

# WIPO



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**WORLD INTELLECTUAL PROPERTY ORGANIZATION**  
GENEVA

**SPECIAL UNION FOR THE INTERNATIONAL PATENT CLASSIFICATION  
(IPC UNION)**

**COMMITTEE OF EXPERTS**

**Fortieth Session  
Geneva, February 6 to 8, 2008**

REPORT

*adopted by the Committee of Experts*

## INTRODUCTION

1. The Committee of Experts of the IPC Union (hereinafter referred to as “the Committee”) held its fortieth session in Geneva on February 6 and 7, 2008. The following members of the Committee were represented at the session: Australia, Austria, Brazil, Bulgaria, Canada, China, Denmark, Egypt, Estonia, Finland, France, Germany, Israel, Ireland, Italy, Japan, Kyrgyzstan, Mexico, Netherlands, Norway, Portugal, Republic of Korea, Romania, Russian Federation, Slovakia, Slovenia, Spain, Sweden, Switzerland, the Former Yugoslav Republic of Macedonia, United Kingdom, United States of America (32). Ukraine was represented as observer. The Eurasian Patent Organization (EAPO) and the European Patent Office (EPO) were also represented. The list of participants appears as Annex I to this report.

2. The session was opened by Mr. Francis Gurry, Deputy Director General, WIPO, who welcomed the participants.

## OFFICERS

3. The Committee unanimously elected Mr. Heiko Wongel (EPO) as Chair and Mr. Sang Hyun Byun (Republic of Korea) and Mr. Mauricio Caballero Galván (Mexico) as Vice-Chairs.

4. Mr. Antonios Farassopoulos (WIPO) acted as Secretary of the session.

#### ADOPTION OF THE AGENDA

5. The Committee unanimously adopted the agenda, which appears as Annex II to this report.

#### DISCUSSIONS, CONCLUSIONS AND DECISIONS

6. As decided by the Governing Bodies of WIPO at their tenth series of meetings held from September 24 to October 2, 1979 (see document AB/X/32, paragraphs 51 and 52), the report of this session reflects only the conclusions of the Committee (decisions, recommendations, opinions, etc.) and does not, in particular, reflect the statements made by any participant, except where a reservation in relation to any specific conclusion of the Committee was expressed or repeated after the conclusion was reached.

#### AMENDMENTS TO THE IPC

7. Discussions were based on Annexes 1 and 2 of project file CE 402 containing amendments to the IPC approved by the Working Group.
8. The Committee adopted, with some modifications, the proposed amendments, which appear in the Technical Annexes to this report. It was decided that these amendments would be included in the next edition of the core level of the IPC.
9. It was noted that the new subclass H04W, which had already been approved by the IPC Revision Working Group (hereinafter referred to as “the Working Group”), could not enter into force in the next edition of the core level (IPC-2009), since reclassification for this subclass was not expected to be completed before 2012 (see paragraph 14 of document IPC/CE/39/7). However, the Trilateral Offices would already introduce the scheme into their local classification systems at an earlier date and would thus be able to use it for the classification of their front file. In that respect, other offices using the IPC would have to bear disadvantages. The Working Group, at its eighteenth session, had invited the Committee to consider this problematic situation and to find a solution that would alleviate or avoid drawbacks for these offices (see paragraph 44 of document IPC/WG/18/4).
10. Having noted the strong desire, expressed by many delegations during the session, of the necessity of entry into force in 2009 of the new subclass H04W that covered a rapidly developing technology, the Committee decided, as an exceptional and experimental case, to introduce the said subclass into the core level of the IPC (IPC-2009) before completion of its reclassification, in order to allow offices to be able to use it for the classification of their front file already in 2009. Meanwhile, IPC users would be notified that reclassification in this area was not complete and also be informed of those patent collections which were not completely reclassified and of the scheme which should be used for searching these collections (see paragraphs 26 and 27, below). Therefore, the Committee invited the Quality Control Task Force (QCTF) to further investigate and propose a way of presenting this warning in the scheme and how to monitor the reclassification progress with respect to this subclass.

11. The Rapporteur of project C 435 was invited to submit proposals for transfer notes in subclass H04W and for Definitions, and to check if additional references in related areas of the IPC were needed.

12. The IPC Advanced Level Subcommittee (hereinafter referred to as “the Subcommittee”) was invited to complete the corresponding advanced level revision of project A 005 and to adopt the said transfer notes, references and Definitions at its fifth session in March, 2008.

#### IMPLEMENTATION OF THE RESULTS OF THE REFORM IN THE IPC AND STATUS OF THE IPC DEVELOPMENT PROGRAM

13. Discussions were based on document IPC/CE/40/2 which contains a status report on several tasks in the program of the Working Group with respect to the implementation of the results of the reform in the IPC. The Committee took note of the contents of this document and, in particular, of the decisions taken by the Working Group, and expressed its satisfaction with the work carried out.

14. The Committee noted that the Working Group had completed the task of the removal of references from guidance headings, and had removed informative references from the scheme of 32 subclasses. The Committee also noted an oral explanation of the Secretariat that completion of the task “Removal of Informative References from the Scheme” would most likely last for several more years, given the large number of references to be reviewed and the current working procedure. The Committee therefore invited the International Bureau to prepare a proposal for a more efficient approach to be considered by the Working Group at its next session.

15. Concerning the task “Renumbering of Pre-Reform Residual Main Groups Being Residual to the Whole Subclass”, the Committee noted that the Working Group had agreed to delete eight existing residual main groups with specific titles and to transfer them to new standardized residual main groups. For two of these groups, subgroups were also deleted and transferred to new main groups. For further 23 existing residual main groups, it was agreed that no changes were needed. The consideration of the remaining groups would be continued at the next session of the Working Group. The current status of this task with respect to each subclass is summarized in Annex 51 to project file WG 111.

16. With respect to the task “Introduction of Residual Main Groups in IPC Subclasses”, the Committee noted that the Working Group had continued consideration of the remaining subclasses without residual main groups in the framework of definition projects and core level revision projects, and that for six more subclasses an agreement had been reached. The current status of this task with respect to each subclass is summarized in the said Annex 51.

17. With respect to the continuing task “Elaboration of Classification Definitions”, the Committee noted that a total of 97 definition projects had been successfully completed both in English and French, and that the target of a total of 100 subclass definitions by end of 2008, as set forth in Task 1(b) of the IPC Development Program 2006 to 2008 (see Annex III to document IPC/CE/37/9), would be achieved. Annex IV to the report of the eighteenth session of the Working Group (see document IPC/WG/18/4) contains a table summarizing the status of each definition project on the program.

18. The Secretariat informed the Committee that all completed definitions that were not yet introduced in the Electronic Layer of the IPC would be included therein during the fourth quarter of 2008.

19. The Committee also noted that Japan and Sweden expressed concerns that the quality of definitions could suffer in view of the large number of 39 new definition projects initiated at the last session of the Working Group and the potentially high workload associated with them, in particular, for the reviewing and commenting of proposals. The Committee agreed that offices would have the option to request, on the e-forum, to temporarily suspend the electronic adoption of definition projects if they did not dispose of sufficient resources for commenting.

20. The Committee also noted concerns of the quality of some definitions already completed and invited the International Bureau to consider means of efficiently revising such definitions, e.g. by means of an Internet-based editing approach similar to that of Wikipedia.

#### PUBLICATION OF IPC VERSIONS 2007.10 AND 2008.01 AND RELATED RECLASSIFICATION OF PATENT FILES

21. Discussions were based on document IPC/CE/40/3 and a compilation of working documents (see Annexes 2 and 3 to project file QC 003).

22. Two new versions of the advanced level of the IPC (IPC-2007.10 and 2008.01), containing amendments to the advanced level, entered into force on October 1, 2007, and on January 1, 2008, respectively. These new versions of the advanced level, in particular the associated master files, were officially published on the WIPO IPC website in the two authentic languages, English and French, in due time, before their entering into force.

23. For the systematic reclassification of patent files according to the latest version of the IPC, working lists of documents were prepared by the EPO for all industrial property offices that could potentially take part in the reclassification, and were made available for downloading on the dedicated WIPO IPC website.

24. Ten industrial property offices participated in the reclassification of patent files related to the 2007.10 version of the advanced level of the IPC. This resulted in the reclassification of more than 85% of the worldwide patent collection corresponding to the revised areas of that version.

25. The Committee also noted a short oral report of the Secretariat on the first three meetings of the QCTF. In addition to the original members Ireland, Japan, Sweden, and the EPO, the following members joined the QCTF at the last two meetings: Brazil, Spain, United States of America. Reports of the meetings are available on the e-forum in Project QC 000.

26. In particular, the Committee noted a summary of recommendations of the QCTF established at its second meeting, held in November 2007, regarding the task of monitoring reclassification (see Annex 2 to project file QC003). The QCTF had agreed to treat the monitoring of reclassification of the pre-reform backfile and the monitoring of the reclassification of documents published after January 1, 2006, as separate tasks. The QCTF had also agreed that, for the latter task, tentative percentage numbers could be calculated based on the working lists prepared by the EPO and result files provided by the reclassifying offices. These numbers should be made available in tabular form for public inspection on the IPC reclassification website in order to inform the user community about the status of reclassification in areas of the IPC that were affected by revision. The QCTF had also recommended including, in the Internet presentation of the IPC, warning indicators in such areas where reclassification would not be completed.

27. The Committee invited the QCTF to further investigate the quantitative analysis of reclassification, in particular of percentage numbers and their meaningfulness, and appropriate thresholds of percentages above which reclassification could be considered as completed and warning indicators be removed.

28. The Committee endorsed the amendments in the IPC corresponding to IPC-2007.10 and IPC-2008.01, as adopted by the Subcommittee, and approved the actions of the International Bureau concerning the publication of these new versions.

#### MASTER CLASSIFICATION DATABASE STATUS REPORT

29. Discussions were based on document IPC/CE/40/4, concerning a tabular status report on the Master Classification Database (MCD) prepared by the EPO.

30. The Committee was informed that 92% of the patent documents in the MCD which were published before 2006 had received valid advanced level symbols, and that 97% of the patent documents in the MCD which were published after January 1, 2006, had received valid advanced level symbols.

31. The Committee agreed that the QCTF should investigate the reasons for the incomplete reclassification of the documents published before 2006, and means for improving the status of reclassification, e.g. by excluding documents with different kind codes but belonging to the same family. The QCTF was also invited to investigate the reasons for missing classification data, e.g. by requesting further information from offices regarding the availability of classification data of their national patent collections.

32. The QCTF was also invited to investigate how the availability of valid classification symbols for all documents published after January 1, 2006, could further be improved.

33. Finally, the Committee expressed its thanks to the EPO for providing MCD status report, and invited the EPO to provide such status reports also in the future.

## MODIFICATION OF THE RULES FOR INDEXING IN THE IPC

34. Discussions were based on project CE 393 containing a proposal by Sweden for modifying the rules for indexing in the IPC and, in particular, on the final rapporteur report (see Annex 8 to project file CE 393).

35. The Committee noted that the majority of commenting offices were not in favor of the initial proposal to change the rules for indexing in the IPC by allowing the use of indexing codes with any classification symbol and, therefore, agreed with the Rapporteur's conclusion to withdraw his initial proposal.

36. Bearing in mind the problem relating to the inconsistency of application of indexing codes, the Committee invited the QCTF to further investigate the problem and propose a solution, for example, the possibility of improving the structure of the validity file in order to enable checking that indexing codes are given together with allowed classification codes. A similar solution could also be applied for checking the correctness of application of secondary classification.

37. The QCTF was invited to prepare a proposal in that respect for consideration at the next session of the Committee.

REVISION OF THE *GUIDE TO THE IPC*

38. Discussions were based on a compilation of working documents (Annexes 4 to 13 to project file WG 182), including a consolidated proposal of the International Bureau to amend the *Guide to the IPC*. The Committee adopted the proposed amendments with some changes.

39. The Committee agreed that the format of the edition indicators used before the entry into force of the reform of the IPC ([2], [3], etc.) for indicating changes with respect to previous editions should be retained; the new format of version indicators (e.g. [2007.01]) should only be used for indicating changes in versions that entered into force after January 1, 2006.

40. The Committee did not agree with the proposal of the United States of America to abolish the presentation of version indicators on front pages of patent documents, since this could bring confusion during the transition period between two editions/versions.

41. The Committee also agreed that the Glossary should remain unchanged, and invited the International Bureau to investigate for which of the terms of the Glossary similar or equivalent definitions appear in notes of the scheme.

42. The Committee finally agreed that the paragraphs of the *Guide* should not be renumbered. Numbers of deleted paragraphs should be retained and the paragraph be indicated as deleted. Numbering of new paragraphs should be based on the number of the preceding existing paragraph complemented by a corresponding subscript like bis, ter, etc.

43. The adopted amended *Guide to the IPC* appears in Annex III to this report.

## PUBLICATION OF IPC-2009 AND RELATED MATERIAL

44. Discussions were based on document IPC/WG/18/2 containing a plan of the publication of IPC-2009 and related material, prepared by the International Bureau.

45. It was noted that for the next edition of the core level of the IPC that is planned to enter into force on January 1, 2009, the International Bureau would publish the new Internet version of the IPC and the related master and transformation files (XML, PDF, etc.) by July 1, 2008. The 2009.01 version of the advanced level would be published simultaneously. The additional publication of the core level in printed form would be discontinued, in view of the low demand for this publication, in particular by countries applying the core level. The new Internet version of the IPC and the related electronic files would then be the only official publication of the IPC. This new Internet version would also include the new versions of the Revision Concordance List (separate for core and advanced levels as currently) and the *Official Catchword Index*.

46. The *Official Catchword Index* had received only few minor amendments during the current revision period. It was therefore agreed to continue the sale of the current edition of the *Catchword Index* until stocks have been exhausted, including an addendum showing the said amendments. The electronic version of the *Catchword Indexes* would be updated to include the said amendments.

47. It was agreed to further improve the Internet version by integrating an option for searching terms and cross references in the IPC, the Definitions and the *Catchword Indexes*, and a link to the PDF files of the IPC version in force. Warnings in new areas where reclassification is incomplete would be included, with links to information on the patent collections not yet reclassified and to the scheme that should be used for searching those patent collections. Furthermore, all previous editions of the IPC would be included (e.g. IPC-1 to 7). In view of those improvements the publication of the IPC:CLASS CD-ROM would be discontinued.

48. A complete set of new Definitions, including those to be approved at the nineteenth session of the Working Group, would be published during the fourth quarter of 2008.

49. The International Bureau would continue the distribution on demand of the IPC on CD-ROM for local use, to those developing countries where limited availability of Internet resources may impede an efficient use of the Internet version or downloading of files.

## RECONSIDERATION OF THE COMPOSITION OF THE IPC ADVANCED LEVEL SUBCOMMITTEE

50. Discussions were based on document IPC/CE/40/5, prepared by the International Bureau, proposing a reconsideration of the current IPC revision strategy.

51. It was recalled that during the reform period, the Committee had approved the creation of a Subcommittee to supervise the revision of the advanced level.

52. At its thirty-third session, in October 2003, the Committee had approved the membership of the Subcommittee and confirmed that, in addition to the International Bureau,

“the membership in the Special Subcommittee should be determined by the volume of patent collections being reclassified by respective offices and that an industrial property office could be elected to the Special Subcommittee if it assumed responsibility to undertake at least 20% of the total reclassification work with respect to the PCT minimum documentation.”

53. However, since reclassification figures had not been available, the 20% criteria were based on the total number of documents belonging to the PCT minimum documentation (see the Annex to document IPC/CE/33/5).

54. At said session the Committee had agreed on the composition of the Subcommittee for the period 2005 to 2008, and that this composition would be reconsidered every three years (see document IPC/CE/33/12, paragraph 26), i.e. in 2008 for the first time.

55. Applying the criteria for the determination of the Subcommittee used in 2003 to the statistics on classification of documents published since January 2006 and on reclassification of the backfile and the front file (see the Annex to document IPC/CE/40/5) would lead to ambiguous conclusions. In any event, the composition of the Subcommittee based exclusively on the proportion of reclassification work may not be a useful criterion in the future in view of the changes in the composition of the PCT minimum documentation and the use of the advanced level for classification by a large majority of offices worldwide.

56. After two years' experience with the reform of the IPC, the composition of the Subcommittee should be considered in the general context of the revision policy and procedure of the reformed IPC. Issues such as the complexity of the Classification with its two levels, their independent revision cycles, as well as their different revision procedures, should be reviewed, aiming at a simplification of the interaction between the two levels and bodies, in order to improve the efficiency of the revision process. In addition, the consistency of application of the IPC by different offices and the improvement of the IPC as a tool for search needed particular consideration by the Committee in the definition of a new revision policy.

57. It was agreed that the matter would require careful consideration before any decision at the next session of the Committee. A special Task Force and two projects on the IPC e-forum (CE 404 and CE 405) were created to conduct this debate. Project CE 404 would deal with the “procedures of revision and publication of the IPC”, with the International Bureau, as Rapporteur and project CE 405 with “IPC revision policy and consistency of application”, with the EPO as Rapporteur.

58. The following issues would be addressed in the framework of project CE 404:

- content and relation between core and advanced levels;
- revision and publication cycles of the two levels;
- accelerated introduction of completed harmony projects into the IPC;
- procedure of revision of the IPC; and
- necessity and degree of reclassification before entry in force of a new scheme in the IPC.

59. The following issues would be addressed in the framework of project CE 405:

- consistency in the use of the IPC for classifying;
- identification of deficient areas in the IPC;
- IPC revision policy, in particular determination of objective criteria to identify the areas to be revised and to set priorities; and
- development of methods to assess the benefit of a revision of the IPC in relation to the cost of this revision.

60. It was decided that project CE 404 should be given priority status and that appropriate deadlines for submission of proposals and comments should be introduced to the e-forum by the International Bureau for these two projects. It was decided that a physical meeting of the Task Force would be necessary during the second half of 2008. The Committee noted, with appreciation, the proposal by the United States Patent and Trademark Office to host such a meeting, in combination with the sixth session of the Subcommittee during the second or third week of September 2008.

61. The following offices declared their interest to become members of the Task Force: France, Germany, Ireland, Israel, Japan, Portugal, Republic of Korea, Russian Federation, Slovakia, Sweden, United Kingdom, United States of America and the EPO.

62. It was agreed that the Subcommittee and the Working Group would continue to work with their current mandate and composition until the Committee would have decided on the future revision procedure.

#### NEXT SESSION OF THE COMMITTEE

63. Owing to lack of time, the report was not adopted during the physical session of the Committee.

64. It was decided to adopt the report electronically, using a procedure similar to that used by the Working Group. A dedicated project, i.e. CE 409, would be created on the e-forum. The International Bureau would post the draft report to this project within five working days after the session in question. Offices should submit their comments on the draft report within five working days of the publication of the draft report. Finally, the International Bureau, in collaboration with the Chair, would then prepare the final report. If the adoption of the report was successful by this means, such adoption could be followed for future sessions of the Committee.

65. It was noted that it might be necessary to convene an extraordinary session of the Committee in October-November 2008 if the special Task force could reach an agreement on the new revision procedures during its session in September. The International Bureau will inform the Committee after the session of the Task Force if such a session is necessary.

66. The Committee noted the following tentative dates for its next regular session:

Geneva, March 16 to 20, 2009.

*67. This report was unanimously adopted by the Committee by electronic means on February 25, 2008.*

[Annexes follow]

ANNEXE I/ANNEX I

LISTE DES PARTICIPANTS/  
LIST OF PARTICIPANTS

I. ÉTATS MEMBRES/MEMBER STATES

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## III. ORGANISATIONS INTERGOUVERNEMENTALES/ INTERGOVERNMENTAL ORGANIZATIONS

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Heiko WONGEL, Head, Classification Board, Rijswijk

### ORGANISATION EURASIENNE DES BREVETS (OEAB)/EURASIAN PATENT ORGANIZATION (EAPO)

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Président/Chair:	Heiko WONGEL (OEB/EPO)
Vice-présidents/Vice-Chairs:	Sang Hyun BYUN (République Corée/Republic of Korea) Mauricio CABALLERO GALVÁN (Mexique/Mexico)
Secrétaire/Secretary:	Antonios FARASSOPOULOS (OMPI/WIPO)

V. BUREAU INTERNATIONAL DE L'ORGANISATION MONDIALE DE LA  
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WORLD INTELLECTUAL PROPERTY ORGANIZATION (WIPO)

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[L'annexe II suit/  
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## ANNEX II

## AGENDA

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6. Publication of IPC versions 2007.10 and 2008.01 and related reclassification of patent files See document IPC/CE/40/3.	21 – 28
7. Master Classification Database status report See document IPC/CE/40/4.	29 – 33
8. Modification of the rules for indexing in the IPC See project CE 393.	34 – 37
9. Revision of the <i>Guide to the IPC</i> See project WG 182.	38 – 43 (III)
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[Annex III follows]

## ANNEX III

# INTERNATIONAL PATENT CLASSIFICATION (Version 2009)

## GUIDE

### I. FOREWORD

#### *Objectives of the IPC; History of the IPC; Reform of the IPC; Assistance in the use of the Classification*

1. The Strasbourg Agreement concerning the International Patent Classification (of 1971), which entered into force on October 7, 1975, provides for a common classification for patents for invention including published patent applications, inventors' certificates, utility models and utility certificates (hereinafter referred to as "patent documents"). Under Article 1 of the Agreement, the Special (IPC) Union was established. The International Patent Classification is hereinafter referred to as "the Classification" or "the IPC".

2. The Classification is established in the English and French languages, both texts being equally authentic. Pursuant to Article 3(2) of the Strasbourg Agreement, official texts of the Classification may be established in other languages.

3. The Internet version of the Classification, available on the WIPO IPC website ([www.wipo.int/classifications/ipc](http://www.wipo.int/classifications/ipc)) represents the official publication of the IPC. It contains the complete text of the classification in English and French of the edition/version in force as well as previous editions/versions.

4. In accordance with Article 4(5) of the Strasbourg Agreement, it has been determined that the abbreviation "Int.Cl." of the words "International Patent Classification" may precede the classification symbols on published patent documents classified according to the Classification. More details on the presentation of these symbols are given in Section XII, below.

5. *[Deleted]*

### OBJECTIVES OF THE IPC

6. The Classification, being a means for obtaining an internationally uniform classification of patent documents, has as its primary purpose the establishment of an effective search tool for the retrieval of patent documents by intellectual property offices and other users, in order to establish the novelty and evaluate the inventive step or non-obviousness (including the assessment of technical advance and useful results or utility) of technical disclosures in patent applications.

7. The Classification, furthermore, has the important purposes of serving as:

- (a) an instrument for the orderly arrangement of patent documents in order to facilitate access to the technological and legal information contained therein;
- (b) a basis for selective dissemination of information to all users of patent information;
- (c) a basis for investigating the state of the art in given fields of technology;
- (d) a basis for the preparation of industrial property statistics which in turn permit the assessment of technological development in various areas.

## HISTORY OF THE IPC

8. The text of the first edition of the Classification was established pursuant to the provisions of the European Convention on the International Classification of Patents for Invention of 1954. Following the signing of the Strasbourg Agreement, the International (European) Classification of Patents for Invention, which had been published on September 1, 1968, was as of March 24, 1971, considered and referred to as the first edition of the Classification.

9. The Classification has been periodically revised in order to improve the system and to take account of technical development.

10. The first edition of the Classification was in force from September 1, 1968 to June 30, 1974,
- the second from July 1, 1974 to December 31, 1979,
  - the third from January 1, 1980 to December 31, 1984,
  - the fourth from January 1, 1985 to December 31, 1989,
  - the fifth from January 1, 1990 to December 31, 1994,
  - the sixth from January 1, 1995 to December 31, 1999, and
  - the seventh from January 1, 2000 to December 31, 2005.

10bis. Following the reform of the IPC (see paragraphs 11 to 13, below), the Classification was divided into core and advanced levels (see paragraphs 29 to 32 below). Each edition of the core level is indicated by the year of entry into force of that edition. IPC-2006 was in force from January 1, 2006, to December 31, 2008, and IPC-2009 entered into force on January 1, 2009. Each new version of the advanced level of the IPC is indicated by the year and the month of the entry into force of that version, for example, IPC-2008.01.

## REFORM OF THE IPC

11. The Classification was designed, and developed for many years, mainly as a paper-based information tool. Changes to the structure of the Classification and to methods of its revision and application were needed in order to ensure its efficient and effective use in the electronic environment.

12. For this reason, member States of the IPC Union decided, in 1999, to launch a reform of the Classification and to introduce a transitional revision period during which, in parallel with revision of the Classification, the changes necessitated by the reform had to be elaborated. The transitional revision period started in 1999 and in 2005 the basic period of reform was completed.

13. The following major changes were introduced in the Classification as a result of its reform:

- (a) the Classification was divided into a core and an advanced level, in order to better satisfy the needs of different categories of users;
- (b) different revision methods were introduced, respectively, for the core and the advanced level, namely three-year revision cycles for the core level and continuous revision for the advanced level;
- (c) when the Classification is revised, patent documents are reclassified according to the amendments to the core and advanced levels;
- (d) additional data illustrating classification entries or explaining them in more detail, such as classification definitions, structural chemical formulae and graphic illustrations, informative references, were introduced in the electronic layer of the Classification;
- (e) general principles of classification and classification rules were reconsidered and revised when appropriate.

14. *[Deleted]*

## ASSISTANCE IN THE USE OF THE CLASSIFICATION

15. The Guide attempts to describe in simple terms and by means of examples how the Classification should be used for the purpose of classifying or retrieving patent documents. Further assistance in the use of the Classification is provided on the WIPO IPC website ([www.wipo.int/classifications/ipc](http://www.wipo.int/classifications/ipc)) by:

- (a) the additional information in the IPC which includes classification definitions, chemical formulae and graphic illustrations (see paragraphs 44 to 51, below);
- (b) the Catchword Index to the IPC, which has been established in English and French as well as in other languages;
- (c) the Revision Concordance List which gives information on how subject matter has been transferred between different places in the Classification as a result of its revision;
- (d) other various IPC explanatory material, for example, the Guidelines for Determining Subject Matter Appropriate for Obligatory and Non-Obligatory Classification, which can serve as a useful addition to the Guide.

16. *[Deleted]*

17. Printed versions of the scheme of the IPC may be produced using the PDF files available on the WIPO IPC website.

18. Communications relating to the Classification should be addressed to:

World Intellectual Property Organization (WIPO)  
34, chemin des Colombettes  
CH-1211 Geneva 20 (Switzerland)  
E-mail: [ipc.mail@wipo.int](mailto:ipc.mail@wipo.int)

## II. LAYOUT OF CLASSIFICATION SYMBOLS

*Section; Class; Subclass; Group; Complete classification symbol*

### SECTION

19. The Classification represents the whole body of knowledge which may be regarded as proper to the field of patents for invention, divided into eight sections. Sections are the highest level of hierarchy of the Classification.

- (a) **Section Symbol** – Each section is designated by one of the capital letters A through H.
- (b) **Section Title** – The section title is to be considered as a very broad indication of the contents of the section. The eight sections are entitled as follows:
  - A HUMAN NECESSITIES
  - B PERFORMING OPERATIONS; TRANSPORTING
  - C CHEMISTRY; METALLURGY
  - D TEXTILES; PAPER
  - E FIXED CONSTRUCTIONS
  - F MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING
  - G PHYSICS
  - H ELECTRICITY
- (c) **Contents of Section** – Each section title is followed by a summary of the titles of its main subdivisions.
- (d) **Subsection** – Within sections, informative headings may form subsections, which are titles without classification symbols.

Example: Section A (HUMAN NECESSITIES) contains the following subsections:  
AGRICULTURE

FOODSTUFFS; TOBACCO  
PERSONAL OR DOMESTIC ARTICLES  
HEALTH; AMUSEMENT

## CLASS

20. Each section is subdivided into classes which are the second hierarchical level of the Classification.
- (a) **Class Symbol** – Each class symbol consists of the section symbol followed by a two-digit number.  
Example: H01
  - (b) **Class Title** – The class title gives an indication of the content of the class.  
Example: H01 BASIC ELECTRIC ELEMENTS
  - (c) **Class Index** – Some classes have an index which is merely an informative summary giving a broad survey of the content of the class.

## SUBCLASS

21. Each class comprises one or more subclasses which are the third hierarchical level of the Classification.
- (a) **Subclass Symbol** – Each subclass symbol consists of the class symbol followed by a capital letter.  
Example: H01S
  - (b) **Subclass Title** – The subclass title indicates as precisely as possible the content of the subclass.  
Example: H01S DEVICES USING STIMULATED EMISSION
  - (c) **Subclass Index** – Most subclasses have an index which is merely an informative summary giving a broad survey of the content of the subclass. The electronic version of the IPC allows users to view the content of a subclass also by order of complexity of the subject matter (see paragraph 52, below).
  - (d) **Guidance Heading** – Where a large part of a subclass relates to a common subject matter a guidance heading indicating that subject matter may be provided at the beginning of that part.

## GROUP

22. Each subclass is broken down into subdivisions referred to as “groups”, which are either main groups (i.e., the fourth hierarchical level of the Classification) or subgroups (i.e., lower hierarchical levels dependent upon the main group level of the Classification).
- (a) **Group Symbol** – Each group symbol consists of the subclass symbol followed by two numbers separated by an oblique stroke.
  - (b) **Main Group Symbol** – Each main group symbol consists of the subclass symbol followed by a one- to three-digit number, the oblique stroke and the number 00.  
Example: H01S 3/00
  - (c) **Main Group Title** – The main group title precisely defines a field of subject matter within the scope of its subclass considered to be useful for search purposes. Main group symbols and titles are printed in bold in the Classification.  
Example: H01S 3/00 Lasers
  - (d) **Subgroup Symbol** – Subgroups form subdivisions under the main groups. Each subgroup symbol consists of the subclass symbol followed by the one- to three-digit number of its main group, the oblique stroke and a number of at least two digits other than 00.  
Example: H01S 3/02  
Any third or subsequent digit after the oblique stroke is to be understood as a decimal subdivision of the digit preceding it, for example, 3/036 is to be found after 3/03 and before 3/04, and 3/0971 is to be found after 3/097 and before 3/098.
  - (e) **Subgroup Title** – The subgroup title precisely defines a field of subject matter within the scope of its main group considered to be useful for search purposes. The title is preceded by one or more dots indicating the hierarchical position of that subgroup, i.e., indicating that each subgroup forms a

subdivision of the nearest group above it having one dot less (see paragraphs 25 to 28, below). The subgroup title is often a complete expression, in which case it begins with a capital letter. A subgroup title begins with a lower case letter if it reads as a continuation of the title of the next higher, less indented group from which it depends. In all cases, the subgroup title must be read as being dependent upon, and restricted by, the titles of the groups under which it is indented.

Examples: H01S 3/00 Lasers  
H01S 3/14 • characterised by the material used as the active medium

The title of 3/14 is to be read as: Lasers characterised by the material used as the active medium.

H01S 3/05 • Construction or shape of optical resonators

The title of 3/05 is a complete expression, but owing to its hierarchical position this group is restricted to the construction or shape of optical resonators of lasers.

## COMPLETE CLASSIFICATION SYMBOL

23. A complete classification symbol comprises the combined symbols representing the section, class, subclass and main group or subgroup.

Example:

A Section – 1 <sup>st</sup> level	01 Class – 2 <sup>nd</sup> level	B Subclass – 3 <sup>rd</sup> level	33/00 or 33/08 Group	Main group – 4 <sup>th</sup> level  Subgroup – lower level
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## III. HIERARCHICAL STRUCTURE OF THE CLASSIFICATION

*Principle of hierarchy; Two levels of the IPC – core level, advanced level*

24. The IPC is a hierarchical classification system. The contents of lower hierarchical levels are subdivisions of the contents of the higher hierarchical levels to which the lower levels are subordinated.

### PRINCIPLE OF HIERARCHY

25. The Classification separates the whole body of technical knowledge using the hierarchical levels, i.e., section, class, subclass, group and subgroup, in descending order of hierarchy.

26. The hierarchy among subgroups is determined solely by the number of dots preceding their titles, i.e. their level of indentation, and not by the numbering of the subgroups.

Example: G01N 33/483 • • Physical analysis of biological material  
33/487 • • • of liquid biological material  
33/49 • • • • blood  
33/50 • • Chemical analysis of biological material, e.g. blood

This example shows that three-digit, three-dot subgroup 33/487 is hierarchically superior to the two-digit, four-dot subgroup 33/49, and the three-digit, two-dot subgroup 33/483 is of the same hierarchical level as the two-digit, two-dot subgroup 33/50.

27. The dots preceding a group title are also used in place of the titles of its hierarchically superior (less indented) groups, in order to avoid repetition.

Example: H01S 3/00 Lasers  
3/09 • Processes or apparatus for excitation, e.g. pumping  
3/091 • • by optical pumping  
3/094 • • • by coherent light

Without the use of hierarchical levels, subgroup H01S 3/094 would require a title such as: “Processes or apparatus for excitation of lasers using optical pumping by coherent light”.

28. The hierarchical structure relating to the six-dot subgroup H01F 1/053 is shown in the following example:

Section:	H	ELECTRICITY
Class:	H01	BASIC ELECTRIC ELEMENTS
Subclass:	H01F	MAGNETS
Main group:	H01F 1/00	Magnets or magnetic bodies characterised by the magnetic materials therefor
One-dot subgroup:	1/01	• of inorganic materials
Two-dot subgroup:	1/03	• • characterised by their coercivity
Three-dot subgroup:	1/032	• • • of hard magnetic materials
Four-dot subgroup:	1/04	• • • • Metals or alloys
Five-dot subgroup:	1/047	• • • • • Alloys characterised by their composition
Six-dot subgroup:	1/053	• • • • • • containing rare earth metals

Group H01F 1/053 actually concerns “magnets of inorganic materials characterised by their coercivity, comprising hard magnetic alloys specifically containing rare earth metals”.

## TWO LEVELS OF THE IPC

29. In order to satisfy the needs of different categories of users, the IPC is a two-level system consisting of the core level and the advanced level. Principles and rules of the Classification described below, are equally applied to both levels, however, different revision procedures are applied to the core level and the advanced level, while ensuring compatibility between the two levels.

### Core level

30. Industrial Property Offices are required to classify their published patent documents at least according to the core level. The core level is intended for general information purposes, for example, dissemination of information, and for searching smaller, national patent collections. The core level includes only hierarchically high entries of the Classification: sections, classes, subclasses, main groups and, in some technical fields, subgroups with a small number of dots.

31. *[Deleted]*

### Advanced level

32. The advanced level is intended for searching larger, international patent collections. Any industrial property office can choose to use the advanced level for classifying its published patent documents. The more detailed subdivisions of the advanced level are compatible with the core level and represent its more extensive elaboration (i.e. additional subgroups of the IPC). In general, the advanced level comprises all core level entries. However, since the advanced level is revised more frequently than the core level, it may contain new entries at the subclass and main group levels which will only subsequently become part of the core level in a new edition thereof. Similarly, the core level may, in exceptional cases, still comprise entries that have already been deleted in the advanced level.

33. *[Deleted]*

## IV. PRESENTATION OF CLASSIFICATION SCHEMES

### *Guidance headings; Presentation of titles; References; Notes*

34. In order to facilitate use of the Classification, various elements and indications are provided in its text in addition to the titles of the hierarchically related classification entries.

## ORDER OF MAIN GROUPS

35. The main groups in each subclass are arranged in a sequence intended to assist the user. For newer subclasses, the main groups are generally arranged from the most complex or highly specialised subject matter to the least complex subject matter (see also paragraph 52, below). A residual main group (for example, “not otherwise provided for”) is placed at the end of the scheme of these newer subclasses.

## GUIDANCE HEADINGS

36. When a plurality of successive main groups within a scheme relate to common subject matter, a “guidance heading” before the first of such main groups may be provided. The “guidance heading” is a short underlined statement that indicates the common subject matter found in all of the main groups it is relevant to (see, for example, the guidance heading “Ploughs” before group A01B 3/00). The series of groups covered by such a heading extends to the next guidance heading or to a line in heavy type extending across the column, which is used when the following group or groups relate to different subject matter for which no guidance heading is provided (see, for example, the line after group A01B 75/00). In exceptional cases, a guidance heading may be provided for a single main group.

## PRESENTATION OF TITLES

37. The titles of classification places may indicate their intended content by using a single phrase or several related phrases linked together (see paragraph 61, below). However, titles may also indicate their content using two or more distinct parts separated by semicolons. Each part of such a multipart title should be interpreted as a separate title. This type of title is used when it is considered desirable to treat together distinct kinds of subject matter which cannot conveniently be covered by a single phrase.

Examples: A42C 5/00 Fittings or trimmings for hats  
A41D 10/00 Pyjamas; Nightdresses

## REFERENCES

38. The title of a class, subclass, group, or note (see paragraph 41, below) may contain a phrase in brackets referring to another place in the Classification. Such a phrase, called a reference, shows that the subject matter indicated by the reference is covered by the place (or places) referred to.

Example: A01F 7/00 Threshing machines (with flails A01F 9/00)

### Functions of References

39. A reference has one of the following functions:

- (a) **Limitation of scope** – This type of reference is referred to as a limiting reference. It specifies the subject matter which is taken to another place where it is covered, even though it is apparently covered by the title of the place where the reference appears. This type of reference is very important for the proper understanding and use of the place where it appears (see, for example, group A01F 7/00).

A limiting reference:

- (i) excludes specified subject matter from the scope of this classification place, when this subject matter would otherwise fulfil all the requirements of the classification place and its definition, i.e. would otherwise be covered by that place; and
- (ii) indicates the place(s) where this subject matter is classified.

In the classification definitions limiting references are presented in tabular form preceded by the heading “This subclass/group does not cover:”

- (b) **Indication of precedence** – A reference stating that another place “takes precedence” is used when subject matter is classifiable in two places, or when different aspects of the subject matter to classify are covered by different places, and it is desired that such subject matter should be classified in only one of those places (see, for example, group A01B 35/00). Such a precedence reference occurs most frequently at subgroup level; in some cases, where several groups are similarly affected, it may be replaced by a note at a higher level (see, for example, Note (2) following the title of subclass A61M). Precedence references are, in fact, a kind of limiting reference.

- (c) **Guidance** – In order to assist the user when classifying or searching, in certain places references indicate where to find related subject matter (see, for example, group A61H 33/14). Examples of such references are:
- (i) references in function oriented places which point to places where their subject matter is covered if it is specially adapted, used for a particular purpose or incorporated in a larger system (see paragraphs 85 to 87 and 89 to 90);
  - (ii) informative references indicating the location of subject matter that could be of interest for searching, but which subject matter is not within the scope of the classification place where the reference occurs.

Limiting references (as defined in subparagraphs (a) and (b), above) are included both in classification schemes and in the electronic layer, in different formats. To maintain the readability of schemes while increasing the amount of useful related information provided, references for guidance are progressively being removed from schemes and transferred to the electronic layer of the IPC (see also paragraph 48, below).

### Use and Interpretation of References

40. Some points of detail concerning the use and interpretation of references:

- (a) A reference is usually placed at the end of the title to which it belongs. If the title consists of two or more parts, the reference is placed after the last part to which it relates. Exceptionally, a reference does not relate to all parts preceding it, but in such cases this is evident from the context.  
Example: A47C CHAIRS (seats specially adapted for vehicles B60N 2/00); SOFAS; BEDS (upholstery in general B68G)
  - (b) A reference following the title of a class, subclass or group relates to all the hierarchically inferior places.
  - (c) *[Deleted]*
  - (d) In the PDF version of the Classification, a reference from one group to another in the same subclass quotes only the number of the latter group without mentioning the subclass.  
Example: B62L 3/00 Brake-actuating mechanisms (actuating mechanisms for back-peddalling brakes 5/00; Bowden mechanisms F16C 1/10); Arrangements thereof
  - (e) Where a group is quoted, it is usually the most relevant group but not necessarily the only relevant group. In particular, groups hierarchically related to a group quoted should also be borne in mind.
  - (f) Where two or more items of subject matter are referred to the same place, they are separated by a comma, the classification symbols of that place being given only at the end of that reference.  
Example: A01M 21/00 Apparatus for destruction of unwanted vegetation, e.g. weeds (biocides, plant growth regulators A01N 25/00)
  - (g) References relating to different items of subject matter referred to different places are separated by a semicolon and are to be read independently.  
Example: A01K 1/00 Housing animals; Equipment therefor (building construction, features of buildings E04; ventilating buildings F24F)
- An exception is where a substantial part of their wording is the same; in this case, the common wording is given once and the different symbols are separated by a comma.
- Example: A01H 3/00 Processes for modifying phenotypes (4/00 takes precedence; influencing the growth of plants without producing new plants, non-chemically A01G 7/00, chemically A01N 25/00 to 65/00)

## NOTES

41. Notes define or explain specific words, phrases or the scope of places, or indicate how subject matter is classified. Notes may be associated with a section, subsection, class, subclass, guidance heading or group.

Examples: F42 This class covers also means for practice or training which may have aspects of simulation, although simulators are generally covered by class G09.

B22F "Metallic powder" covers powders containing a substantial proportion of non-metallic material.

B01J 31/00 In this group, the presence of water is disregarded for classification purposes.

Notes apply only to the places concerned, and their subdivisions, and override any general guidance in case of conflict. For example, Note (1) following the title of subclass C08F overrides the Note following the title of section C.

Any information that is found in notes that are associated with the section, subsection, or class level of the Classification is also provided within subclass definitions (see paragraphs 45 to 47, below) that have their scope impacted by this information.

## V. USER INFORMATION

*Indication of changes; Electronic layer of the IPC – classification definitions, informative references; Chemical formulae and graphic illustrations; Main groups in a standardised sequence*

### INDICATION OF CHANGES WITH RESPECT TO PREVIOUS EDITIONS/VERSIONS

42. In order to assist the user, the text of the Classification is presented in such a way as to give some indication of the kind of changes it has undergone with respect to previous editions/versions.

The following indications are used in the Classification:

- (a) Text in italics means that the entry in question, in relation to the previous edition/version, either
  - (i) is new, or
  - (ii) its "file scope" (see paragraph 73 below) has been changed, or
  - (iii) has been deleted (see under (d) below).

In cases (i) or (ii), above, the entry in italics is followed by the version indicator in square brackets (see under (b) below).

- (b) The version indicator gives the edition/version where the corresponding entry was new or where its "file scope" was modified, for example, [4] or [2008.01]. Exceptionally, the version indicator for IPC-2006 is [8].
- (c) One and the same entry may be followed by two or more version indicators in square brackets. In order to allow a more convenient presentation, only the last version indicator is displayed while the others are displayed if the user so wishes (for example, by moving the cursor on the said version indicator).
- (d) The symbols of groups that have been deleted appear with an indication in italics of where the subject matter concerned is transferred to, or where this subject matter is covered, in the current edition/version.

The symbols of groups which have been deleted in the previous editions/versions do not appear in the current edition/version.

43. *[Deleted]*

### ADDITIONAL INFORMATION IN THE IPC

44. In addition to the Classification scheme, various data illustrating IPC entries or explaining them more in detail, which are intended to enhance understanding and ease of use of the IPC, are accessible via its Internet publication.

### Classification Definitions

45. Although the scope of classification places can be determined from classification titles with associated references and notes, which are present in the scheme of the Classification, it is recommended to use classification definitions for clarifying the exact boundaries of the subject matter appropriate for the classification place. Classification definitions provide additional information in respect of classification entries and serve for their clarification, but do not change the scope of classification entries.

46. Classification definitions are prepared following a structured definition format, the most important part of which is the definition statement giving a more detailed explanation of the scope of the classification place. In the definition statement, relevant words and phrases are used which may be alternative to those used in the classification title and which can be found in the patent documents classified in the classification place. Classification definitions also contain other parts, such as explanation of limiting and informative references associated with the classification title, interpretation of special classifying rules affecting the classification place and definitions of terms used in the classification place.

47. Classification definitions are provided only for a limited number of subclasses and groups. In the course of the further development of the IPC, classification definitions will be elaborated for all its subclasses, and for main groups and subgroups, where appropriate.

### Informative References

48. Informative references indicating the location of subject matter that could be of interest for searching are progressively being introduced into the classification definitions. They do not limit the scope of classification places with which they are associated and are intended only to facilitate the patent search.

### Chemical Formulae and Graphic Illustrations

49. In the areas of the IPC relating to general and applied chemistry, chemical structural formulae that provide a visual representation of the content of the classification place are of great value. They are introduced in the scheme of the Classification with a limited number of classification entries when they are necessary for defining their scope or for interpreting the scope of their subordinated entries (see, for example, main group C07D 499/00).

50. Many additional chemical structural formulae are introduced in the electronic layer of the IPC. They serve for illustrating purposes, generally by way of examples, and for facilitating understanding of the content of the chemical areas of the Classification. The chemical formulae are available for viewing through hyperlinks provided in the relevant classification entries.

51. Other explanatory graphic illustrations have also been introduced in the electronic layer of the IPC (see, for example, graphic illustrations under main group F23B 50/00).

### Presentation of Main Groups in a Standardised Sequence

52. The numerical sequence of main groups of a subclass in the IPC is not generally standardised. In order to provide additional aid for the classification procedure, an alternative presentation following a standardised sequence of main groups in IPC subclasses has been included in the electronic layer. This standardised sequence follows the principle of proceeding from more complex to less complex subject matter and from specialised to non-specialised subject matter of the subclass. In the electronic version of the Classification, main groups are displayed either in the numerical order or in the standardised sequence, at the choice of the user.

## VI. TERMINOLOGY

### *Standard expressions; Glossary*

#### STANDARD EXPRESSIONS

53. It has been possible to standardise a limited number of wordings in the IPC. The explanations of standard expressions used in the text of the Classification follow below. Whenever a standard expression occurs in the text of the electronic version of the IPC, a hyperlink to its explanation is provided.

#### “Covered” or “Provided for”

54. When subject matter is stated to be “covered” by/in a classification place, it means the subject matter has characteristics enabling it to be classified in that place (see, for example, group A41F 18/00). The expression “provided for” has the same meaning as “covered” (see, for example, group B60Q 11/00).

#### Expressions Used to Indicate Residual Subject Matter

55. The expression “not otherwise provided for”, or similar expressions occurring in a group title, means “not provided for in any other group in the same subclass or in any other subclass” (see, for example, group B65D 51/00). This applies similarly where this expression appears in the title of a class or subclass. However, the use of this expression in a main group title does not expand the scope of the subclass as specified in paragraph 69, below.

56. Groups worded “... not provided for in groups...” cover subject matter that is not provided for in the stated groups. Groups worded “Other...” only cover subject matter that is not provided for in other related groups, for example at the same hierarchical level within a subclass or group (see, for example, A41F 13/00, B05C 21/00, respectively).

57. Many subclass schemes include a residual main group, which provides for the subject matter within the scope of the subclass that is not covered by any of the other main groups of the subclass. Such residual main groups are usually located at the end of subclasses.

#### Expressions Used to Indicate Combination Subject Matter

58. In a number of subclasses, there are main groups designating subject matter “... covered by more than one of main groups...” or with similar wording. Such groups only provide for subject matter which consists of a combination of characteristics not covered as a whole by a single one of the groups specified, for example, C05B 21/00. Additionally, in a number of subclasses, there are main groups designating subject matter “... not covered by any single one of main groups ...” or with similar wording. This type of group may provide for both:

- subject matter which consists of combinations of characteristics not covered as a whole by a single one of the specified groups, and
- subject matter not covered by any of the groups in the specified range.

#### “i.e.”, “e.g.”

59. The expression “i.e.” has the sense of “equals” and the two phrases joined by “i.e.” are to be considered equivalent, one of the phrases constituting a definition of the other.

Example: A01D 41/00 Combines, i.e. harvesters or mowers combined with threshing devices

60. The expression “e.g.” does not limit the sense of the phrase which precedes it, but simply explains it by giving one or more examples. This expression is used for the following purposes:

- (a) To provide a typical illustration of the subject matter covered by the preceding wording.  
Example: A42C 5/00 Fittings or trimmings for hats, e.g. hat-bands
- (b) To draw attention to the fact that what is mentioned after “e.g.” is definitely included within and covered by the preceding wording although this might not be readily apparent from the wording.

Example: B62B 7/00 Carriages for children; Perambulators, e.g. dolls' perambulators

- (c) To indicate matter which is covered by a group but for which no dependent subgroup has been provided.

Example: G02B 6/122 • • • Basic optical elements, e.g. light-guiding paths  
6/124 • • • • Geodesic lenses or integrated gratings  
6/125 • • • • Bends, branchings or intersections

### “A and B”, “A or B”, “Either A or B, but not Both”

61. The expression:

- “A and B” requires the presence of both A and B in the same example or embodiment;
- “A or B” implies the presence of A or the presence of B, or the presence of A and B in the same example or embodiment;
- “either A or B, but not both” implies the presence of A or the presence of B but not the presence of both A and B in the same example or embodiment.

### “In General”, “Per se”, “Specially Adapted for”

62. The expression “in general” is used when indicating things that are considered for their characteristics, disregarding any specific application, or that are not specially adapted for any particular use or purpose, as defined in paragraph 85(a), below.

63. The expression “per se” concerns only an item of subject matter itself as opposed to a combination of which that item is a part.

Example: In group G01T 3/08, which covers the measuring of neutron radiation with semiconductor detectors, the reference (semiconductor detectors per se H01L 31/00) means that subject matter concerned solely with semiconductor detectors is covered by group H01L 31/00. When the subject matter concerns the combination of semiconductor detectors with other elements of devices for measuring neutron radiation, it is classified in group G01T 3/08.

64. The expression “specially adapted for” is used when indicating “things” that have been modified or particularly constructed for the given use or purpose, as defined in paragraph 85(b), below.

Examples: A47D FURNITURE SPECIALLY ADAPTED FOR CHILDREN  
A01K 63/02 • Receptacles specially adapted for transporting live fish

### “Or the Like”

65. The expression “or the like” is sometimes used to emphasise that the classification place in question is not limited to the specific subject matter as specified by the wording but that it also covers similar subject matter with essentially the same characteristics.

Example: A01D 3/00 Non-abrasive sharpening devices for scythes, sickles, or the like

## **GLOSSARY**

66. A two-part Glossary of terms and expressions is included at the end of the Guide. Its first part includes classification terms and expressions relating to principles and rules of the Classification which are often used in this Guide. The second part of the Glossary includes technical terms and expressions used in the Classification itself.

## **VII. SCOPE OF PLACES**

*Subclasses; Main groups; Subgroups*

67. The scope of any classification place must always be interpreted within the scope of all its hierarchically superior places.

68. The titles of sections, subsections and classes are only broadly indicative of their content and do not define with precision the subject matter falling under the general indication of the title. In general, the section or subsection titles very loosely indicate the broad nature of the scope of the subject matter to be found within the section or subsection, and the class title gives an overall indication of the subject matter covered by its subclasses. By contrast, it is the intention in the Classification that the titles of subclasses, taking into consideration any references, definitions or notes associated therewith, define as precisely as possible the scope of the subject matter covered thereby. The titles of main groups and subgroups, again subject to any references, definitions or notes associated therewith, precisely define the subject matter covered thereby (see the example cited in paragraph 28, above).

## SUBCLASSES

69. The scope of a subclass is defined by the following, taken together:

- (a) The subclass title which describes, as precisely as is possible in a small number of words, the main characteristic of a portion of the whole body of knowledge covered by the Classification, this portion being the field of the subclass to which all its groups relate.
- (b) Any limiting references which follow the subclass title or its class title. These references indicate certain parts of the field described by the title which are covered by other subclasses and are therefore excluded. These parts may constitute a substantial part of the field described by the title and, thus, the limiting references are in some respects as important as the title itself. For example, in subclass A47D – FURNITURE SPECIALLY ADAPTED FOR CHILDREN – a considerable part, namely school benches or desks, of the subject matter covered by the title is excluded in view of a reference to particular groups of subclass A47B, thus considerably altering the scope of subclass A47D.
- (c) Any limiting references which appear in groups of a subclass and which refer subject matter to another class or subclass also restrict the scope of the subclass in question. For example, in subclass B43K – IMPLEMENTS FOR WRITING OR DRAWING – writing points for indicating or recording apparatus are referred out of group 1/00 to group 15/16 of subclass G01D, thereby reducing the scope of the subject matter covered by the title of subclass B43K.
- (d) Any notes appearing under the subclass title or its class, subsection or section title. Such notes may define terms or expressions used in the title, or elsewhere, or clarify the relation between the subclass and other places.

Examples:

- (i) The Notes following the title of the subsection “ENGINES OR PUMPS”, embracing classes F01 to F04, which notes define the terms or expressions used throughout the subsection.
- (ii) Note (1) following the title of subclass F01B, which defines its scope in relation to subclasses F01C to F01P.
- (iii) The Note following the title of section C which defines groups of elements.

The titles of subclasses sometimes do not embrace the titles of all main groups under them. However, the scope of a subclass should always be understood to include all subject matter specifically stated in the titles of its main groups.

70. A more detailed explanation of the scope of a subclass is provided by its classification definition where it is available. In particular, the exact boundaries of any subject matter added to the scope of the subclass by its main group titles are specified.

## MAIN GROUPS

71. The scope of a main group is to be interpreted only within the scope of its subclass (as indicated above).

Subject to this, the scope of a main group is determined by its title as modified by any relevant references or notes associated with the main group or with any guidance heading covering it. For example, a group for “bearings” in a subclass whose title is limited to a particular apparatus must be read as covering only features of bearings peculiar to that apparatus, for example, the arrangement of bearings in the apparatus.

Attention is drawn to the fact that guidance headings are intended to be only informative and, as a rule, do not modify the scope of the groups covered by them. A more detailed explanation of the scope of a main group is provided by its classification definition where it is available.

## SUBGROUPS

72. The scope of a subgroup is likewise to be interpreted only within the scope of its subclass, main group and of any subgroup under which it is indented. Subject to this, the scope of a subgroup is determined by its title as modified by any relevant references or notes associated therewith.

- Example: B64C AEROPLANES; HELICOPTERS (air-cushion vehicles B60V)
- 5/00     Stabilising surfaces (attaching stabilising surfaces to fuselage 1/26)
  - 5/06     • Fins (specially for wings 5/08)
  - 5/08     • mounted on, or supported by, wings
  - 5/10     • adjustable
  - 5/12     • • for retraction against or within fuselage or nacelle
- (a) Main group 5/00 must be read within the scope of the subclass title, i.e., as “stabilising surfaces of aeroplanes or helicopters”. Moreover, the reference following the title of subclass B64C (air-cushion vehicles B60V) indicates that all subject matter concerning air-cushion vehicles is classified in subclass B60V, so that, in relation to main group 5/00 and all its subgroups, stabilising surfaces of air-cushion vehicles are classified in subclass B60V. Furthermore, the reference in main group 5/00 (attaching stabilising surfaces to fuselage 1/26) indicates that all subject matter concerned with attaching stabilising surfaces to fuselages is classified in subgroup 1/26.
- (b) Subgroup 5/06, which is indented under main group 5/00, must be read as “aeroplane or helicopter stabilising surfaces in the form of fins”. Moreover, the reference following the title of subgroup 5/06 (specially for wings 5/08) indicates that fins designed specially for wings are classified in subgroup 5/08.
- (c) Similarly, subgroup 5/08, which is of the same one-dot indentation under main group 5/00 as subgroup 5/06, must be read as “aeroplane or helicopter stabilising surfaces mounted on, or supported by, wings”, and subgroup 5/10 as “adjustable stabilising surfaces of aeroplanes or helicopters”.
- (d) Subgroup 5/12 is indented under subgroup 5/10 and must be read within the scope thereof, i.e., as “adjustable stabilising surfaces of aeroplanes or helicopters for retraction against or within fuselage or nacelle”.

73. When a group is subdivided, each of its dependent subgroups covers only a particular part of the field covered by the group under which it is indented; thus, a group may have only one subgroup indented thereunder or there may be many. Each subgroup is primarily devised to take out of that field a well-defined portion of subject matter which can often serve as a self-contained field of search. Thus, any group is used for classifying subject matter which falls within its scope but is not specified in any subgroup indented thereunder. This residual subject matter is called the file scope of the group. For a group that is not subdivided, the scope and the file scope are thus identical. When this group is subdivided its scope remains unchanged whereas its file scope is modified.

74. The scope of any subgroup in comparison with its hierarchically higher group is determined by the presence of one or more essential characteristics, specified in the title of the subgroup. Two cases may arise:

- (a) The essential characteristics are not expressed in the title of the hierarchically higher group.
- Example: H01F 5/00     Coils  
          H01F 5/02     • wound on non-magnetic supports
- (b) The essential characteristics are already expressed in the title of the hierarchically higher group.
- Example: B01D 35/00    Other filtering devices; Auxiliary devices for filtration; Filter housing constructions  
          B01D 35/30     • Filter housing constructions

## VIII. PRINCIPLES OF THE CLASSIFICATION

*Invention information; Additional information; Technical subjects of inventions; Places in the Classification for technical subjects of inventions; Function-oriented and application-oriented places; Classification of technical subjects of inventions*

75. The primary purpose of the Classification, as noted in paragraph 6, above, is to facilitate the retrieval of technical subject matter. It is therefore devised, and has to be used, in such a way that one and the same technical subject is classified in, and thus can be retrieved from, one and the same place within the Classification; this place being the one most relevant to be searched for that subject.

76. Two types of information may be found in patent documents. These are “invention information” and “additional information”. The meaning of these expressions is explained in paragraphs 77 to 80, below. The rules of selection of classification symbols are the same for both types of information (see also chapter XI, below). Although in the Guide reference is often made only to inventions or technical subjects of inventions, it is to be understood that the remarks made in the Guide apply equally to technical subjects which are covered by the additional information.

### INVENTION INFORMATION

77. Invention information is technical information in the total disclosure of a patent document (for example, description, drawings, claims) that represents an addition to the state of the art. The invention information is determined in the context of the state of the art, using guidance provided by the claims of the patent document, with due regard given to the description and the drawings.

78. “Addition to the state of the art” means all novel and unobvious subject matter specifically disclosed in a patent document, which subject matter does not represent part of the prior art, i.e., the difference between the subject matter in a patent document and the collection of all technical subject matter that has already been placed within public knowledge.

### ADDITIONAL INFORMATION

79. Additional information is non-trivial technical information which does not in itself represent an addition to the state of the art but might constitute useful information for the searcher.

80. The additional information complements the invention information by identifying, for example, the constituents of a composition or mixture, or elements or components of a process or structure, or use or applications of classified technical subjects.

### TECHNICAL SUBJECTS OF INVENTIONS

81. Technical subjects of inventions may represent processes, products, apparatus or materials (or the way these are used or applied). These terms, usually referred to as categories of subject matter, should be interpreted in their widest sense, as indicated in the following examples:

- (a) Examples of processes are: polymerisation, fermentation, separation, shaping, conveying, treating of textiles, transfer and transformation of energy, building, preparation of foodstuffs, testing, methods of operating machines and ways in which they work, processing and transmitting of information.
- (b) Examples of products are: chemical compounds, compositions, fabrics, articles of manufacture.
- (c) Examples of apparatus are: installations used in chemical or physical processes, tools, implements, machines, devices for performing operations.
- (d) Examples of material are: ingredients of mixtures.

82. It should be noted that an apparatus can be regarded as a product, since it is produced by a process. The term “product”, however, is rather used to denote the result of a process regardless of the subsequent function of the product, for example, the end-product of a chemical or manufacturing process, whereas the term “apparatus” is associated with an intended use or purpose, for example, apparatus for generating gases, apparatus for cutting. Materials in themselves may constitute products.

## PLACES IN THE CLASSIFICATION FOR TECHNICAL SUBJECTS OF INVENTIONS

83. The Classification is designed to ensure that any technical subject with which an invention is essentially concerned can be classified, as far as possible, as a whole and not by separate classification of constituent parts.

84. However, constituent parts of a technical subject of invention may also constitute invention information if they themselves represent an addition to the state of the art, i.e. they represent novel and unobvious subject matter.

## FUNCTION-ORIENTED AND APPLICATION-ORIENTED PLACES

85. The technical subjects of inventions dealt with in patent documents concern either the intrinsic nature or function of a thing or the way a thing is used or applied. The term “thing” is used in this context to mean any technical matter, tangible or not, for example, process, product or apparatus. The above is reflected in the design of the Classification. It provides places for classifying:

- (a) a thing “in general”, i.e., characterised by its intrinsic nature or function; the thing being either independent of a particular field of use or technically not affected if statements about the field of use are disregarded, i.e., it is not specially adapted for use in the field.
  - Examples: (1) F16K has provision for valves characterised by constructional or functional aspects that do not depend on the nature of the particular fluid (for example, oil) passing therethrough or of any system of which the valve may form part.
  - (2) C07 has provision for organic chemical compounds characterised by their chemical structure but not by their application.
  - (3) B01D has provision for filters in general.
- (b) A thing “specially adapted for” a particular use or purpose, i.e., modified or particularly constructed for the given use or purpose.
  - Example: A61F 2/24 is the place for a mechanical valve specially adapted for insertion into a human heart.
- (c) The particular use or application of a thing.
  - Example: Filters specially adapted for particular purposes, or in combination with other apparatus, are classified in application-oriented places, for example, A24D 3/00, A47J 31/06.
- (d) The incorporation of a thing into a larger system.
  - Example: B60G has provision for the incorporation of a leaf spring into the suspension of a vehicle wheel.

86. Places of category (a), above, are referred to as “function-oriented places”. Places of the above categories (b) to (d) are referred to as “application-oriented places”.

87. Places, for example, subclasses, are not always exclusively function-oriented or application-oriented in relation to other places in the Classification.

Example: Although F16K (valves, etc.) and F16N (lubricating) are both function-oriented subclasses, F16N includes application-oriented places for certain valves specially adapted for lubrication systems (for example, F16N 23/00—special adaptations of check valves), while, conversely, F16K includes application-oriented places for lubricating features of gate valves or sliding valves (see, for example, F16K 3/36—features relating to lubrication).

Furthermore, the expressions “function-oriented place” and “application-oriented place” cannot always be regarded as absolute. Thus, a given place may be more function-oriented than another place but less function-oriented than yet a further place.

Example: F02F 3/00 concerns pistons for combustion engines in general and is therefore more function-oriented than F02B 55/00, which is specifically directed to rotary type pistons in combustion engines, but is less function-oriented than F16J, which relates to pistons in general.

## CLASSIFICATION OF TECHNICAL SUBJECTS OF INVENTIONS

### General Observations

88. It is of great importance to identify accurately the technical subject(s) with which each invention is essentially concerned. Therefore, consideration should be given to the thing involved as set out in paragraphs 81 to 85, above, in order to determine the appropriate place in the Classification.

Example: If a patent document discloses pistons, consideration must be given to whether the technical subject of the invention is a piston itself, or whether the technical subject is different, for example, the special adaptation of a piston for use in a particular apparatus, or the arrangement of pistons in a larger system, for example, in an internal-combustion engine.

89. Often, the invention information relates only to a particular field of use, and the application-oriented places are intended to cover completely the classification of such matter. The function-oriented places embrace a wider concept in which the constructional or functional characteristics of a subject are applicable to more than one field of use, or in which the application to a particular field of use is not considered invention information.

Example: Main group C09D 5/00 covers a variety of application-oriented coating compositions (for example, C09D 5/16 covers anti-fouling paints), whereas groups C09D 101/00 to 201/00 cover function-oriented aspects of coating compositions, namely the polymer the composition is based on.

90. When it is unclear whether to classify a technical subject in a function-oriented place or in an application-oriented place, the following should be observed:

- (a) If a particular application is mentioned, but not specifically disclosed or fully identified, classification is made in the function-oriented place, if available. This is likely to be the case when several applications are broadly stated.
- (b) If the essential technical characteristics of the subject relate both to the intrinsic nature or function of a thing and to its particular use, or its special adaptation to or incorporation into a larger system, classification is made in both the function-oriented place and the application-oriented place, if available.
- (c) If guidance indicated in subparagraphs (a) and (b), above, cannot be used, classification is made in both the function-oriented place and the relevant application-oriented places.

91. When classifying a larger system (combination) as a whole, attention should be given to parts or details whenever they are novel and unobvious. Classification of both the system and these parts and details is necessary.

Example: When a document is concerned with the incorporation of a given thing, for example, a leaf spring, into a larger system, for example, a vehicle wheel suspension, it is therefore concerned with the larger system and should be classified in the place for this system (B60G). If the document is also concerned with the thing itself, i.e., the leaf spring as such, and it is novel and unobvious, it is also necessary to classify the document in the place for the thing itself (F16F).

### Categories of Subject Matter not explicitly provided for in Classification Titles

92. It is apparent from paragraphs 81 and 82, above, that the technical subject of an invention may be expressed as different categories of subject matter. If for one of these categories, no distinct place has been identified by the titles of the Classification for a particular technical subject, the most appropriate place existing for the other categories is used for classifying (see paragraphs 93 to 99, below, for specific situations). In these situations, even though the titles of those places do not directly indicate that this category of subject matter is appropriate there, this may be indicated by other means such as references, notes, definitions, or the provision for similar subject matter in other groups of

their scheme. Classification definitions, where present, should provide specific information about the appropriate classification places for related categories of subject matter not specified in classification titles.

### Periodic Table of Chemical Elements

92bis. In all sections of the IPC, in the absence of an indication to the contrary, the Periodic System of chemical elements referred to is the one with eight groups as represented in the table below. For example, group C07F 3/00 "Compounds containing elements of the 2nd Group of the Periodic System" refers to the elements of columns IIa and IIB

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Period	IA	IIA	IIIB	IVB	VB	VIB	VII B	VIII B			IB	IIB	IIIA	IVA	VA	VIA	VIIA	VIIIA
1	H																	He
2	Li	Be											B	C	N	O	F	Ne
3	Na	Mg											Al	Si	P	S	Cl	Ar
4	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
5	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
6	Cs	Ba	Lanthanides	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
7	Fr	Ra	Actinides	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg							

Lanthanides	La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Actinides	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr

### Chemical Compounds

93. When the subject of the invention concerns a chemical compound per se (organic, inorganic or macromolecular), it is classified in section C according to its chemical structure. When it also concerns a specific field of use, it is also classified in the place provided for that field of use, if such field of use constitutes an essential technical characteristic of the subject. However, when the chemical compound is known and the subject of the invention concerns only the application of the compound, it is classified only in the place covering the field of use.

### Chemical Mixtures or Compositions

94. When the subject of the invention concerns a chemical mixture or composition per se, it is classified in a place according to its chemical composition if such a place exists, for example, C03C (glass), C04B (cements, ceramics), C08L (compositions of organic macromolecular compounds), C22C (alloys). If such a place does not exist, it is classified according to its use or application. If the use or application also constitutes an essential technical characteristic of the subject of the invention, a mixture or composition is classified according to both its chemical composition and its use or application. However, when the chemical mixture or composition is known and the subject of the invention concerns only its use, it is classified only in the place covering the field of use.

### Preparation or Treatment of Compounds

95. When the subject of the invention concerns a process of preparation or treatment of a chemical compound, it is classified in the place for the process of preparation or treatment of the compound concerned. If such a place does not exist, it is classified in the place of the compound. When the compound resulting from the preparation process is also novel, the compound is also classified according to its chemical structure. Subjects of invention concerned with general processes for the preparation, or treatment, of classes of compounds are classified in the groups for the processes employed, when such groups exist.

### Apparatus or Processes

96. When the subject of the invention concerns an apparatus, it is classified in the place for the apparatus when such a place exists. When such a place does not exist, the apparatus is classified in the place for the process performed by that apparatus. When the subject of the invention concerns a process for making or treatment of products, it is classified in the place for the process performed. When such a place does not exist, the making or treatment of products is classified in the place for the apparatus performing the process. If no place exists for the manufacture of a product, the manufacturing apparatus or process is classified in the place covering the product.

### Articles of Manufacture

97. When the subject of the invention concerns an article, it is classified in the place for the article. If no place exists for the article itself, it is classified in the appropriate function-oriented place (i.e., according to the function performed by the article) or, if this is not possible, according to the field of use.

Example: When the article to be classified is a glue-dispenser specially adapted for binding books, it is classified in group B42C 9/00, which covers “Applying glue or adhesive peculiar to bookbinding”. Since there is no specific place for glue-dispensers for bookbinding, they are classified in the place for their function, i.e., “applying glue”.

### Multistep Processes, Industrial Plants

98. When the subject of the invention concerns a multistep process or an industrial plant that consists, respectively, of a combination of process steps or apparatus, it is classified as a whole, i.e., in a place provided for such combination, for example, subclass B09B. If no such place exists, it is classified in the place for the product obtained by the process or plant. When the subject of the invention concerns also an element of the combination, for example, an individual step of the process or machine of the plant, the element is also separately classified.

### Details, Constructional Parts

99. When the subject of the invention concerns constructional or functional details or parts of subject matter, for example, of apparatus, the following rules apply:

- (a) Details or parts only applicable to, or specially adapted for, one kind of subject matter are classified in the details places of this kind of subject matter, if such places exist.
- (b) If such places do not exist, these details or parts are classified in the place for the subject matter in question.
- (c) Details or parts applicable to more than one of different kinds of subject matter are classified in the details places of more general nature, if such places exist.
- (d) If such places of more general nature do not exist, these details or parts are classified according to all of the kinds of subject matter to which they explicitly apply.

Example: In subclass A45B, groups 11/00 to 23/00 cover the various kinds of umbrella, while group 25/00 covers details of umbrellas applicable to more than one kind of umbrella.

### General Chemical Formulae

100. Large sets of related chemical compounds are often expressed or claimed using general formulae. The general formulae are presented in the form of a chemical compound genus with at least one component of the formula being a variable selected from a specific collection of alternatives (for example, “Markush”-type compound claims). The use of general formulae causes classification problems when an enormous number of compounds are within their scope and are separately classifiable in a large number of classification places. When this situation occurs, only the individual chemical compounds most useful for searches are classified. If chemical compounds are specified using a general chemical formula, the following classifying procedure is applied:

Step 1: All “fully identified” compounds that are novel and unobvious are classified if they are:

- (i) specifically claimed as such or in a composition,
- (ii) products of a claimed process, or
- (iii) derivatives of either of these.

A compound is considered to be “fully identified” where:

- (a) the structure is given by exact chemical name or formula, or can be deduced from its preparation from specified reactants, not more than one of which is selected from a list of alternatives, and
- (b) the compound is characterised by a physical property (for example, its melting point), or its preparation is described in a worked example giving practical details.

Compounds identified only by an empirical formula are not considered to be “fully identified”.

Step 2: If no “fully identified” compounds are disclosed, the general formula is classified in the most specific group(s) that cover(s) all or most of the potential embodiments. Classification should be limited to a single or a very small number of groups.

Step 3: In addition to the above obligatory classification, non-obligatory classification may be made when other compounds within the scope of the general formula are of interest.

When classification of all the “fully identified” compounds into their most specific classification places would lead to a high number of classification symbols (for example, more than twenty), the classifier may reduce the number of symbols. This may only be done when classification of the “fully identified” compounds would lead to the assigning of a large number of subgroups under a single group at the next hierarchically higher level. Classification of these compounds may then be made in the higher group only. Otherwise, classification of the compounds is made in all of the more specific subgroups.

### Combinatorial Libraries

101. Collections composed of many chemical compounds, biological entities or other substances may be presented in the form of “libraries”. A library usually includes an enormous number of members that, if separately classifiable in a large number of classification places, would unnecessarily burden the search system. Therefore, only the individual members which are considered “fully identified”, in the same manner as the compounds of general formulae, are obligatorily classified into the groups that most specifically provide for them, for example, compounds in section C. The library as a whole is classified in an appropriate group in subclass C40B. In addition to the above obligatory classifications, non-obligatory classifications are made when other members of the libraries are of interest.

## **IX. MULTIPLE CLASSIFICATION; HYBRID SYSTEMS**

*Multi-aspect classification of technical subjects; Schemes for secondary classification; Hybrid systems; Application of indexing codes*

102. The primary purpose of the Classification is to facilitate search. Depending on the content of a patent document, the information disclosed therein may require more than one classification symbol to be applied.

103. Multiple classification of documents is needed, for example, when different categories of subject matter, i.e., processes, products, apparatus or materials, for which special places are provided in the Classification, constitute invention information. Another example of multiple classification may represent classifying in function-oriented places and application places when essential technical characteristics of the subject of the invention are concerned with both types of places.

104. Multiple classification or classification in combination with indexing (see paragraphs 108 to 112, below) is also recommended, but is not obligatory, for indicating additional information in a patent document when it is of interest for search.

## MULTI-ASPECT CLASSIFICATION OF TECHNICAL SUBJECTS

105. Multi-aspect classification represents a special type of multiple classification. Multi-aspect classification is applied to subject matter which, by its nature, is characterised by several aspects, for example, by its intrinsic structure and its particular use or property. Classifying of such subject matter according to only one aspect would lead to incomplete search information. The classification symbols allotted should not be restricted to the place or places in the Classification which cover only one aspect of a technical subject identified. Due regard should also be given to further places in the Classification where other non-trivial aspects of that technical subject may need to be classified.

106. Places in the IPC where multi-aspect classification is especially desirable are indicated by a note. Depending on the nature of the subject matter concerned, such a note prescribes obligatory classification of the subject matter according to the indicated aspects or contains a recommendation for multi-aspect classification if it is desirable for increasing the efficiency of the patent search.

## SCHEMES FOR SECONDARY CLASSIFICATION

107. For a limited number of technical subjects, subclasses for secondary classification are provided in the Classification. These subclasses are used for obligatory supplementary classification according to an aspect of the subject matter that is different from the aspect upon which the primary classification was based. Such subclasses for secondary classification are subclass A01P (Biocidal, pest repellent, pest attractant or plant growth regulatory activity of chemical compounds or preparations), subclass A61P (Therapeutic activity of chemical compounds or medicinal preparations), subclass A61Q (Use of cosmetics or similar toilet preparations) and subclass C12S (Processes using enzymes or micro-organisms).

## HYBRID SYSTEMS; INDEXING SCHEMES

108. In specific areas of the Classification, hybrid systems have been introduced in order to improve the effectiveness of the Classification. Hybrid systems exist only in the advanced level of the IPC (see paragraphs 29 to 33, above).

109. Each hybrid system consists of a classification scheme and an associated complementary indexing scheme. The indexing scheme specifies aspects that are not covered by the classification places. When classifying within a hybrid system, all classification symbols appropriate to the technical subjects are first assigned. Then any appropriate indexing codes from indexing schemes associated with one or more of these classification symbols may be added, if they identify elements of information which are useful for search purposes.

110. Indexing codes have a format similar to classification symbols. Within subclasses having classification schemes, indexing schemes are placed after the classification scheme and their numbering starts, as a rule, with the number 101/00. Some subclasses are used only for indexing purposes, in association with classification symbols from one or more classification subclasses; this is indicated in their titles. Indexing subclasses usually employ the same numbering system used in the indexing schemes of classification subclasses (see subclasses F21W and F21Y), but sometimes their numbering systems may include numbers (for example, 1/00) similar to those normally associated with standard classification symbols (see subclasses C10N, C12R, B29K, B29L).

111. Indexing codes can only be applied in association with classification symbols. Each place in the Classification where indexing codes may be used is indicated by a note. Similarly, a note, title or heading before each indexing scheme indicates with which classification symbols those indexing codes are associated.

112. Whenever possible, the layout of the indexing schemes is hierarchical, facilitating their presentation. The numbering of some of the schemes is such that truncation of the indexing codes is feasible when carrying out database searching.

Example (part of the indexing scheme in subclass C04B):

103/00 Function or property of the active ingredients  
103/10 • Accelerators  
103/12 • • Set accelerators  
103/14 • • Hardening accelerators

- 103/20 • Retarders
- 103/22 • • Set retarders
- 103/24 • • Hardening retarders
- 103/30 • Water reducers

## APPLICATION OF INDEXING CODES

113. Indexing codes may be applied when it is desirable for search purposes to identify elements of information about a technical subject of the invention already classified as such.

114. In an indexing scheme, the hierarchically higher group is only to be used in a residual manner, i.e., to record a specific feature not provided for in any of its subdivisions. When indexing two or more elements of information about a technical subject which are useful for search purposes, for each such element the hierarchically lowest indexing group which provides for this element should be applied. Indexing of residual matter in main groups of indexing schemes should be limited to cases where this is of use for searching. Indexing should not be made in main groups of very wide or general scope, which are mainly used as informative headings.

Example: A welding process for attaching flanges is described as being applicable to the manufacture of railway rails, structural beams and rail vehicle wheels.  
In this case, B23K 101/26 and 101/28 should be applied for rails and beams, respectively. Although rail vehicle wheels are broadly covered by B23K 101/00, this code should not be applied as it is too general and would give no information of use for searching. See the following excerpt of the indexing scheme referred to:

- 101/00 Articles made by soldering, welding or cutting
- 101/02 • Honeycomb structures
- 101/04 • Tubular or hollow articles
- 101/06 • • Tubes
- 101/08 • • • finned or ribbed
- 101/10 • • Pipe-lines
- 101/12 • • Vessels
- 101/14 • • Heat exchangers
- 101/16 • Bands or sheets of indefinite length
- 101/18 • Sheet panels
- 101/20 • Tools
- 101/22 • Nets, wire fabrics or the like
- 101/24 • Frameworks
- 101/26 • Railway- or like rails
- 101/28 • Beams

## X. OBLIGATORY CLASSIFICATION; NON-OBLIGATORY CLASSIFICATION AND INDEXING

*General approach: obligatory classification, non-obligatory classification, non-obligatory indexing; Classification procedure for patent documents at different publication levels*

### GENERAL APPROACH

115. As indicated in paragraphs 77 to 80, above, patent documents comprise in principle invention information and may comprise additional information, i.e., non-trivial technical information which is not in itself an addition to the state of the art but might constitute useful information for the searcher.

116. The invention information is only represented by classification symbols.

117. The additional information is represented by classification symbols, by indexing codes or by both. Classification symbols from any place in the Classification, together with any indexing codes associated with those symbols, may be used for indicating additional information.

### Obligatory Classification

118. According to Article 4(3) of the Strasbourg Agreement Concerning the International Patent Classification, in classifying a patent document, the competent authorities of the countries of the Special Union shall indicate “the complete symbols of the Classification applied to the invention to which the patent document relates”. This means that it is an obligation on the part of the said authorities to allot the classification symbols which represent the invention information.

### Non-obligatory Classification; Non-obligatory Indexing

119. It is desirable that any additional information be classified or indexed, since it could be useful for search purposes. In specific classification places, recommendations can be present in order to assist the classifier in the use of non-obligatory classification or non-obligatory indexing. However, such recommendations do not affect the discretionary nature of this classification or indexing.

## **CLASSIFICATION PROCEDURE FOR PATENT DOCUMENTS AT DIFFERENT PUBLICATION LEVELS**

120. All invention information in a patent document as described in paragraph 77, above, should be classified. Depending on the stage of the examination procedure in which a document is classified, the precise invention information may not have been fully determined. Paragraphs 121 to 130, below, outline procedures for determining the best approximation of this invention information for the purpose of classifying principal types of patent documents (granted patents, searched published applications, unsearched published applications).

### Classification of patents granted after search and examination

121. All subject matter covered by the claims of a patent document must be classified as invention information along with any novel and unobvious constituents or components (subcombinations) of the claimed subject matter. Classification should be based on the subject matter of each claim as a whole and on each inventive embodiment within a claim.

122. Any unclaimed subject matter in the disclosure that is novel and unobvious must also be classified as invention information.

123. It is desirable to classify or index any additional information complementing the invention information, mentioned in the claims or in the unclaimed disclosure, if it is useful for search purposes.

### Classification of searched but unexamined patent documents, for example, patent applications

124. All claimed subject matter that appears to be novel and unobvious in view of the search results must be classified as invention information along with any novel and unobvious constituents or components (subcombinations) of the claimed subject matter.

125. Any unclaimed subject matter in the disclosure that appears to be novel and unobvious in view of the search results must be classified as invention information.

126. It is desirable to classify or index any additional information complementing the invention information, mentioned in the claims or in the unclaimed disclosure, if it is useful for search purposes.

### Classification of unsearched patent documents

127. All claimed subject matter that is potentially novel and unobvious in the opinion of the classifier who is an expert in the art must be classified as invention information along with any potentially novel and unobvious constituents or components (subcombinations) of the claimed subject matter.

128. Any unclaimed subject matter in the disclosure that is potentially novel and unobvious in the opinion of the classifier who is an expert in the art must be classified as invention information.

129. For classifiers who are not experts in the relevant technical field, all the claims must be used for determining the subject matter to be classified.

130. It is desirable to classify or index any additional information complementing the invention information, mentioned in the claims or in the unclaimed disclosure, if it is useful for search purposes.

### General observations

131. Patent documents should not be classified as a single entity, but all different inventive things, claimed or disclosed within the patent document, should be identified and separately classified. Such different inventive things are represented, for example, by different claims, alternative variants or different categories of subject matter (for example, a product and a method of its production).

132. Unclaimed subject matter representing invention information does not need to be classified when fully identified in the classification of a related published application of the same patent office, for example, in the parent of a published divisional application.

133. Where a classifier determines that no invention information is present within a patent document, at least one classification symbol must still be assigned to the patent document as an invention information symbol. In these circumstances, the classification should be based on that portion of the total disclosure that the classifier determines as most useful for search purposes.

134. To minimise potentially unnecessary classification symbols, the classification of a previously published application may be reviewed when the application is granted, searched, evaluated or abandoned, in order to confirm or alter its classification. However, it should be noted that some intellectual property offices classify an application only once, and the classification is not reconsidered when a patent is granted.

## **XI. RULES FOR SELECTING CLASSIFICATION PLACES**

### *Common rule; Priority rules; Special rules*

135. Before deciding where to classify a patent document, it is necessary to correctly determine invention and additional information contained in the document, as described in paragraphs 77 to 101, above. Once determined, this information must be classified as completely as possible in the IPC. The presence or absence of classification places for certain features should not lead to a modification of the concept of information to be classified (see also chapter X, above).

### **SELECTING A SUBCLASS**

136. Since the IPC is a hierarchical classification system, a systematic approach using its hierarchical structure can be used and followed step by step for determining the appropriate subclass for classification of the subject of the invention. The relevant section can first be identified, then the appropriate subsection and class, and, under the selected class, the subclass which most satisfactorily covers the subject in question can be identified. When following this approach, it should be remembered that titles of sections, subsections and classes only give a broad indication of their scope.

137. Alternative methods of determining the relevant subclass of the Classification can often be more efficient. These alternative methods may consist in:

- (a) using an alphabetical Catchword Index to the IPC;
- (b) text searching in the IPC itself or in the Catchword Index;
- (c) reviewing the classification symbols of patent documents most related to the subject in question, for example, by statistical analysis of documents found during a text search using relevant technical terms.

Although these alternative methods may lead to determination of a more specific place than a subclass, the relevance of that place must always be verified by checking its scope in the light of its hierarchically superior places and the classification rules in that particular area of the IPC.

138. After identification of a subclass using the methods described above, it is necessary to check whether its scope (see Chapter VII “SCOPE OF PLACES”, above) is wide enough to cover the technical subject to be classified. For this purpose, the references and notes appearing after the subclass title and its classification definition, if available, should be consulted.

## SELECTING A GROUP

139. After selection of the appropriate subclass, the procedure using the hierarchical structure of the IPC should be followed for determining the relevant main group and subgroup in the identified subclass. Before applying this procedure, it is necessary to check which of the three general classification rules, described below (the common rule, the first place priority rule and the last place priority rule), is used in the selected subclass and whether any special classification rules are applied in its parts.

140. While the paragraphs below indicate the differences between the general classification rules, it is important to remember that the general rules share the following essential features:

- (a) many technical subjects are completely covered by only one group in the subclass scheme; in this situation, the subject is classified in that group regardless of the general classification rule used in the subclass;
- (b) if two or more subjects of the invention are disclosed in the patent document, the general rule used in the subclass is separately applied for classifying each subject;
- (c) if a subcombination of the subject of the invention is novel and non-obvious itself, it is separately classified according to the general rule used in the subclass.

It is only in situations where the technical subject is covered by two or more of groups of the subclass (i.e., some groups have potentially overlapping scope or groups are only available for subcombinations of the subject and not for the subject itself) that the general classification rule used in the subclass is important for determining a relevant group or groups.

## COMMON RULE

141. The common rule is the “default” classification rule in the IPC and it is applied in all areas of the IPC where priority classification rules or special classification rules are not specified. It is based on the principle of devising the Classification in such a way that one and the same technical subject can be classified in one and the same place in the Classification (see paragraph 75, above). This principle assumes that classification places in the IPC are mutually exclusive. When this is not the case, the principles of paragraph 144(b), below, should be applied.

142. As opposed to the first and last place priority rules described in paragraphs 146 to 154, below, no general priority rules apply in the common rule areas of the IPC. However, the following principles of priority can be applied to limit unnecessary multiple classification and to select groups that most adequately represent the technical subject to be classified:

- (a) Groups for more complex matter take priority over groups for less complex matter. For example, groups for combinations take priority over groups for subcombinations and groups for “whole things” take priority over groups for “details”.
- (b) Groups for more specialised subject matter take priority over groups for less specialised subject matter. For example, groups for unique types of matter or groups for matter with means for solving particular problems take priority over more general groups.

These principles also form the basis for the standardised sequence of main groups described in paragraph 52, above. The standardised sequence can therefore in many situations be used as guidance for applying the priority principles explained above. However, it should be borne in mind that the standardised sequence gives priority between all main groups of a subclass, for example, between groups covering function and application aspects, groups of similar complexity or groups having a similar degree of specialisation. In the common rule areas of the IPC, priority should not be applied between such groups, but classification should be made in all appropriate places (see, for example,

paragraphs 88 to 91, above). When references or local precedence rules apply, these overrule the general priority principles.

143. When classifying subject matter characterised by several aspects or when assigning additional classification symbols representing useful information for searching, principles of multiple classification apply (see paragraphs 102 to 107, above).

144. After selection of the appropriate subclass, the following procedure is applied for identifying a detailed classification place at each hierarchical level, starting at main group level:

- (a) Determining, by reviewing all of the groups, if only one of them provides for the technical subject to be classified. If this is the case, step (c) should be applied for this group.
- (b) If it is determined that two or more groups provide for the technical subject to be classified, then the principles described in paragraph 142, above, should be used as guidance.
  - (i) If these principles indicate a priority between the groups, the group given priority must be selected. Other groups with a lower priority may also be selected for classification if they are considered to be useful for search purposes, for example, for performing Boolean searching. Step (c) should then be applied separately for each selected group.
  - (ii) If priority between the groups cannot be determined by these principles, then step (c) should be applied separately for each group.
- (c) Repeat step (a) and, if necessary, step (b) at each subsequent hierarchical level until none of the subgroups at the next hierarchical level provides for the technical subject.

145. If no specific place for a combination is provided in an area of classification where the common rule applies, it is classified according to its subcombinations, following the principles described in paragraph 142, above. Subcombinations not selected for classification according to these principles should be considered for classification as additional information.

## **PRIORITY RULES**

146. In certain areas of the Classification, priority classification rules are applied. The purpose of these rules is to improve consistency of classifying. As opposed to the common rule, the priority rules give general priority rules between all groups in the given area. In order to enable this, the schemes have been specially adapted for the particular rule. Even though general priority rules apply, multiple classification is possible in these areas, for example, when it is necessary to classify different aspects of subject matter or when the subject matter contains additional information which is desirable to be classified. The areas where priority classification rules are applied are clearly marked by a note appearing before the first place of the area covered by such classification rules or at a hierarchically higher place.

### **First Place Priority Rule**

147. In some parts of the Classification, the first place priority rule is used. Where this rule applies, it is set out in a note of the type: "In this subclass / main group(s) / group(s), at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place." For example, see the relevant notes in C40B or F23B. According to this rule, a technical subject of the invention is classified by successively, at each indentation level, locating the first group covering any portion of the technical subject, until a subgroup is selected for classification at the deepest appropriate indentation level. When several particular technical subjects are disclosed in a patent document, the first place priority rule is separately applied to each of them.

148. Classification schemes where the first place priority rule has been introduced contain a standardised sequence of groups. This standardised sequence follows the principle of proceeding from more complex or specialised subject matter at the top of the scheme to less complex or less specialised subject matter located lower in the scheme.

149. After selection of the appropriate subclass for the subject of the invention, the following procedure is applied for identifying a detailed classification place:

- (a) determining the first main group in the subclass which provides at least in part for the subject of the invention;
- (b) determining, under this main group, the first one-dot subgroup which provides at least in part for this subject of the invention;
- (c) repeating the procedure of the previous step through successive indentation levels of subgroups until the first subgroup at the deepest subgroup level (i.e., with a maximum number of dots) which provides for the subject of the invention is determined.

150. If no specific place for a combination is provided in the area of the Classification where the first place priority rule applies, the combination is classified in the first group that provides for at least one of its subcombinations. Any other subcombinations which are determined to be novel and non-obvious must also be separately classified following the first place priority rule procedure. Subcombinations which are considered to represent information of interest for search may be classified as additional information.

### Last Place Priority Rule

151. In some parts of the Classification the last place priority rule is used. Where this rule applies, it is set up in a note of the type: "In this subclass / main group(s) / group(s), at each hierarchical level, in the absence of an indication to the contrary, classification is made in the last appropriate place." For example, see the relevant notes in A61K, C07, C08G, C10M. According to this rule, a technical subject of the invention is classified by successively locating at each indentation level the last group covering any portion of the technical subject until a subgroup is selected for classification at the deepest appropriate indentation level. When several particular technical subjects are disclosed in a patent document, the last place priority rule is separately applied to each of them.

152. In classification schemes where the last place priority rule has been introduced, a sequence of groups is not formally standardised. However, the sequence of groups frequently follows the principle of proceeding from less complex or more general subject matter at the top of the scheme to progressively more complex or specialised subject matter located lower in the scheme.

153. After selection of the appropriate subclass, the following procedure is applied for identifying a detailed classification place:

- (a) determining the last main group in the subclass which provides at least in part for the subject of the invention;
- (b) determining, under this main group, the last one-dot subgroup which provides at least in part for this subject of the invention;
- (c) repeating the procedure of the previous step through successive indentation levels of subgroups until the last subgroup at the deepest subgroup level (i.e., with a maximum number of dots) which provides for the subject of the invention is determined.

154. If no specific place for a combination is provided in the area of the Classification where the last place priority rule applies, the combination is classified in the last group that provides for at least one of its subcombinations. Any other subcombinations which are determined to be novel and non-obvious must also be classified following the last place priority rule procedure. Subcombinations which are considered to represent information of interest for search may be classified as additional information.

### **SPECIAL RULES**

155. In a limited number of places in the Classification, special classification rules are used. In these places, these rules override the general classification rules. Wherever special rules are used, they are clearly specified in notes at the places concerned, for example, C04B 38/00, C08L, G05D. For example, Note 2(b) following the title of subclass C08L ("Compositions of macromolecular compounds") specifies that, in this subclass, compositions are classified according to the macromolecular constituent or constituents present in the highest proportion; if all these constituents are present in equal proportions, the composition is classified according to each of these constituents.

## XII. PRESENTATION OF CLASSIFICATION SYMBOLS AND INDEXING CODES ON PATENT DOCUMENTS

156. The order of classification symbols and indexing codes is as follows:

- (a) Classification symbols representing invention information, of which that symbol which most adequately represents the invention should be listed first.
- (b) Classification symbols representing additional information.
- (c) Indexing codes.

157. Classification symbols and indexing codes are presented in tabular form in one or more columns, with only one symbol or code on each line of a column. The order specified in paragraph 156 above, should be followed the first column downwards, then the second column downwards, and so on.

158. The current version indicator of the core level (year) has to be placed in round brackets after the abbreviation "Int.Cl.", if the document is classified, at least partly, using the core level. Most offices classify a given document only in one level, i.e. only in the advanced level or only in the core level (see Examples (a) and (b) in paragraph 161, below). When classifying using the advanced level, the version indicator of each IPC symbol (see paragraph 42b, above), is placed in round brackets after the symbol. It should however be noted that all version indicators earlier than (2006.01) should be replaced by (2006.01).

158bis. For previous editions, up to the seventh edition of the IPC, the Classification edition was generally indicated by means of a superscript Arabic numeral, printed immediately after the abbreviation. Thus, for a document classified in accordance with the fifth edition, the abbreviation was: Int.Cl.<sup>5</sup>, etc. However, when it was in accordance with the first edition, no superscript Arabic numeral was shown, the indication being merely Int.Cl.

159. When classifying using the core level, IPC symbols are printed or displayed in regular font style (i.e., non-italics), and when classifying using the advanced level, IPC symbols are printed or displayed in italics.

160. The invention information symbols are printed or displayed in bold font style and the additional information symbols are printed or displayed in regular font style (i.e., non-bold).

161. Sample representations of IPC classification symbols and indicators are given below for the same document when classified using the advanced level, the core level or both the advanced level and the core level.

- (a) When classified in the advanced level:

Int.Cl.  
***B60K 5/00*** (2006.01)  
***B60K 6/20*** (2007.10)  
*H04H 20/48* (2008.01)

Where: ***B60K 5/00*** indicates invention information (bold font style) classified using the advanced level classification (italics font style);  
***B60K 6/20*** indicates invention information (bold font style) classified using the advanced level classification (italics font style);  
*H04H 20/48* indicates additional information (regular font style, i.e., non-bold) classified using the advanced level classification (italics font style);

- (b) When classified in the core level:

Int. Cl. (2009)  
**B60K 5/00**  
**B60K 6/00**  
H04H 20/44

Where: **B60K 5/00** indicates invention information (bold font style) classified using the core level classification (regular font style, i.e., non-italics);  
**B60K 6/00** indicates invention information (bold font style) classified using the core level classification (regular font style, i.e., non-italics);  
H04H 20/44 indicates additional information (regular font style, i.e., non-bold) classified using the core level classification (regular font style, i.e., non-italics);

(c) When invention information is classified in the advanced level and additional information in the core level:

Int. Cl. (2009)  
**B60K 5/00** (2006.01)  
**B60K 6/20** (2007.10)  
H04H 20/44

Where: ***B60K 5/00*** indicates invention information (bold font style) classified using the advanced level classification (italics font style);  
***B60K 6/20*** indicates invention information (bold font style) classified using the advanced level classification (italics font style);  
H04H 20/44 indicates additional information (regular font style, i.e., non-bold) classified using the core level classification (regular font style, i.e., non-italics).

### **XIII. SPECIAL CLASSIFICATION PLACES FOR SUBJECT MATTER NOT ADEQUATELY COVERED IN THE IPC**

162. Normally, invention information disclosed in patent documents is adequately covered by one or more classification places. Nevertheless, due to the development of technology, it is inevitable that existing classification places may not adequately provide for all newly disclosed subject matter. Because it is necessary for this subject matter to be classified, special classification places have been created with titles that do not contain technical limitations. These classification places gather these new types of subject matter until technically defined classification places covering such subject matter can be created.

163. When the invention information in a patent document is not adequately covered by any of the subclasses of the most appropriate section, the invention information is classified in the special residual main group of that section. Each special residual main group is designated by “99Z 99/00” preceded by its section symbol. All of the special residual classes, subclasses and main groups have the same title.

For example (Section A):

A99Z 99/00 Subject matter not otherwise provided for in this section.

Each of the special residual subclasses has the following standard note:

“This subclass covers subject matter that (a) is not provided for, but is most closely related to, the subject matter covered by the subclasses of this section, and (b) is not covered by any subclass of any other section.”

164. Whenever invention information is covered by a subclass, but is not covered by any of its groups with specific titles, the invention information is classified in a residual main group of that subclass. To facilitate locating these main groups, such residual main groups, where they are necessary, are placed at the end of the subclass scheme and designated by the standard group symbol 99/00 whenever possible. Before classifying in a residual main group, classification in another subclass or in other main groups of the same subclass should be thoroughly considered. Due respect should be given to the scope of such places as explained in paragraphs 92 to 99, above, which describe some situations where subject matter is classified in places whose titles do not explicitly provide for it. Combinations of subject matter covered by two or more different main groups should not be classified in a residual main group, unless indicated otherwise. The normal procedures for classification of combination-type subject matter are described in paragraphs 145, 150 and 154, above.

165. If for specific invention information no residual main group exists in the appropriate subclass, classification is made in the special residual main group of the appropriate section (see paragraph 163, above).

## **XIV. USE OF THE IPC FOR SEARCH PURPOSES**

*Different kinds of search; Preparing for a search; Defining a field of search*

### **DIFFERENT KINDS OF SEARCH**

166. Nearly all published patent documents are provided with IPC symbols. The IPC may be used for various kinds of search in paper documentation or in electronic databases, such as:

- (a) **Novelty Search** – The object of a “Novelty Search” is to determine the novelty or lack of novelty of the invention claimed in a patent application. The aim of the search is to discover relevant prior art in order to establish whether an invention has or has not already been disclosed at a date earlier than the reference date for the search.
- (b) **Patentability or Validity Search** – A “Patentability or Validity Search” is made to locate documents relevant to the determination not only of novelty but also of other criteria of patentability, for example, the presence or absence of an inventive step (i.e., that the alleged invention is or is not obvious) or the achievement of useful results or technical progress. This type of search should cover all technical fields which may contain material pertinent to the invention. Novelty and patentability searches are mainly carried out by industrial property offices with respect to their patent examination procedures.
- (c) **Infringement Search** – The object of an “Infringement Search” is to locate patents and published patent applications which might be infringed by a given industrial activity. In this type of search the aim is to determine whether an existing patent gives exclusive rights covering that industrial activity or any part of it.
- (d) **Informative Search** – An “Informative Search” is made to familiarise the inquirer with the state of the art in a particular field of technology. It is also often referred to as a “state-of-the-art search”. This kind of search provides background information for research and development activities and allows to identify which patent publications already exist in the given field. Further reasons for this kind of search could be the need to determine alternative technologies which may replace a technology applied or to evaluate a specific technology which is being offered for licence or which is being considered for acquisition.

### **PREPARING FOR A SEARCH**

167. Before making a search, it is essential to establish clearly the technical subject of the search. For certain types of search, for example, a “Patentability Search”, it may be necessary to search for more than one technical subject. Having formulated a clear statement of the technical subject to be searched, the searcher has to identify the proper place for this subject in the IPC. Consideration of the technical subject in question will allow to identify a word or words (technical terms) which cover broadly or specifically the field of technology with which this subject is clearly concerned.

### **DEFINING A FIELD OF SEARCH**

168. Having identified technical terms relating to the technical subject, it is advisable to approach the system by using the Catchword Index to the IPC or the term searching of the electronic publication, enabling to search for technical terms in the text of the IPC itself or in the Catchword Index to the IPC. The Catchword Index may indicate to the searcher a precise group of the IPC, but often there can only be an indication of the main group or possibly the subclass of the IPC. The Introduction to the Catchword Index includes a suggested mode of use. It should be noted that the Catchword Index in no sense replaces any part of the IPC and must not be read as modifying the effect of anything in the latter.

169. If the use of the Catchword Index or term search in the electronic publication does not lead to a pertinent field of search, the searcher should scan the eight sections of the IPC, selecting possible subsections and classes by title. Then it would be necessary to turn to the selected class and subclass titles thereunder and note those subclasses which appear to include the subject in question. The subclass which most satisfactorily covers the subject should be selected.

170. An alternative method of determining an appropriate subclass could be text searching by identified technical terms in databases containing full texts or abstracts of patent documents, followed by a statistical analysis of classification symbols assigned to retrieved documents. Subclasses which most often appear in classification symbols of the documents should be considered for inclusion in the field of search.

171. After selection of the appropriate subclass, it is necessary to check the references and notes appearing in the selected subclass title for a more precise indication of the subclass contents and for identifying borderlines between related subclasses, which in turn may indicate that the location of the desired subject is elsewhere. If a classification definition is available for the selected subclass, it should be studied in detail because classification definitions give the most precise indication of the scope of subclasses.

172. At the next step, all main groups in the subclass should be scanned to locate the most appropriate main group, in the light of its title and any existing notes and references. For a quick navigation in the subclass, the subclass index appearing at the beginning of the subclass may be used.

173. Having determined the appropriate main group, the searcher should scan its one-dot subgroups and identify the group which seems most appropriate to the subject in question. If this one-dot group has subordinate groups with two or more dots, the group to be selected for search is the most appropriate group which is most indented (i.e., has most dots).

174. If the chosen group includes a precedence reference to another group, for example, if the chosen group is in the form "7/16 ..... (7/12 takes precedence)", it may be necessary to search the group taking precedence as well as the chosen group, i.e., in the example the group 7/12 as well as 7/16, since documents including in addition to the subject of group 7/16 that of group 7/12 will be classified in the latter. If, on the other hand, the subject in question includes that of group 7/12 as well as that of group 7/16, it is not generally necessary to search group 7/16.

Example: C08F 2/04 Polymerisation in solution (2/32 takes precedence)  
C08F 2/32 Polymerisation in water-in-oil emulsions

Polymerisation characterised by taking place in a particular solvent may be found in either of these places, and therefore it should be necessary to search in both these places; however, if the polymerisation in question cannot take place in a water-in-oil emulsion it should not be necessary to search 2/32.

175. If the chosen group is in a subclass, or a part thereof, governed by an overall precedence rule, for example, a last place priority rule, special attention should be given to the scope of groups taking precedence or priority, in order to identify other groups possibly covering aspects of the technical subject to be searched.

176. After completing the search in the chosen group, the searcher can consider hierarchically higher groups (i.e., having fewer dots) under which it is indented, since a wider subject which includes the subject in question may be classified there.

177. In the areas of the IPC, where multiple classification or indexing is applied, it is recommended to use for searching first a combination of classification symbols or classification symbols and indexing codes associated therewith so as to make a search query more specific. For obtaining complete search results, the search query could be broadened afterwards by using the most pertinent classification symbols alone.

178. Failure to retrieve pertinent documents may indicate that the proper place in the IPC has not been located. In such a case, the technical subject in question should be expressed differently and the procedure of defining the field of search should be reconsidered.

## XV. MASTER CLASSIFICATION DATABASE

179. The Master Classification Database (MCD) is a database storing all bibliographic data elements (such as IPC symbols, applicant and inventor names, titles, abstracts and priorities for family information) of patent documents at their various publication levels. The database stores in principle all collections as far as made available for inclusion in the MCD. The database also contains family information.

180. During the reform of the IPC this database was established for the storage of the IPC symbols allotted to patent documents as well as for the management of the updating of these symbols after each revision of the IPC. The documents included in the MCD are classified according to the current version in force of the IPC. This means that patent searches can be conducted using only the current version of the Classification and eliminates the need to rely on superseded IPC editions. During revision of the schemes, the work distribution for offices participating in the reclassification of relevant files is done using the database. The principles of the operation of the MCD are explained in the “Concept of Operations (CONOPS)” which is available on the IPC website.

181. The MCD is a management database to which public access is not possible. Copies of the database can be provided for updating the content of other databases; indirect access is therefore possible via databases incorporating MCD data via the Internet sites of WIPO and other intellectual property offices and via commercial hosts.

182. *[Deleted]*

## XVI. GLOSSARY

### CLASSIFICATION TERMS AND EXPRESSIONS

183. This part of the glossary presents a list of terms or expressions relating to principles and rules of the Classification, as requiring some explanation of their meaning and use.

addition to the state of the art	=	the difference between the subject matter in question and the state of the art.
aspect	=	distinguishing perspective from which technical information, particularly invention information, may be viewed and according to which the information may be classified (for example, “Categories of subject matter” are possible “aspects” of an invention)
basic subject matter of a classification place	=	the subject matter explicitly stated as covered by the title and definition of a classification place, i.e., the subject matter itself as opposed to a combination of which it is a part.
borderline (line)	=	a clearly stated boundary between classification places
categories of subject matter	=	the principal divisions of invention information: <ul style="list-style-type: none"><li>– methods of using a product or performing a non-manufacturing process or activity;</li><li>– products, for example, articles of manufacture;</li><li>– processes of making a product;</li><li>– apparatus; and</li><li>– materials from which a product is made.</li></ul> These categories are determined contextually. As examples, (1) a product of a process of manufacture can itself be a material from which a different product is made; (2) a process of making a product can simultaneously be a method of using a material to make the product.

- combination = a technical “thing” as a whole that consists of two or more steps or components put together for a purpose. For example:
- a three-step manufacturing process is a combination of three steps that together produce a product;
  - a five-component chemical composition is a combination of the five components that may have a property that each component alone will not have; and
  - a wheelchair is a combination of a chair and a wheel assembly designed to transport a person in a sitting position.
- The terms combination and subcombination, however, are relative terms. Thus, the first example might be a subcombination of a larger combination with a fourth step. In the third example, the wheel assembly is itself a combination of a tyre, spokes, and rim as well as a subcombination of the wheelchair.
- embodiment = a specific, disclosed example of how an inventive concept, that is more generally stated elsewhere in the disclosure, can be put into practice. See Genus.
- genus = a grouping of embodiments within a category of subject matter which share a common limitation.
- A subgenus (i.e., species) is a subgrouping within a genus.
- An ultimate species is the most specific embodiment within a genus, i.e., an embodiment with no explicit variables. This expression is primarily used in the chemical arts.
- Example:  
Considering “inorganic compounds” as a genus, “inorganic salts” or “sodium salts” would be a “subgenus” or “species”, and “sodium chloride” would be an “ultimate species”.
- group branch (group array) = a segment of a subclass consisting of
- a particular main group or subgroup, and
  - all the subgroups indented under it.
- indentation/indent = a graphic representation of the hierarchical relationships of groups within classification schemes. Indentation indicates subdivision of part of the subject matter covered by a group into its subgroup(s). The dependent relationship of a subgroup to its “parent” group is shown in a classification scheme by positioning the subgroup title below, to the right of, and with one more dot preceding its title than its “parent” group.
- Example:  
H01S 3/00 Lasers  
    3/09 • Processes or apparatus for excitation, e.g. pumping  
    3/091 • • by optical pumping  
    3/094 • • • by coherent light
- In this example, the subgroup H01S 3/094 is successively dependent on subgroups H01S 3/091, H01S 3/09 and on main group H01S 3/00 under which it is indented. Without the use of hierarchical levels and indentation, subgroup H01S 3/094 would require a title such as: “Processes or apparatus for excitation of lasers using optical pumping by coherent light”.

invention information (in a patent document)	=	all novel and unobvious subject matter in its total disclosure (for example, description, drawings, claims) that represents an addition to the state of the art in the context of the state of the art (for example, a solution to a stated problem). “Invention information” should usually be determined using the claims of the patent document for guidance.
inventive thing	=	means any part of the invention information which is novel and unobvious in itself.
object	=	any tangible technical matter, for example, article of manufacture, apparatus, piece of material.
obligatory classification	=	the classification necessary to completely represent the invention information of a patent document.
parallel groups (coordinate groups)	=	groups that depend from the same immediate classification place (i.e., “parent” subclass or group) and are at the same hierarchical (indentation) level.  Example: all main groups in the same subclass are parallel (coordinate).
residual main group	=	A main group, within a subclass scheme, that is not defined by any technical features and that provides for the subject matter not covered by any of the other main groups of the subclass.
standardised sequence of groups	=	the arrangement of groups following the principle of proceeding from more complex to less complex subject matter and from specialised to non-specialised subject matter of the subclass.
subclass scheme	=	the ordered arrangement of groups within a subclass.
subcombination	=	a subset of the steps or components forming an entire “thing”. A subcombination may include one or more components or steps.  Examples of subcombinations are: <ul style="list-style-type: none"><li>– two consecutive steps of a three-step manufacturing process;</li><li>– a composition consisting only of some of the components of a more complex composition; and</li><li>– wheels for a wheelchair.</li></ul> A subcombination may itself consist of further subcombinations.
the state of the art	=	the collection of all technical subject matter that has already been placed within public knowledge.
thing	=	means any technical subject matter, tangible or not, such as: <ul style="list-style-type: none"><li>– methods of using a product or performing a non-manufacturing operation;</li><li>– products (articles of manufacture);</li><li>– processes of making a product;</li><li>– apparatus; and</li><li>– materials from which a product is made.</li></ul>

## TECHNICAL TERMS AND EXPRESSIONS USED IN THE CLASSIFICATION

184. This part of the Glossary presents a list of technical terms or expressions selected from those used in the Classification, as requiring some explanation of their meaning and use, for example, because of a need for choice between alternative meanings or when the terms are used in a more precise or restricted manner than their common usage. The explanations given in the Glossary should not be regarded as rigid definitions. The meaning of a term or an expression should always be considered in the context of the technical matter dealt with.

185. Attention is drawn to the definitions of certain words and expressions which are set forth earlier in the Guide, for example, in paragraphs 31 to 42, above.

186. Any definitions given in the Classification override, for the places concerned, the explanations given in this Glossary.

187. The following abbreviations are used:

(A) adjective; (N) = noun; (V) = verb

adaptation	=	1. modification to meet certain conditions; 2. a thing embodying such modification.
apparatus	=	a category of subject matter which is a machine or device, described in terms of its functional capabilities or structural features, that is used – to make a product, or – to carry out a non-manufacturing process or activity.
arrangement of	=	assemblage or relative disposition. This term may cover modification of one of the objects concerned, but only if such modification is not of interest apart from the arrangement.
arrangements for	=	any means of fulfilling a specified function, normally comprising a combination of things which may be modified, for example, F16D 23/02 “Arrangements for synchronisation”.
aspect	=	distinguishing perspective from which technical information, particularly invention information, may be viewed and according to which the information may be classified (for example, “Categories of subject matter” are possible “aspects” of an invention).
characteristic (n)	=	distinguishing feature.
chemical composition	=	a product formed from two or more discrete chemical materials (for example, compounds or elements), which materials are not chemically bonded to each other. An alloy is usually a composition, but may in some instances (for example, intermetallics, etc.) be a compound.
chemical compound	=	a chemical compound is a substance formed of atoms attached to each other via chemical bonds.
control (v)	=	affect a variable (for example, the speed of an engine) in any way, for example, prevent variation (see also definition in class G05).
engine	=	a machine for producing mechanical power, for example, for rotating or reciprocating a member, from pressure energy of a fluid.
essential	=	a characteristic is essential for classification in a given group if its absence would necessitate its classification in a different group.

feature	=	any attribute of a thing, for example, its shape, its purpose, its manner of use, any part or quality.
fluid (a)	=	having the properties of a gas or liquid.
fluid (n)	=	any gas or liquid.
gearing	=	mechanical, hydraulic, electric, or other means for transmitting mechanical motion or force.
handling	=	dealing with material or objects in any way without intentionally or essentially altering any property, even temporarily (for example, without deforming, heating, electrifying), for example, transporting, storing, positioning, dispensing, winding, loading.
laminate	=	material of substantially uniform thickness composed of layers in more or less continuous contact and bonded together, for example, plywood, The layers may be discontinuous, but not gapped.
layered product	=	material composed of strata (continuous, discontinuous, or with gaps) of any form (for example, honeycomb, corrugated) secured together in any way. Normally of substantially uniform thickness overall (i.e., ignoring local variations such as are produced by a corrugated face layer); may be in the form of an article, for example, a container. This term is of wider scope than “laminate”, covering material with voids between or in any layer.
manually	=	by hand; by any other part of the human body unless a more restricted meaning is clearly understood.
material	=	a category of subject matter that embraces any substance, intermediate product, or composition of matter which is acted upon to make a product.
measure	=	enable a value, or its relation to a datum, to be determined (see also definition in class G01).
monitor (v)	=	maintain a continuous or periodical watch (human or instrumental) on, to enable action to be taken or initiated, or a signal to be given, if undesired conditions occur.
motor	=	an apparatus for producing mechanical motion from any other form of energy; the motion may be continuous or in separate strokes. This term covers “engine”.
of interest	=	having features which are of importance in the stated context.
pertinent	=	of a nature which is important to the field in question, for example, in F02M 17/00 (“Carburettors having pertinent characteristics...”) the characteristics must be peculiar to the purpose of supplying combustion engines, in accordance with the subclass title.
plant	=	a combination of machines, apparatus, etc. to produce a desired result, in which each machine, etc. performs a function that can be dealt with separately and is often studied individually, as opposed to “apparatus”, in which only the overall function is normally of interest, though parts may also be of interest constructionally. For example, ore-treating plant comprising crusher, conveyer, screen and dust separator, or engine plant comprising two engines related in respect of steam supply or drive.

plastic (a)	=	more or less easily deformable, locally or as a whole, by force in any direction, to assume and retain any desired shape.
plastics (a)	=	of plastics.
plastics (n)	=	macromolecular compounds or compositions based on such compounds, for example, synthetic resins.
preparation	=	<ol style="list-style-type: none"><li>1. the making of any kind of substance, material, compound or composition;</li><li>2. pretreatment of a semi-finished material or article for subsequent treatment, etc.</li><li>3. composition for a particular purpose, for example medicinal.</li></ol>
product	=	a category of subject matter that is an article or composition of matter resulting from a process and defined in terms of its structural features or its physical or chemical properties.
stock	=	a piece (which may be of indefinite length) of solid material in a particular form resulting from some preliminary operation (a semi-finished product), for use in an operation in which it is divided up (before or after some shaping or other operation) in the production of articles.
treatment	=	use of a process, or series of processes, to produce a desired effect on material or objects. A treatment may alter the nature of the material or the objects completely (for example, chemical treatment); otherwise its purpose is usually to alter some property (for example, by heating, coating, polishing, sterilising, magnetising), without altering overall form, though the term also covers changing shape. The effect may be temporary or permanent, and may apply to the whole of an object or only part of it.
use (n)	=	<ol style="list-style-type: none"><li>1. purpose for which, or field of art in which, a thing is employed;</li><li>2. fact that a thing is employed, or the manner in which it is employed.</li></ol>
value	=	magnitude or numerical expression of a variable or of a measurable constant.
variable (n)	=	a measurable quantity or property which may, but need not, change, for example, length, speed, voltage, colour. Since such a quantity or property may, for a given entity or in given circumstances, remain constant in value, means for measurement of a variable are in general the same as for measurement of a constant of the same nature, and reference to “a variable” must be interpreted accordingly (see Note to section G).
working-up	=	treating substances to obtain them in desired final state or form, for example, colouring by incorporating pigments, granulating, producing sheets or articles.

[Technical Annexes follow]

## TECHNICAL ANNEXES

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**ANNEX 1E    A01B            [ Project-Rapporteur : M031/IB ]    <CE40>**

CL M Guidance **Parts, details or accessories of agricultural machines or implements, in general**  
 heading  
 51/00-  
 75/00

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**ANNEX 2E    A01D            [ Project-Rapporteur : M031/IB ]    <CE40>**

CL M Guidance **Hand implements**  
 heading  
 1/00-  
 11/00

CL M **1/00 Hand-cutting implements for harvesting** (devices for picking apples or like fruits **A01D 46/24**; hedge trimming means **A01G 3/04**)

CL M **11/00 Other hand implements** (devices for picking apples or like fruits **A01D 46/24**)

CL M Guidance **Harvesters or mowers for grass, cereals or other crops**  
 heading  
 34/00-  
 51/00

CL M Guidance **Components of harvesters or mowers for grass or cereals**  
 heading  
 57/00-  
 69/00

CL M Guidance **Haymakers; Crop conditioners**  
 heading  
 76/00-  
 84/00

CL M **76/00 Haymakers with tines that are stationary with respect to the machine during operation but that may be liftable for dumping** (haymakers combined with mowers **A01D 43/04**)

CL M **78/00 Haymakers with tines moving with respect to the machine** (haymakers combined with mowers **A01D 43/04**)

CL M **84/00 Haymakers not provided for in a single one of groups **A01D 76/00-A01D 82/00**** (haymakers combined with mowers **A01D 43/04**)

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ANNEX 3E    A01D            [ Project-Rapporteur : M099/IB ]    <CE40>

CL   N   93/00 *Harvesting apparatus not provided for in other groups of this subclass*

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ANNEX 4E    A01F            [ Project-Rapporteur : M031/IB ]    <CE40>

CL   M   Guidance Baling of straw, hay or the like  
heading  
13/00-  
15/00

CL   M   Guidance Accessories for threshing machines or baling presses  
heading  
17/00-  
21/00

CL   M   21/00 **Devices for threshing machines or baling presses for protecting human beings** (in combines [A01D 75/20](#); safety devices in general [F16P](#))

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ANNEX 5E    A01H            [ Project-Rapporteur : M032/IB ]    <CE40>

CL   M   1/06 · Processes for producing mutations, e.g. treatment with chemicals or with radiation (specific mutations prepared by genetic engineering on plant cell or plant tissues [C12N 15/00](#))

CL   M   3/00 **Processes for modifying phenotypes** ([A01H 4/00](#) takes precedence)

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ANNEX 6E    A01J            [ Project-Rapporteur : M031/IB ]    <CE40>

CL   M   Guidance Milking  
heading  
1/00-  
9/00

CL   M   5/00 **Milking machines or devices** ([A01J 1/00](#), [A01J 3/00](#) take precedence; milking stations [A01K 1/12](#))

CL   M   7/00 **Accessories for milking machines or devices** (milking stations [A01K 1/12](#))

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**ANNEX 7E    A01K            [ Project-Rapporteur : M031/IB ]    <CE40>**

CL M Note This subclass covers :

- A01K
- equipment for the care, culture or rearing of all animals or for obtaining their products, unless provided for elsewhere, e.g. milking **A01J**, shoeing animals **A01L**, veterinary devices **A61D**, devices in connection with harnesses **B68B**;
  - methods of breeding animals or new animal breeds. [5]

CL M Guidance **Animal husbandry in general, especially cattle-raising**

heading

1/00-

29/00

AL M 1/12 • Milking stations

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**ANNEX 8E    A01K            [ Project-Rapporteur : C440/US ]    <CE40>**

CL M **15/00 Devices for taming animals, e.g. nose-rings, hobbles; Devices for overturning animals in general; Training or exercising equipment; Covering boxes** (devices for veterinary purposes **A61D 3/00**)

AL M 15/02 • Training or exercising equipment, e.g. mazes or labyrinths for animals (**A01K 15/04** takes precedence)

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**ANNEX 9E    A01K            [ Project-Rapporteur : M031/IB ]    <CE40>**

CL M Guidance **Fishing**

heading

69/00-

81/00

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**ANNEX 10E    A01K            [ Project-Rapporteur : M109/EP ]    <CE40>**

CL M **69/00 Stationary catching devices for fishing**

CL M **71/00 Floating fishing nets**

CL M **73/00 Drawn fishing nets**

CL M **74/00 Other catching nets or the like for fishing**

CL M **75/00 Accessories for fishing nets; Details of fishing nets, e.g. structure**

CL M **77/00 Landing-nets for fishing; Landing-spoons for fishing**

- CL M 80/00 **Harvesting oysters, mussels, sponges or the like** (fishing nets [A01K 73/00](#), [A01K 74/00](#); dredgers [E02F](#))
- CL M 85/00 **Artificial bait for fishing**
- CL M 87/00 **Fishing rods**
- CL M 89/00 **Fishing reels**
- CL M 91/00 **Fishing lines**
- CL M 97/00 **Accessories for angling** (fish stringers [A01K 65/00](#); landing-nets or landing-spoons for fishing [A01K 77/00](#))
- 

ANNEX 11E A01N [ Project-Rapporteur : M032/IB ] <CE40>

- CL M Title **PRESERVATION OF BODIES OF HUMANS OR ANIMALS OR PLANTS OR PARTS THEREOF** (preservation of food or foodstuff [A23](#)) ; **BIOCIDES, e.g. AS DISINFECTANTS, AS PESTICIDES, AS HERBICIDES** (preparations for medical, dental or toilet purposes which kill or prevent the growth or proliferation of unwanted organisms [A61K](#)) ; **PEST REPELLANTS OR ATTRACTANTS; PLANT GROWTH REGULATORS** (mixtures of pesticides with fertilisers [C05G](#))
- CL M 1/00 **Preservation of bodies of humans or animals, or parts thereof**
- CL M 3/00 **Preservation of plants or parts thereof, e.g. inhibiting evaporation, improvement of the appearance of leaves** (preservation or chemical ripening of harvested fruit or vegetables [A23B 7/00](#)) ; **Grafting wax**
- CL M 25/00 **Biocides, pest repellants or attractants, or plant growth regulators, characterised by their forms, or by their non-active ingredients or by their methods of application** (fungicidal, bactericidal, insecticidal, disinfecting or antiseptic paper [D21H](#)) ; **Substances for reducing the noxious effect of the active ingredients to organisms other than pests**
- CL M 25/18 · Vapour or smoke emitting compositions with delayed or sustained release
- 

ANNEX 12E A43D [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Title **MACHINES, TOOLS, EQUIPMENT OR METHODS FOR MANUFACTURING OR REPAIRING FOOTWEAR** (sewing [D05B](#))
- CL M Guidance [Making or fastening soles, heels, or welts, or preparing same for fastening to the shoe](#); [Carrying out other operations subsequent to lasting](#); [Turning](#)  
25/00-  
86/00
-

ANNEX 13E A45B [ Project-Rapporteur : M031/IB ] <CE40>

CL M Title **WALKING STICKS** (walking aids, e.g. sticks, for blind persons [A61H 3/06](#); walking sticks formed as supports or tripod stands [F16M 13/08](#)) ; **UMBRELLAS; LADIES' OR LIKE FANS** (cane or umbrella stands or holders [A47G 25/12](#))

CL M Note In this subclass, the following terms are used with the meaning indicated:  
A45B

- "umbrellas" also covers sunshades similar in construction to umbrellas;
- "*sticks*" covers walking sticks and sticks for umbrellas. [new]

CL M Guidance [Walking sticks; Sticks for umbrellas](#)  
heading  
1/00-  
9/00

CL M Guidance [Umbrellas](#)  
heading  
11/00-  
25/00

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ANNEX 14E A45D [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance [Devices for cleaning the hair or the scalp, drying the hair or colouring the hair](#)  
heading  
19/00-  
20/00

CL M Guidance [Containers or accessories specially adapted for handling toilet or cosmetic substances](#)  
heading  
33/00-  
40/00

CL M 37/00 **Sachet pads specially adapted for liquid toilet or cosmetic substances**

CL M 40/00 **Casings or accessories specially adapted for storing or handling solid or pasty toilet or cosmetic substances, e.g. shaving soap, lipstick, make-up** (features common to containers for handling powdery or liquid toilet or cosmetic substances [A45D 33/00-A45D 37/00](#); cosmetic or like preparations [A61K 8/00](#), [A61Q](#); features common to writing or drawing implements [B43](#); sample tables or the like [G09F 5/00](#))

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ANNEX 15E A47B [ Project-Rapporteur : M031/IB ] <CE40>

CL M Title **TABLES; DESKS; OFFICE FURNITURE; CABINETS; DRAWERS; GENERAL DETAILS OF FURNITURE** (jointing of furniture [F16B 12/00](#))

- CL M Guidance Tables or desks characterised by adaptation for particular purposes  
heading  
17/00-  
37/00
- CL M **23/00 Bed-tables** (operating tables **A61G 13/00**) ; **Trays; Reading-racks; Book-rests**
- CL M **37/00 Tables adapted for other particular purposes** (flower tables **A47G 7/04**; operating tables **A61G 13/00**; laboratory tables **B01L 9/02**; work tables **B25H 1/02**)
- CL M Guidance Structural features of cabinets, racks, shelf units or similar furniture; Similar features of built-in cupboards  
heading  
43/00-  
57/00
- CL N Guidance Special adaptations of cabinets racks, shelf units or similar furniture; Similar features of built-in cupboards  
heading  
61/00-  
81/00
- CL M **81/00 Cabinets, racks or shelf units specially adapted for other particular purposes, e.g. for storing guns or skis** (racks for dispensing merchandise **A47F 1/00**; showcases or show cabinets **A47F 3/00**; racks specially adapted for workshops **B25H 3/04**; peculiar to housing recording apparatus or records therefor **G11B 33/02**; peculiar to housing electrical apparatus or installations **H05K**)
- CL M Guidance Combined or convertible furniture  
heading  
83/00-  
87/00
- CL M **85/00 Furniture convertible into other kinds of furniture** (convertible chairs, stools or benches **A47C 13/00**; into beds **A47C 17/52**; into billiard tables **A63D 15/04**)
- CL D Guidance < Deleted / Supprimé >  
heading /  
Rubrique  
d'orientation  
88/00-  
96/00

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ANNEX 16E A47C [ Project-Rapporteur : M031/IB ] <CE40>

- CL M **25/00 Unframed spring units specially adapted for sofas or beds**
-

ANNEX 17E A47H [ Project-Rapporteur : M099/IB ] <CE40>

CL M Title **FURNISHINGS FOR WINDOWS OR DOORS** (concerned with the functioning of the door or window **E05**; roller blinds **E06B**; special arrangements or measures in connection with doors or windows, e.g. for ventilation or sealing, **E06B 7/00**)

CL D 33/00 (transferred to **A47H 99/00** )

CL N **99/00** *Subject matter not provided for in other groups of this subclass*

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ANNEX 18E A47L [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance **Suction cleaners**  
heading  
5/00-  
9/00

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ANNEX 19E A61 [ Project-Rapporteur : M014/IB ] <CE40>

CL M Title **HEALTH; LIFE-SAVING; AMUSEMENT**

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ANNEX 20E A61B [ Project-Rapporteur : M032/IB ] <CE40>

CL M Title **DIAGNOSIS; SURGERY; IDENTIFICATION** (analysing biological material **G01N**, e.g. **G01N 33/48**)

CL M 1/24 · for the mouth, i.e. stomatoscopes, e.g. with tongue depressors (tongue depressors per se **A61B 13/00** ) ; Instruments for opening or keeping open the mouth (combined with saliva removers **A61C 17/10**)

CL M **3/00** **Apparatus for testing the eyes; Instruments for examining the eyes** (eye inspection using ultrasonic, sonic or infrasonic waves **A61B 8/10**)

AL M 3/04 · · · Trial frames; Sets of lenses for use therewith

AL M 3/125 · · · with contact lenses

CL M 5/0215 · · · by means inserted into the body

AL M 5/025 · · · · within occluders, e.g. responsive to Korotkoff sounds

CL M 5/04 · Measuring bioelectric signals of the body or parts thereof

- CL M 5/055 · · involving electronic [EMR] or nuclear [NMR] magnetic resonance, e.g. magnetic resonance imaging
- CL M 5/103 · Measuring devices for testing the shape, pattern, size or movement of the body or parts thereof, for diagnostic purposes ([A61B 5/08](#) takes precedence; measuring instruments specially adapted for dentistry [A61C 19/04](#))
- CL M 5/11 · · Measuring movement of the entire body or parts thereof, e.g. head or hand tremor, mobility of a limb (for measuring pulse [A61B 5/02](#))
- CL M 5/117 · Identification of persons, e.g. finger-printing, foot-printing, impression techniques (dental impression cups or articulators [A61C 9/00](#), [A61C 11/00](#); recognising fingerprints [G06K 9/00](#); identification of persons by analysing their voice or speech [G10L 17/00](#))
- CL M 5/16 · Devices for psychotechnics (using teaching or educational appliances [G09B 1/00-G09B 7/00](#)) ; Testing reaction times
- CL M 5/22 · Ergometry; Measuring muscular strength or the force of a muscular blow
- CL M **6/00 Apparatus for radiation diagnosis, e.g. combined with radiation therapy equipment** (instruments measuring radiation intensity for application in the field of nuclear medicine, e.g. in vivo counting, [G01T 1/161](#); apparatus for taking X-ray photographs [G03B 42/02](#))
- CL M 6/02 · Devices for diagnosis sequentially in different planes; Stereoscopic radiation diagnosis
- CL M 6/03 · · Computerised tomographs (echo-tomography [A61B 8/14](#))
- CL M 6/10 · Application or adaptation of safety means
- CL M **8/00 Diagnosis using ultrasonic, sonic or infrasonic waves**
- CL M 8/06 · Measuring blood flow
- CL M **10/00 Other methods or instruments for diagnosis, e.g. for vaccination diagnosis; Sex determination; Ovulation-period determination; Throat striking implements**
- CL M 17/02 · for holding wounds open; Tractors
- CL M 17/04 · · for suturing wounds; Holders or packages for needles or suture materials
- CL M 17/06 · · · Needles; Holders or packages for needles or suture materials (puncturing needles [A61B 17/34](#); hypodermic needles [A61M 5/32](#))
- AL M 17/10 · · for applying or removing wound clamps; Wound clamp magazines
- CL M 17/12 · for ligaturing or otherwise compressing tubular parts of the body, e.g. blood vessels, umbilical cord
- AL M 17/135 · · · inflatable
- CL M 17/14 · Surgical saws (tooth saws [A61C 3/12](#))
- CL M 17/20 · for vaccinating or cleaning the skin previous to the vaccination (apparatus for injections [A61M 3/00](#), [A61M 5/00](#))

- CL M 17/22 • Implements for squeezing-off ulcers or the like on inner organs of the body; Implements for scraping-out cavities of body organs, e.g. bones; for invasive removal or destruction of calculus using mechanical vibrations; for removing obstructions in blood vessels, not otherwise provided for
- CL M 17/225 • for extracorporeal shock wave lithotripsy [ESWL], e.g. by using ultrasonic waves
- CL M 17/42 • Gynaecological or obstetrical instruments or methods
- AL M 17/425 • • for reproduction or fertilisation
- AL M 17/46 • • Embryotomes
- CL M 17/50 • Instruments, other than pincettes or toothpicks, for removing foreign bodies from the human body
- CL M 17/56 • Surgical instruments or methods for treatment of bones or joints; Devices specially adapted therefor
- CL M 17/60 • • • for external osteosynthesis, e.g. distractors, contractors
- CL M 18/04 • by heating (by applying electromagnetic radiation [A61B 18/18](#); devices for heating specific reflex points of the body within cell-life limits [A61H 39/06](#))
- AL M 19/04 • Operating gloves; Finger-stalls for operating; Devices for treating them, e.g. cleaning, powdering
- AL M 19/08 • Surgical drapes

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ANNEX 21E A61C [ Project-Rapporteur : M031/IB ] <CE40>

CL M Title **DENTISTRY; APPARATUS OR METHODS FOR ORAL OR DENTAL HYGIENE**  
(non-driven toothbrushes [A46B](#); preparations for dentistry [A61K 6/00](#); preparations for cleaning the teeth or mouth [A61K 8/00](#), [A61Q 11/00](#))

CL M Subclass  
index

DENTAL SURGERY	<a href="#">1/00-8/00</a>
DENTAL PROSTHETICS; ARTIFICIAL TEETH	<a href="#">9/00-13/00</a>
DEVICES FOR CLEANING OF TEETH OR MOUTH	<a href="#">15/00</a> , <a href="#">17/00</a>
DENTAL AUXILIARY APPLIANCES	<a href="#">19/00</a>

CL M Guidance [Dental prosthetics; Artificial teeth](#)  
heading  
9/00-  
13/00

CL M **9/00** Impression methods specially adapted for dental prosthetics; Impression cups therefor

CL M Guidance [Tooth-cleaning or mouth-rinsing devices](#)  
heading  
15/00-  
17/00

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ANNEX 22E A61F [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance [Filters](#); [Devices providing patency to tubular structures](#); [Prostheses](#); [Accessories](#)  
heading  
2/00-  
4/00

---

ANNEX 23E A61G [ Project-Rapporteur : M031/IB ] <CE40>

CL M Title **TRANSPORT, PERSONAL CONVEYANCES, OR ACCOMMODATION  
SPECIALLY ADAPTED FOR PATIENTS OR DISABLED PERSONS; OPERATING  
TABLES OR CHAIRS; CHAIRS FOR DENTISTRY; FUNERAL DEVICES**  
(embalming corpses [A01N 1/00](#); chairs or beds in general [A47C](#); appliances for aiding  
patients or disabled persons to walk [A61H 3/00](#))

---

ANNEX 24E A61G [ Project-Rapporteur : M032/IB ] <CE40>

CL M Title **TRANSPORT, PERSONAL CONVEYANCES, OR ACCOMMODATION  
SPECIALLY ADAPTED FOR PATIENTS OR DISABLED PERSONS** (appliances for  
aiding patients or disabled persons to walk [A61H 3/00](#)) ; **OPERATING TABLES OR  
CHAIRS; CHAIRS FOR DENTISTRY; FUNERAL DEVICES**

CL M 1/003 · with facilities for picking up patients or disabled persons, e.g. break-away type or using  
endless belts

CL M 1/007 · with skis or sled runners

AL M 1/01 · Sheets specially adapted for use as or with stretchers

CL M 5/00 **Chairs or personal conveyances specially adapted for patients or disabled persons, e.g.  
wheelchairs** (devices enabling patients or disabled persons to operate an apparatus or  
device not forming part of the body [A61F 4/00](#); bicycles specially adapted for disabled  
riders [B62K 3/16](#))

CL M 7/00 **Beds specially adapted for nursing; Devices for lifting patients or disabled persons**  
(equipment for beds, treatment tables, floor frames or the like for extending or stretching  
[A61F 5/045](#); stretchers with facilities for picking up patients or disabled persons [A61G  
1/003](#))

AL M 7/16 · · converting a lying surface into a chair

AL M 10/02 · with artificial climate; with means to maintain a desired pressure, e.g. for germ-free rooms

- CL M 12/00 **Accommodation for nursing, e.g. in hospitals, not covered by groups A61G 1/00-A61G 11/00, e.g. trolleys for transport of medicaments or food; Prescription lists**
- CL M 13/00 **Operating tables; Auxiliary appliances therefor** (illumination of operating tables **F21L**, **F21S** or **F21V**)
- CL M 15/00 **Operating chairs; Dental chairs; Accessories specially adapted therefor, e.g. work stands**
- 

ANNEX 25E A61G [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Guidance **Funeral devices**  
heading  
17/00-  
21/00

- CL M 17/00 **Coffins; Funeral wrappings; Funeral urns**
- 

ANNEX 26E A61G [ Project-Rapporteur : M032/IB ] <CE40>

- AL M 17/08 · Urns
- 

ANNEX 27E A61H [ Project-Rapporteur : M031/IB ] <CE40>

- CL D Guidance < Deleted / Supprimé >  
heading /  
Rubrique  
d'orientation  
7/00- 23/00

- CL M 7/00 **Devices for suction-kneading massage; Devices for massaging the skin by rubbing or brushing not otherwise provided for** (electro-medical massage devices applying electric current by contact **A61N 1/18**; brushes in general **A46**; bathing sponges, brushes, gloves or similar cleaning or rubbing implements not specially for massage **A47K 7/02**; suction devices for nursing **A61M 1/06**, **A61M 1/08**)
- CL M 31/00 **Artificial respiration or heart stimulation, e.g. heart massage** (artificial respiration by treatment with gas or air, e.g. mouth-to-mouth respiration, **A61M 16/00**; applying electric currents by contact electrodes for stimulation, e.g. heart pace-makers, **A61N 1/36**)
-

ANNEX 28E A61K [ Project-Rapporteur : M032/IB ] <CE40>

- CL M Title **PREPARATIONS FOR MEDICAL, DENTAL, OR TOILET PURPOSES** (devices or methods specially adapted for bringing pharmaceutical products into particular physical or administering forms [A61J 3/00](#); chemical aspects of, or use of materials for deodorisation of air, for disinfection or sterilisation, or for bandages, dressings, absorbent pads or surgical articles [A61L](#); soap compositions [C11D](#))
- CL M **6/00 Preparations for dentistry** (teeth cleaning preparations [A61K 8/00](#), [A61Q 11/00](#); fastening dental prostheses in the mouth using adhesive foils or adhesive compositions [A61C 13/23](#))
- AL M 6/04 · · Use of metals or alloys
- AL M 6/06 · · Use of inorganic cements
- AL M 6/08 · · Use of natural or synthetic resins
- CL M 6/10 · Compositions for taking dental impressions
- CL M **8/00 Cosmetics or similar toilet preparations**
- CL M **9/00 Medicinal preparations characterised by special physical form**
- CL M 9/68 · chewing gum type
- CL M 9/70 · Web, sheet or filament bases
- CL M **41/00 Medicinal preparations obtained by treating materials with wave energy or particle radiation** ([A61K 31/59](#) takes precedence)
- 

ANNEX 29E A61L [ Project-Rapporteur : M031/IB ] <CE40>

- CL M **11/00 Disinfection or sterilising methods specially adapted for refuse**
- 

ANNEX 30E A61M [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Guidance [Syringes](#); [Irrigators](#); [Baths for subaquatic intestinal cleaning](#)  
heading  
3/00-  
9/00
- CL M **19/00 Devices for local anaesthesia** (syringes therefor [A61M 5/00](#)) ; **Devices for hypothermia** ([A61M 5/42](#) takes precedence; cooling blood in a bypass of the arterial system [A61M 1/36](#))

CL M Guidance Probes; Catheters; Dilators; Drainage appliances for wounds  
heading  
23/00-  
29/00

CL M 29/00 **Dilators with or without means for introducing media, e.g. remedies** (instruments for performing visual medical inspections of cavities or tubes of the body [A61B 1/00](#); stents [A61F 2/82](#))

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ANNEX 31E A61Q [ Project-Rapporteur : M099/IB ] <CE40>

CL N 90/00 *Cosmetics or similar toilet preparations for specific uses not provided for in other groups of this subclass*

CL D 99/00 (transferred to [A61Q 90/00](#) )

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ANNEX 32E A62B [ Project-Rapporteur : M031/IB ] <CE40>

CL M Title **DEVICES, APPARATUS, OR METHODS FOR LIFE-SAVING** (valves specially adapted for medical use [A61M 39/00](#); composition of chemical substances used in respirators, gas-masks, breathing apparatus or the like [A62D](#); rescuing from mountains or trees [A63B 27/00](#), [A63B 29/00](#); life-saving devices, apparatus or methods specially adapted for use in water [B63C 9/00](#); divers' equipment [B63C 11/00](#); specially adapted for use with aircraft, e.g. parachutes, ejector seats, [B64D](#); rescue devices peculiar to mining [E21F 11/00](#))

CL M Guidance Rescuing from fire; Rescuing from buildings or the like  
heading  
1/00-  
5/00

CL M Guidance Respirators; Gas-masks, including breathing apparatus, e.g. for high altitude, or masks therefor; Devices affording protection against harmful chemical agents  
heading  
7/00-  
33/00

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ANNEX 33E A62B [ Project-Rapporteur : M099/IB ] <CE40>

CL D 37/00 (transferred to [A62B 99/00](#) )

CL N 99/00 *Subject matter not provided for in other groups of this subclass*

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ANNEX 34E A62C [ Project-Rapporteur : M031/IB ] <CE40>

CL M Title **FIRE-FIGHTING** (fire-extinguishing compositions, use of chemical substances in extinguishing fires [A62D 1/00](#); spraying, applying liquids or other fluent materials to surfaces in general [B05](#); fire-fighting aircraft [B64D 1/16](#); alarm arrangements [G08B](#), e.g. fire alarms actuated by smoke or gases [G08B 17/10](#))

CL D Guidance < Deleted / Supprimé >  
heading /  
Rubrique  
d'orientation  
27/00-  
33/00

CL M **27/00 Fire-fighting land vehicles** (vehicle aspects, see the appropriate subclasses of classes [B60-B62](#))

CL M **29/00 Fire-fighting vessels or like floating structures** (shipbuilding or navigation aspects, see the appropriate subclasses of class [B63](#))

CL D Guidance < Deleted / Supprimé >  
heading /  
Rubrique  
d'orientation  
35/00

CL M **35/00 Permanently-installed equipment** ([A62C 31/00](#), [A62C 33/00](#), [A62C 37/00](#) take precedence; for forming water curtains [A62C 2/08](#))

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ANNEX 35E A63B [ Project-Rapporteur : M031/IB ] <CE40>

CL M Title **APPARATUS FOR PHYSICAL TRAINING, GYMNASTICS, SWIMMING, CLIMBING, OR FENCING; BALL GAMES; TRAINING EQUIPMENT** (apparatus for passive exercising, massage [A61H](#))

CL M Guidance [Gymnastic exercising apparatus](#)  
heading  
1/00-  
26/00

CL M **1/00 Horizontal bars for gymnastics**

CL M **3/00 Parallel bars or similar gymnastic apparatus**

CL M **15/00 Clubs for gymnastics or the like**

---

ANNEX 36E A63G [ Project-Rapporteur : M031/IB ] <CE40>

CL M Title **MERRY-GO-ROUNDS; SWINGS; ROCKING-HORSES** (swings or rocking horses as nursery furniture [A47D 13/10](#)) ; **CHUTES; SWITCHBACKS; SIMILAR DEVICES FOR PUBLIC AMUSEMENT**

CL M Guidance [Swings](#); [See-saws](#); [Rocking horses](#); [Other toy animals for riding](#)  
heading  
9/00-  
19/00

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ANNEX 37E A63J [ Project-Rapporteur : M099/IB ] <CE40>

CL M Subclass index	STAGE OR CIRCUS ARRANGEMENTS	<a href="#">1/00-5/00</a>
	OTHER VISUAL ENTERTAINMENT	<a href="#">13/00-19/00</a> , <a href="#">99/00</a>
	OTHER ENTERTAINMENT	<a href="#">9/00</a> , <a href="#">11/00</a> , <a href="#">99/00</a>
	APPARATUS FOR ARTISTES	<a href="#">7/00</a> , <a href="#">21/00</a>

CL D 23/00 (transferred to [A63J 99/00](#) )

AL D 23/02 (transferred to [A63J 25/00](#) )

CL N *25/00 Equipment specially adapted for cinemas (cinematographic projection means [G03B](#))*

CL N *99/00 Subject matter not provided for in other groups of this subclass*

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ANNEX 38E B01D [ Project-Rapporteur : M032/IB ] <CE40>

CL M Title **SEPARATION** (separating solids from solids by wet methods [B03B](#), [B03D](#), by pneumatic jigs or tables [B03B](#), by other dry methods [B07](#); magnetic or electrostatic separation of solid materials from solid materials or fluids, separation by high-voltage electric fields [B03C](#); centrifuges [B04B](#); vortex apparatus [B04C](#); presses *per se* for squeezing-out liquid from liquid-containing material [B30B 9/02](#))

CL M **1/00 Evaporating** (drying solid materials or objects by evaporating liquids therefrom [F26B](#))

AL M 1/20 · · Sprayers

CL M **3/00 Distillation or related exchange processes in which liquids are contacted with gaseous media, e.g. stripping**

AL M 3/16 · · Fractionating columns in which vapour bubbles through liquid

CL M **8/00 Cold traps; Cold baffles**

- CL M 15/00 **Separating processes involving the treatment of liquids with solid sorbents; Apparatus therefor**
- CL M 17/00 **Separation of liquids, not provided for elsewhere, e.g. by thermal diffusion**
- CL M 19/02 • Foam dispersion or prevention
- CL M 21/00 **Separation of suspended solid particles from liquids by sedimentation** (differential sedimentation **B03D 3/00**)
- CL M 21/01 • using flocculating agents
- CL M 21/26 • Separation of sediment aided by centrifugal force
- 

**ANNEX 39E B01D [ Project-Rapporteur : M031/IB ] <CE40>**

- CL M Guidance **Filtration; Filtering material, regeneration thereof**  
heading  
24/00-  
41/00
- 

**ANNEX 40E B01D [ Project-Rapporteur : M032/IB ] <CE40>**

- AL M 33/052 • • • combined with a compression device (**B01D 33/64** takes precedence)
- CL M 35/06 • Filters making use of electricity or magnetism (ultrafiltration, microfiltration **B01D 61/14**; electro-dialysis, electro-osmosis **B01D 61/42**; devices comprising filters and magnetic separators **B03C 1/30**)
- CL M 35/14 • Safety devices specially adapted for filtration; Devices for indicating clogging (incorporated in a throw-away filter **B01D 27/10**)
- CL M 39/18 • • • the material being cellulose or derivatives thereof
- CL M 39/20 • • of inorganic material, e.g. asbestos paper, metallic filtering material of non-woven wires
- 

**ANNEX 41E B01D [ Project-Rapporteur : M031/IB ] <CE40>**

- CL M Guidance **Separating dispersed particles from gases or vapours**  
heading  
45/00-  
51/00
-

ANNEX 42E B01D [ Project-Rapporteur : M032/IB ] <CE40>

AL M 47/14 · Packed scrubbers

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ANNEX 43E B01D [ Project-Rapporteur : M031/IB ] <CE40>

CL M 51/00 **Auxiliary pretreatment of gases or vapours to be cleaned from dispersed particles**  
(preventing dust fires [A62C](#); pretreatment specially adapted for magnetic or electrostatic separation [B03C](#))

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ANNEX 44E B01D [ Project-Rapporteur : M032/IB ] <CE40>

CL M 51/00 **Auxiliary pretreatment of gases or vapours to be cleaned**

CL M 53/00 **Separation of gases or vapours; Recovering vapours of volatile solvents from gases; Chemical or biological purification of waste gases, e.g. engine exhaust gases, smoke, fumes, flue gases, aerosols** (recovery of volatile solvents by condensation [B01D 5/00](#); sublimation [B01D 7/00](#); cold traps, cold baffles [B01D 8/00](#); separation of difficult-to-condense gases or air by liquefaction [F25J 3/00](#))

AL M 53/18 · · Absorbing units; Liquid distributors therefor ([B01D 3/16](#), [B01D 3/26](#), [B01D 3/30](#) take precedence)

CL M 53/18 · · Absorbing units; Liquid distributors therefor ([B01D 3/14](#) takes precedence) only

CL M 53/22 · by diffusion

CL M 57/02 · by electrophoresis

CL M 59/00 **Separation of different isotopes of the same chemical element**

AL M 59/38 · Separation by electrochemical methods

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ANNEX 45E B01D [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance [Processes of separation using semi-permeable membranes, e.g. dialysis, osmosis, ultrafiltration; Apparatus specially adapted therefor; Semi-permeable membranes or their production](#)  
heading 61/00-71/00

CL M 61/00 **Processes of separation using semi-permeable membranes, e.g. dialysis, osmosis, ultrafiltration; Apparatus, accessories or auxiliary operations specially adapted therefor** (separation of gases or vapours by diffusion [B01D 53/22](#))

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ANNEX 46E B01J [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance Ion-exchange  
heading  
39/00-  
49/00

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ANNEX 47E B05C [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Note B05C
1. This subclass covers apparatus or hand tools, in general, for applying liquids or other fluent materials to a surface or a part thereof, by any mechanical or physical method, in particular apparatus for obtaining a uniform distribution of liquids or other fluent materials on a surface. [2]
  2. *Hand tools or apparatus using hand-held tools are classified in group B05C 17/00. [new]*
  3. Attention is drawn to the Note following the title of class B05. [2]

CL D Guidance < Deleted >  
heading  
1/00-  
11/00

- CL M 1/00 **Apparatus in which liquid or other fluent material is applied to the surface of the work by contact with a member carrying the liquid or other fluent material, e.g. a porous member loaded with a liquid to be applied as a coating (B05C 5/02, B05C 7/00, B05C 19/00 take precedence)**
- CL M 3/00 **Apparatus in which the work is brought into contact with a bulk quantity of liquid or other fluent material (B05C 19/00 takes precedence)**
- CL M 5/00 **Apparatus in which liquid or other fluent material is projected, poured or allowed to flow on to the surface of the work (B05C 7/00, B05C 19/00 take precedence; essentially involving spraying or electrostatic projection B05B)**
- CL M 7/00 **Apparatus specially designed for applying liquid or other fluent material to the inside of hollow work (B05C 19/00 takes precedence)**
- CL M 9/00 **Apparatus or plant for applying liquid or other fluent material to surfaces by means not covered by groups B05C 1/00-B05C 7/00, or in which the means of applying the liquid or other fluent material is not important (B05C 19/00 takes precedence)**
- CL M 11/00 **Component parts, details or accessories not specifically provided for in groups B05C 1/00-B05C 9/00 (B05C 19/00 takes precedence; means for manipulating or holding work B05C 13/00; enclosures for apparatus, booths B05C 15/00; spray booths B05B 15/12)**
-

**ANNEX 48E B07C [ Project-Rapporteur : M099/IB ] <CE40>**

CL M Subclass  
index

SORTING CHARACTERISED BY THE METHOD	<a href="#">5/00</a> , <a href="#">7/00</a> , <a href="#">99/00</a>
SORTING ACCORDING TO DESTINATION	<a href="#">1/00</a> , <a href="#">3/00</a>

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**ANNEX 49E B07C [ Project-Rapporteur : M031/IB ] <CE40>**

CL M Guidance [Postal sorting; Similar sorting of documents, e.g. cheques](#)  
heading  
1/00-  
3/00

CL M [1/00](#) Measures preceding sorting of mail or documents according to destination

CL M [3/00](#) Sorting of mail or documents according to destination

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**ANNEX 50E B07C [ Project-Rapporteur : M099/IB ] <CE40>**

CL D [9/00](#) (transferred to [B07C 99/00](#) )

CL N [99/00](#) *Subject matter not provided for in other groups of this subclass*

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**ANNEX 51E B21B [ Project-Rapporteur : M031/IB ] <CE40>**

CL M Guidance [Rolling methods or mills specially designed for making or processing tubes](#)  
heading  
17/00-  
25/00

CL M [17/00](#) Tube-rolling by rollers of which the axes are arranged essentially perpendicular to the axis of the work, e.g. "axial" tube-rolling

CL M [19/00](#) Tube-rolling by rollers arranged outside the work and having their axes not perpendicular to the axis of the work (straightening by rollers [B21D](#))

CL M [21/00](#) Pilgrim-step tube-rolling

CL M [23/00](#) Tube-rolling not restricted to methods provided for in only one of groups [B21B 17/00-](#)  
[B21B 21/00](#), e.g. combined processes ([B21B 25/00](#) takes precedence)

CL M [25/00](#) Mandrels for metal tube rolling mills, e.g. mandrels of the types used in the methods covered by group [B21B 17/00](#); Accessories or auxiliary means therefor

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ANNEX 52E B21C [ Project-Rapporteur : C444/SE ] <CE40>

CL M Title **MANUFACTURE OF METAL SHEETS, WIRE, RODS, TUBES, PROFILES OR LIKE SEMI-MANUFACTURED PRODUCTS OTHERWISE THAN BY ROLLING; AUXILIARY OPERATIONS USED IN CONNECTION WITH METAL-WORKING WITHOUT ESSENTIALLY REMOVING MATERIAL**

CL M Subclass  
index

METAL DRAWING	
General methods	1/00
Auxiliary operations	5/00, 9/00
Equipment	3/00, 19/00
METAL EXTRUDING	
General methods	23/00
Auxiliary operations	29/00, 33/00, 35/00
Equipment	25/00, 26/00, 27/00
Control	31/00
DETAILS COMMON TO DRAWING AND EXTRUDING OF METAL	43/00
MANUFACTURING NOT OTHERWISE PROVIDED FOR	37/00
AUXILIARY OPERATIONS USED IN CONNECTION WITH METAL-WORKING WITHOUT ESSENTIALLY REMOVING MATERIAL	
Reeling	47/00
Other auxiliary operations	45/00, 51/00
Auxiliary equipment	19/00, 49/00

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ANNEX 53E B21C [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance [Metal drawing](#)  
heading  
1/00-  
9/00

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ANNEX 54E B21C [ Project-Rapporteur : C444/SE ] <CE40>

CL M 1/00 **Manufacture of metal sheets, wire, rods, tubes or like semi-manufactured products by drawing**

AL M 1/16 • Metal drawing by machines or apparatus in which the drawing action is effected by means other than drums, e.g. by a longitudinally-moved carriage pulling or pushing the work or stock for making metal sheets, rods or tubes

CL M 1/16 · Metal drawing by machines or apparatus in which the drawing action is effected by means only other than drums, e.g. by a longitudinally-moved carriage pulling or pushing the work or stock for making metal sheets, rods or tubes (bending sheet metal into tubular form by drawing [B21D 5/06](#))

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ANNEX 55E B21C [ Project-Rapporteur : M031/IB ] <CE40>

CL M 3/00 **Profiling tools for metal drawing; Combinations of dies and mandrels for metal drawing**

CL M 5/00 **Pointing or push-pointing drawn work or drawing material**

CL M Guidance [Metal extruding](#)  
heading  
23/00-  
35/00

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ANNEX 56E B21C [ Project-Rapporteur : C444/SE ] <CE40>

AL M 23/08 · · · Making wire, rods or tubes

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ANNEX 57E B21C [ Project-Rapporteur : M031/IB ] <CE40>

CL M 26/00 **Rams or plungers for metal extruding; Discs therefor**

CL M 29/00 **Cooling or heating extruded work or parts of the extrusion press**

CL M 31/00 **Control devices for metal extruding, e.g. for regulating the pressing speed or temperature of metal ([B21C 25/08](#) takes precedence) ; Measuring devices, e.g. for temperature of metal, combined with or specially adapted for use in connection with extrusion presses** (measuring devices of more general interest within subclass [B21C](#), see group [B21C 51/00](#))

CL M 35/00 **Removing work or waste from extruding presses; Drawing-off extruded work** (in connection with the extruding of bent tubes or rods [B21C 23/12](#)) ; **Cleaning dies, ducts, containers, or mandrels for metal extruding**

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ANNEX 58E B21C [ Project-Rapporteur : C444/SE ] <CE40>

CL M 37/00 **Manufacture of metal sheets, rods, wire, tubes, profiles or like semi-manufactured products, not otherwise provided for** (by rolling [B21B](#); by working or processing semi-finished sheet metal, profiles, tubes, or wire [B21D](#), [B21F](#); by casting [B22](#); by material-removing machine tools [B23](#); by welding, e.g. cladding or plating, [B23K](#); by grinding or polishing [B24](#); by electroforming [C25D 1/00](#)) ; **Manufacture of tubes of special shape**

AL M 37/04 · of rods or wire

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**ANNEX 59E B21C [ Project-Rapporteur : M099/IB ] <CE40>**

CL N *99/00 Subject matter not provided for in other groups of this subclass*

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**ANNEX 60E B21D [ Project-Rapporteur : C442/EP ] <CE40>**

CL M 51/02 · characterised by the structure of the objects

CL N *Note* Making hollow objects characterised both by their structure and by their use is classified 51/02 only in group **B21D 51/16**.

CL M 51/16 · characterised by the use of the objects (making heat exchangers **B21D 53/02**)

AL M 51/38 · · Making inlet or outlet arrangements of cans, tins, baths, bottles or other vessels; Making can ends; Making closures

CL M 51/38 · · Making inlet or outlet arrangements of cans, tins, baths, bottles or other vessels (folded only of thin metal foils in the way of making paper caps **B31D 5/00**) ; Making can ends; Making closures

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**ANNEX 61E B21F [ Project-Rapporteur : M099/IB ] <CE40>**

CL D 21/00 (transferred to **B21F 99/00** )

CL N *99/00 Subject matter not provided for in other groups of this subclass*

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**ANNEX 62E B21L [ Project-Rapporteur : M099/IB ] <CE40>**

CL M **Title MAKING CHAINS** (making chains or chain links by casting **B22D 25/02**; chains in general **F16G**)

CL M Subclass index	GENERAL METHODS OF WORKING	
	Chains made from individual links	<b>1/00, 3/00, 7/00, 9/00</b>
	Chains with integral links	<b>5/00</b>
	METHODS FOR MAKING SPECIAL CHAINS OR PARTS THEREOF	<b>11/00, 13/00</b>
	TOOLS FOR MANUFACTURE OR REPAIR	<b>19/00, 21/00</b>
	FINISHING	<b>15/00</b>
	OTHER MANUFACTURE	<b>99/00</b>
CL D 17/00	(transferred to <b>B21L 99/00</b> )	
CL N 99/00	<i>Subject matter not provided for in other groups of this subclass</i>	

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ANNEX 63E B22C [ Project-Rapporteur : M031/IB ] <CE40>

- CL M **11/00 Moulding machines for making moulds or cores, characterised by the relative arrangement of their parts**
- CL M **15/00 Moulding machines for making moulds or cores, characterised by the compacting mechanism; Accessories therefor**
- CL M **17/00 Moulding machines for making moulds or cores, characterised by the mechanism for separating the pattern from the mould or for turning over the flask or the pattern plate**
- CL M **19/00 Components or accessories for moulding machines for making moulds or cores**

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ANNEX 64E B22D [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Guidance **Final measures after casting**  
heading  
29/00-  
31/00
- CL M **31/00 Cutting-off surplus material after casting, e.g. gates** (cleaning of castings by sand-blasting **B24C**)
- CL M Guidance **Other equipment for casting**  
heading  
33/00-  
45/00
- CL M **35/00 Equipment for conveying molten metal into beds or moulds** (**B22D 37/00-B22D 41/00** take precedence; specially adapted to particular processes or machines, see the relevant groups)

- CL M 37/00 **Controlling or regulating the pouring of molten metal from a casting melt-holding vessel** (**B22D 39/00**, **B22D 41/00** take precedence; specially adapted to particular processes or machines, see the relevant groups of this subclass)
- CL M 39/00 **Equipment for supplying molten metal in rations** (specially adapted to particular processes or machines, see the relevant groups of this subclass)
- CL M 41/00 **Casting melt-holding vessels, e.g. ladles, tundishes, cups or the like** (**B22D 39/00**, **B22D 43/00** take precedence)
- 

**ANNEX 65E B23B [ Project-Rapporteur : M031/IB ] <CE40>**

- CL M **Title TURNING; BORING** (using an electrode which takes the place of a tool **B23H**, e.g. making holes **B23H 9/14**; working by laser beam **B23K 26/00**; arrangements for copying or controlling **B23Q**)
- CL M **13/00 Arrangements for automatically conveying, chucking or guiding stock for turning machines**
- CL Guidance < Become(s) / Deviennent/Deviendra 17/00-25/00 >  
heading /  
Rubrique  
d'orientation  
17/00-  
33/00
- CL M Guidance **Boring; Drilling**  
heading  
35/00-  
45/00
- 

**ANNEX 66E B23D [ Project-Rapporteur : M031/IB ] <CE40>**

- CL M Guidance **Sawing**  
heading  
45/00-  
65/00
- CL M Guidance **Filing or rasping**  
heading  
67/00-  
73/00
-

ANNEX 67E B23K [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance Soldering, e.g. brazing, or unsoldering  
heading  
1/00-  
3/00

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ANNEX 68E B24B [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance Polishing surfaces; Finishing surfaces  
heading  
29/00-  
39/00

CL M **29/00 Machines or devices for polishing surfaces on work by means of tools made of soft or flexible material with or without the application of solid or liquid polishing agents** (machines or devices for grinding or polishing glass **B24B 7/24, B24B 9/08, B24B 13/00**; for grinding or polishing using belts **B24B 21/00**; polishing tools in general **B24D 13/00**)

CL M **31/00 Machines or devices designed for polishing or abrading surfaces on work by means of tumbling apparatus or other apparatus in which the work or the abrasive material is loose; Accessories therefor** (machines or devices for grinding or polishing glass **B24B 7/24, B24B 9/08, B24B 13/00**; abrasive blasting machines **B24C 3/26**)

CL M **35/00 Machines or devices designed for superfinishing surfaces on work, i.e. by means of abrading blocks reciprocating with high frequency** (**B24B 3/00** takes precedence)

CL M **37/00 Lapping machines or devices, i.e. requiring pulverulent abrading substances inserted between a lap of relatively soft but rigid material and the surface to be lapped; Accessories therefor** (**B24B 3/00** takes precedence)

CL M **39/00 Burnishing machines or devices, i.e. requiring pressure members for compacting the surface zone** (modifying the physical properties or structure of metal by burnishing **C21D 7/08, C22F 1/00**) ; **Accessories therefor** (**B24B 3/00** takes precedence)

CL M Guidance Component parts of general applicability for grinding machines or devices  
heading  
41/00-  
47/00

CL M **41/00 Component parts of grinding machines or devices, such as frames, beds, carriages, headstocks**

CL M **47/00 Drives or gearings for grinding machines or devices; Equipment therefor**

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**ANNEX 69E B26B [ Project-Rapporteur : M031/IB ] <CE40>**

CL M Guidance Hand shears; Scissors  
heading  
13/00-  
15/00

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**ANNEX 70EF B27B [ Project-Rapporteur : M031/IB ] <CE40>**

CL Guidance < Become(s) / Deviennent/Deviendra 5/00-9/00 >  
heading /  
Rubrique  
d'orientation  
5/00- 11/00

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**ANNEX 71E B27G [ Project-Rapporteur : M031/IB ] <CE40>**

CL M Title **ACCESSORY MACHINES OR APPARATUS; TOOLS** (sawing tools **B27B 33/00**;  
tools for slotting or mortising machines **B27F 5/00**; tools for the manufacture of wood  
shavings, chips, powder, or the like **B27L 11/00**) ; **SAFETY DEVICES, e.g. FOR SAWS**  
(clamping devices for mitre joints, presses for producing frames, press frames, or cages  
equipped with clamping devices **B25B**; woodworkers' benches **B25H**)

CL M Guidance Tools  
heading  
13/00-  
17/00

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**ANNEX 72E B28C [ Project-Rapporteur : M031/IB ] <CE40>**

CL M Guidance Mixing clay or cement with other material  
heading  
3/00-  
7/00

CL M **3/00 Apparatus or methods for mixing clay with other substances** (producing clay  
suspensions **B28C 1/02**; general arrangement or layout of plant **B28C 9/00**)

CL M **5/00 Apparatus or methods for producing mixtures of cement with other substances, e.g.  
slurries, mortars, porous or fibrous compositions** (controlling the mixing apparatus and  
supplying the ingredients **B28C 7/00**; general arrangement or layout of plant **B28C 9/00**)

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ANNEX 73E B31C [ Project-Rapporteur : M099/IB ] <CE40>

CL D 13/00 (transferred to **B31C 99/00** )

CL N 99/00 *Subject matter not provided for in other groups of this subclass*

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ANNEX 74E B41L [ Project-Rapporteur : M031/IB ] <CE40>

CL M 5/00 **Autographic registers or like apparatus for manifolding by means of pressure-sensitive layers, using movable strips or webs** (movable-strip writing or reading apparatus **B42D 19/00**)

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ANNEX 75E B60 [ Project-Rapporteur : M014/IB ] <CE40>

CL M Note In this class, the following term is used with the meaning indicated:

B60

- "vehicle" means all vehicles except those restricted to one of the following types of vehicles: rail vehicles, waterborne vessels, aircraft, space vehicles, hand carts, cycles, animal-drawn vehicles, and sledges, which are covered by the relevant subclasses of **B61-B64**.

Thus the term "vehicle" includes:

- vehicular characteristics which are common to more than one of the above-listed types;
- certain characteristics restricted to automobiles, road or cross-country trailers.
- The following exceptions to the above should be noted:
  - a. subclass **B60B** or **B60C** embrace all vehicle wheels and tyres, except wheels for roller skates **A63C 17/22**, wheels for model railway vehicles **A63H 19/22**, and special adaptations of wheels or tyres for aircraft **B64C 25/36**;
  - b. subclass **B60C** embraces the connection of valves to inflatable elastic bodies in general, and in this respect it is not limited to vehicles;
  - c. subclass **B60L** embraces certain electric equipment of all electrically-propelled vehicles;
  - d. subclass **B60M** embraces certain power supply equipment for, but external to, any kind of electrically-propelled vehicle;
  - e. subclass **B60R** embraces safety belts or body harnesses used in all types of land vehicles; [4]
  - f. subclass **B60S** relates to all kinds of vehicles, except the servicing of rail locomotives **B61K 11/00**, ground equipment for aircraft **B64F**, or cleaning apparatus peculiar to waterborne vessels **B63B 57/00**, **B63B 59/00**;
  - g. subclass **B60T** includes brake control systems of general applicability, and in this respect it is not limited to vehicles. It also

includes rail-vehicle power-brake systems and some other features of rail-vehicle brake systems;

- h. subclass **B60V** embraces air-cushion vehicles *per se* and land vehicles, waterborne vessels or aircraft combined with features allowing them to alternatively operate as air-cushion vehicles or to be partially supported by an air cushion. [new]

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ANNEX 76E    **B60B**                    [ Project-Rapporteur : M031/IB ]    <CE40>

CL    M    Title **VEHICLE WHEELS** (making wheels or wheel parts by rolling **B21H 1/00**, by forging, hammering or pressing **B21K 1/28**) ; **CASTORS; AXLES; INCREASING WHEEL ADHESION**

CL    M    Guidance Wheels  
          heading  
          1/00-  
          19/00

CL    M    Guidance Apparatus or tools for mounting, holding or assembling wheels  
          heading  
          29/00-  
          31/00

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ANNEX 77E    **B60D**                    [ Project-Rapporteur : M099/IB ]    <CE40>

CL    D    7/00 (transferred to **B60D 99/00** )

CL    N    99/00 *Subject matter not provided for in other groups of this subclass*

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ANNEX 78E    **B60K**                    [ Project-Rapporteur : M031/IB ]    <CE40>

CL    M    Guidance Arrangement or mounting of propulsion units in vehicles  
          heading  
          1/00-  
          8/00

CL    M    Guidance Arrangement or mounting of transmissions or their control in vehicles  
          heading  
          17/00-  
          23/00

CL    M    17/00 **Arrangement or mounting of transmissions in vehicles** (torque-transmitting axles **B60B 35/12**; combined transmission and steering gear for steering non-deflectable wheels **B62D 11/00**; clutches *per se* , e.g. construction thereof, **F16D**; gearing *per se* , e.g. construction thereof, **F16H**)

- CL M 23/00 **Arrangement or mounting of control devices for vehicle transmissions, or parts thereof, not otherwise provided for** (combined transmission and steering gear for steering non-deflectable wheels **B62D 11/00**; movable cabs having special adaptations of vehicle control devices **B62D 33/073**; such control devices per se **F16D**, **F16H**)
- 

ANNEX 79E B60R [ Project-Rapporteur : M099/IB ] <CE40>

- CL D 27/00 (transferred to **B60R 99/00** )

- CL N 99/00 *Subject matter not provided for in other groups of this subclass*
- 

ANNEX 80E B60T [ Project-Rapporteur : M032/IB ] <CE40>

- CL M Title **VEHICLE BRAKE CONTROL SYSTEMS OR PARTS THEREOF; BRAKE CONTROL SYSTEMS OR PARTS THEREOF, IN GENERAL** (control of electrodynamic brake systems **B60L 7/00**; conjoint control of brakes and other drive units of vehicles **B60W**) ; **ARRANGEMENT OF BRAKING ELEMENTS ON VEHICLES IN GENERAL; PORTABLE DEVICES FOR PREVENTING UNWANTED MOVEMENT OF VEHICLES; VEHICLE MODIFICATIONS TO FACILITATE COOLING OF BRAKES**

- CL M 7/14 · · operated upon collapse of driver

- AL M 8/175 · · Brake regulation specially adapted to prevent excessive wheel spin during vehicle acceleration, e.g. for traction control

- CL M 8/32 · responsive to a speed condition, e.g. acceleration or deceleration (**B60T 8/28** takes precedence)

- CL M 11/00 **Transmitting braking action from initiating means to ultimate brake actuator without power assistance or drive or where such assistance or drive is irrelevant**

- CL M 11/16 · · Master control, e.g. master cylinders

- AL M 11/21 · · · · with two pedals operating on respective circuits, pressures therein being equalised when both pedals are operated together, e.g. for steering

- CL M 13/00 **Transmitting braking action from initiating means to ultimate brake actuator with power assistance or drive; Brake systems incorporating such transmitting means, e.g. air-pressure brake systems**

- AL M 13/08 · · · Overrun brakes

- CL M 15/00 **Construction, arrangement, or operation of valves incorporated in power brake systems and not covered by groups **B60T 11/00** or **B60T 13/00**** (valve structures responsive to a speed condition **B60T 8/34**)

- AL M 15/08 · · · Driver's valves for pressure brakes having automatic control

CL M 17/00 **Component parts, details, or accessories of brake systems not covered by groups B60T 8/00, B60T 13/00 or B60T 15/00, or presenting other characteristic features**

AL M 17/04 • Arrangement of piping, valves in the piping, e.g. cut-off valves, couplings or air hoses

AL M 17/08 • Brake cylinders other than ultimate actuators

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**ANNEX 81E B61B [ Project-Rapporteur : M031/IB ] <CE40>**

CL M Guidance Rope railways; Power-and-free systems  
heading  
7/00-  
12/00

CL M 9/00 **Tramway or funicular systems with rigid track and cable traction** (haulage clips **B61B 12/12**; shunting devices with cable traction **B61J**)

CL M 12/00 **Component parts, details, or accessories for rope railways or power-and-free systems not provided for in groups B61B 7/00-B61B 11/00** (railway brakes **B61H**; turntables **B61J 1/06**)

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**ANNEX 82E B61C [ Project-Rapporteur : M031/IB ] <CE40>**

CL M 7/00 **Other locomotives or motor railcars characterised by the type of motive power plant used; Locomotives or motor railcars with two or more different kinds or types of motive power**

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**ANNEX 83E B61D [ Project-Rapporteur : M031/IB ] <CE40>**

CL M Guidance Heating, cooling, ventilating, lighting, or air-conditioning, peculiar to rail vehicles  
heading  
27/00-  
29/00

CL M Guidance Furniture or furnishings peculiar to rail vehicles  
heading  
31/00-  
37/00

CL M Guidance Other details peculiar to rail vehicles  
heading  
39/00-  
49/00

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ANNEX 84E B61G [ Project-Rapporteur : M031/IB ] <CE40>

CL M Title **COUPLINGS SPECIALLY ADAPTED FOR RAILWAY VEHICLES; DRAUGHT OR BUFFING APPLIANCES SPECIALLY ADAPTED FOR RAILWAY VEHICLES**

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ANNEX 85E B61G [ Project-Rapporteur : M014/IB ] <CE40>

CL M 5/00 Couplings not otherwise provided for

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ANNEX 86E B62B [ Project-Rapporteur : M031/IB ] <CE40>

CL M Title **HAND-PROPELLED VEHICLES, e.g. HAND CARTS, PERAMBULATORS; SLEDGES** (characterised by animal propulsion **B62C**; propulsion of sledges by driver or engine **B62M**)

CL M Guidance **Carriages for children; Perambulators**  
heading  
7/00-  
9/00

CL M Guidance **Sledges**  
heading  
13/00-  
15/00

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ANNEX 87E B62C [ Project-Rapporteur : M099/IB ] <CE40>

CL N 99/00 *Subject matter not provided for in other groups of this subclass*

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ANNEX 88E B62D [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance **Steering of motor vehicles or trailers**  
heading  
1/00-  
15/00

CL M Guidance **Motor vehicles or trailers classified according to type; Parts or accessories thereof not otherwise provided for**  
heading  
47/00-  
63/00

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ANNEX 89E B62J [ Project-Rapporteur : M099/IB ] <CE40>

CL M Title **CYCLE SADDLES OR SEATS; ACCESSORIES PECULIAR TO CYCLES AND NOT OTHERWISE PROVIDED FOR, e.g. ARTICLE CARRIERS, CYCLE PROTECTORS** (registration plates **B60R 13/10**; cyclometers, i.e. wheel-revolution counters, **G01C 22/00**)

CL M Subclass  
index

SADDLES, SEATS; FOOT-RESTS, KNEE GRIPS	1/00; 25/00
LIGHTING OR SIGNALLING DEVICES; MIRROR ARRANGEMENTS	3/00, 6/00; 29/00
ARTICLE CARRIERS, ACCESSORIES	7/00, 9/00, 11/00
PROTECTING ARRANGEMENTS OR ACCESSORIES	
Chain-guards; mud-guards; parking covers	13/00; 15/00; 19/00
For rider only; weather guards, fairing; dress protectors; warming	17/00; 21/00; 33/00
Other protectors	23/00
SAFETY EQUIPMENT	27/00
INSTALLATIONS OF LUBRICATING DEVICES; OF FUEL TANKS; OF SUPPLY LINES	31/00; 35/00; 37/00
OTHER ACCESSORIES	99/00

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ANNEX 90E B62J [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance Signal or lighting devices specially adapted for cycles  
heading  
3/00-  
6/00

CL M Guidance Article carriers  
heading  
7/00-  
11/00

CL M Guidance Protectors; Fairings or streamlining parts not otherwise provided for  
heading  
13/00-  
25/00

CL M 13/00 **Guards for chain, chain drive, or equivalent drive, e.g. belt drive** (chain guards forming part of cycle frames **B62K 19/44**)

CL M 17/00 **Weather guards for riders; Fairings or streamlining parts not otherwise provided for** (protective clothing or garments **A41D 13/00**; crash helmets **A42B 3/00**; fairings forming part of frames **B62K 19/48**; fairings for sidecars **B62K 27/04**; hoods for sidecars **B62K 27/16**)

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ANNEX 91E B62J [ Project-Rapporteur : M099/IB ] <CE40>

CL D 39/00 (transferred to [B62J 99/00](#) )

CL N 99/00 *Subject matter not provided for in other groups of this subclass*

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ANNEX 92E B62M [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance [Rider propulsion of wheeled vehicles](#)  
heading  
1/00-  
5/00

CL M 1/00 **Rider propulsion of wheeled vehicles** (propulsion by ground-engaging rods [B62M 29/02](#))

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ANNEX 93E B63B [ Project-Rapporteur : M014/IB ] <CE40>

CL M 35/00 **Vessels or like floating structures adapted for special purposes** (vessels characterised by load- accommodating arrangements [B63B 25/00](#); fire- fighting vessels [A62C 29/00](#); submarines, mine-layers, or mine-sweepers [B63G](#); large containers for use in or under water [B65D 88/78](#))

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ANNEX 94E B63C [ Project-Rapporteur : M014/IB ] <CE40>

CL M 3/00 **Launching or hauling-out, e.g. by landborne slipways; Slipways** (ship-borne guides for handling lifeboats or the like [B63B 23/30](#); cranes, winches, or the like [B66](#); ship-lifting for adapting to different water levels [E02C](#))

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ANNEX 95E B63H [ Project-Rapporteur : M014/IB ] <CE40>

CL M Title **MARINE PROPULSION OR STEERING** (propulsion of air-cushion vehicles [B60V 1/14](#); peculiar to submarines, other than nuclear propulsion, [B63G](#); peculiar to torpedoes [F42B 19/00](#))

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ANNEX 96E B63J [ Project-Rapporteur : M099/IB ] <CE40>

CL D 5/00 (transferred to [B63J 99/00](#) )

CL N 99/00 *Subject matter not provided for in other groups of this subclass*

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ANNEX 97E B64C [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance [Aircraft structures or fairings](#)  
heading  
1/00-  
7/00

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ANNEX 98E B64G [ Project-Rapporteur : M099/IB ] <CE40>

CL D 9/00 (transferred to [B64G 99/00](#) )

CL N *99/00 Subject matter not provided for in other groups of this subclass*

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ANNEX 99E B65D [ Project-Rapporteur : M014/IB ] <CE40>

- CL M Note  
B65D
1. This subclass covers : [6]
    - containers, packaging elements or packages with auxiliary means or provision for displaying articles or materials; [6]
    - methods of packaging which are wholly characterised by the form of the package produced or the form of the container or packaging element used, as distinct from the operations performed or the apparatus employed, which are covered by subclass [B65B](#). [6]
  2. This subclass, which is intended to be as comprehensive as possible, only excludes containers or packages of a nature clearly confined to a single other subclass, which are classified in that subclass.
  3. In this subclass, groups [B65D 5/00](#), [B65D 27/00](#), [B65D 30/00](#) or [B65D 65/00](#) include constructional features of foldable or erectable container or wrapper blanks as well as the containers or wrappers formed by folding or erecting such blanks.
  4. Containers, packaging elements or packages classified in group [B65D 85/00](#), are also classified according to the constructional or functional features, if such features are of interest. [6]
  5. *Large containers, as defined in Note (6) below, are classified in groups [B65D 88/00](#) or [B65D 90/00](#). Features that are of interest for containers in general may also be classified in other groups of subclass [B65D](#) when they are considered to represent information of interest for search. [new]*
  6. In this subclass, the following terms or expressions are used with the meanings indicated:
    - "rigid or semi-rigid containers" includes:
      - a. containers not deformed by, or not taking-up the shape of, their contents;
      - b. containers adapted to be temporarily deformed to expel their contents;
      - c. pallets;

- d. trays;
  - "flexible containers" includes:
    - a. containers deformed by, or taking-up the shape of, their contents;
    - b. containers adapted to be permanently deformed to expel their contents;
  - "packaging elements" includes:
    - a. elements, other than containers, for covering, protecting, stiffening, or holding together articles or materials to be stored or transported;
    - b. packaging materials of special type or form not provided for in other subclasses;
  - "packages" includes:
    - a. combinations of containers or packaging elements with articles or materials to be stored or transported;
    - b. articles joined together for convenience of storage or transport;
  - "paper" includes materials, e.g. cardboard, plastic sheet materials, laminated materials, or metal foils, worked in a manner analogous to paper;
  - "large containers", in groups **B65D 88/00** or **B65D 90/00**, means containers having about the size of containers used in container traffic, sometimes referred to as freight, forwarding or "ISO" (International Standardization Organization) containers, or larger containers. [3]
7. Tamper-indicating means for containers or closures are classified in the group appropriate to the type of container or closure, e.g. **B65D 5/43**, **B65D 5/54**, **B65D 17/00**, **B65D 27/30**, **B65D 27/34**, **B65D 33/34**, **B65D 41/32**, **B65D 47/36**, **B65D 49/12**, **B65D 51/20**, **B65D 55/06**. [6]

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ANNEX 100E B65D [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance General kinds of rigid or semi-rigid containers  
heading  
1/00-  
21/00

CL M 1/00 **Rigid or semi-rigid containers having bodies formed in one piece, e.g. by casting metallic material, by moulding plastics, by blowing vitreous material, by throwing ceramic material, by moulding pulped fibrous material, by deep-drawing operations performed on sheet material** (by winding, bending, or folding paper **B65D 3/00**, **B65D 5/00**; specially constructed to be opened by cutting, piercing, or tearing of wall portions **B65D 17/00**; pallets **B65D 19/00**; details of bottles or of jars **B65D 23/00**; bundles of articles held together by packaging elements for convenience of storage or transport, e.g. portable segregating carriers for plural receptacles such as beer cans, pop bottles, **B65D 71/00**)

CL M 3/00 **Rigid or semi-rigid containers having bodies or peripheral walls of curved or partially-curved cross-section made by winding or bending paper without folding along defined lines** (with end walls of different materials **B65D 6/00**, **B65D 8/00**)

- CL M 5/00 **Rigid or semi-rigid containers of polygonal cross-section, e.g. boxes, cartons, trays, formed by folding or erecting one or more blanks made of paper** (pallets [B65D 19/00](#); bundles of articles held together by packaging elements for convenience of storage or transport, e.g. portable segregating carriers for plural receptacles such as beer cans, pop bottles, [B65D 71/00](#); forming foldable or erectable blanks [B31B](#))
- CL M 17/00 **Rigid or semi-rigid containers specially constructed to be opened by cutting or piercing, or by tearing of frangible member or portion** (opening arrangements or devices for containers made by winding, bending or folding paper [B65D 3/00](#), [B65D 5/00](#); frangible inner closure members associated with caps, lids or covers [B65D 51/20](#); opening devices added or incorporated during filling or closing of containers [B65D 77/30](#); separate devices for opening closed containers [B67B 7/00](#))
- 

ANNEX 101E B65D [ Project-Rapporteur : M014/IB ] <CE40>

- AL M 21/00 **Nestable, stackable or joinable containers; Containers of variable capacity**
- CL M 21/00 **Nestable, stackable or joinable containers; Containers of variable capacity** (containers only of polygonal cross-section adapted to be of variable capacity formed by folding or erecting blanks made of paper [B65D 5/00](#))
- 

ANNEX 102E B65D [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Guidance [Details of rigid or semi-rigid containers not otherwise provided for](#)  
heading  
23/00-  
25/00
- CL M Guidance [General kinds of flexible containers](#)  
heading  
27/00-  
37/00
- CL M 27/00 **Envelopes or like essentially-rectangular flexible containers for postal or other purposes having no structural provision for thickness of contents** (with shock-absorbing properties [B65D 81/03](#); letter-cards [B42D 15/00](#))
- CL M Guidance [Movable or hinged closure members for rigid or semi-rigid containers or for flexible containers presenting similar closing problems; Parts of containers co-operating with closure members or characterised by the form of closure member](#)  
heading  
39/00-  
55/00
- CL M 43/00 **Lids or covers for rigid or semi-rigid containers** (for cooking vessels [A47J 36/06](#); covers for pressure vessels in general [F16J 13/00](#))
- CL M 45/00 **Clamping or other pressure-applying devices for securing or retaining closure members** (screw-threaded or bayonet connections between stoppers or caps and containers [B65D 39/08](#), [B65D 41/04](#), [B65D 41/34](#); expansible stoppers [B65D 39/12](#); for pressure vessels in general [F16J 13/00](#))

- CL M 50/00 **Closures with means for discouraging unauthorised opening or removal thereof, with or without indicating means, e.g. child-proof closures** (tamper-indicating closures without means for discouraging, see the relevant groups, e.g. **B65D 41/32**, **B65D 51/20**; means per se for discouraging or indicating unauthorised opening or removal of closure **B65D 55/02**)
- 

ANNEX 103E B65D [ Project-Rapporteur : M014/IB ] <CE40>

- CL D Note < Deleted >  
88/00-  
90/00
- 

ANNEX 104E B65G [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Guidance **Devices assisting manual conveyance of articles over short distances, e.g. in storage depots, warehouses, or factories**  
heading  
7/00-  
9/00
- CL M 7/00 **Devices for assisting manual moving or tilting heavy loads** (chutes **B65G 11/00**; roller-ways **B65G 13/00**; for tilting and emptying barrels or casks **B65G 65/24**)
- CL M 9/00 **Apparatus for assisting manual handling having suspended load-carriers movable by hand or gravity** (manually-operated endless-rope or chain conveyers **B65G 17/00**; railway systems **B61B**)
- CL M Guidance **Chutes; Kinds or types of conveyers; Constructional features, details, or auxiliary devices peculiar to conveyers of particular types**  
heading  
11/00-  
37/00
- CL M 11/00 **Chutes** (used as storage devices **B65G 1/02**, **B65D 88/26**; feeding or discharging conveyers by devices incorporated in, or operatively associated with, conveyers **B65G 47/00**; for sports, games, or amusements **A63G 21/00**; for refuse disposal in buildings **E04F 17/12**)
- CL M 13/00 **Roller-ways** (storage devices comprising roller-ways **B65G 1/02**; endless-chain conveyers comprising load-supporting rollers **B65G 17/00**; rollers, or arrangements thereof **B65G 39/00**; feeding or discharging conveyers by devices incorporated in, or operatively associated with, conveyers **B65G 47/00**; in metal-rolling equipment **B21B 39/00**, **B21B 41/00**)
- CL M 15/00 **Conveyers having endless load-conveying surfaces, i.e. belts and like continuous members, to which tractive effort is transmitted by means other than endless driving elements of similar configuration** (having load-conveying surfaces formed by interconnected longitudinal links **B65G 17/06**; feeding or discharging conveyers by devices incorporated in, or operatively associated with, conveyers **B65G 47/00**)
- CL M 17/00 **Conveyers having an endless traction element, e.g. a chain, transmitting movement to a continuous or substantially-continuous load-carrying surface or to a series of individual load-carriers; Endless-chain conveyers in which the chains form the load-**

**carrying surface** (feeding or discharging conveyers by devices incorporated in, or operatively associated with, conveyers **B65G 47/00**; railway systems, detachable load-carriers on rails **B61B**; escalators or paternosters neither combined nor associated with loading or unloading apparatus **B66B 9/00**)

- CL M **19/00 Conveyers comprising an impeller or a series of impellers carried by an endless traction element and arranged to move articles or materials over a supporting surface or underlying material, e.g. endless scraper conveyers** (feeding or discharging conveyers by devices incorporated in, or operatively associated with, conveyers **B65G 47/00**)
- CL M **25/00 Conveyers comprising a cyclically-moving, e.g. reciprocating, carrier or impeller which is disengaged from the load during the return part of its movement** (jigging **B65G 27/00**; feeding or discharging conveyers by devices incorporated in, or operatively associated with, conveyers **B65G 47/00**; pumps **F04**)
- CL M **27/00 Jigging conveyers** (feeding or discharging conveyers by devices incorporated in, or operatively associated with, conveyers **B65G 47/00**; jigs for wet separation **B03B**; generating or transmitting mechanical vibrations **B06**; jiggers for screening, sifting, or sorting **B07B 1/28**)
- CL M **29/00 Rotary conveyers, e.g. rotating discs, arms, star-wheels, cones** (mechanical projectors **B65G 31/00**; screw or rotary spiral conveyers **B65G 33/00**; feeding or discharging conveyers by devices incorporated in, or operatively associated with, conveyers **B65G 47/00**)
- CL M **31/00 Mechanical throwing machines for articles or solid materials** (feeding or discharging conveyers by devices incorporated in, or operatively associated with, conveyers **B65G 47/00**; distributors for fertilisers **A01C**; moulding machines **B22C**; sandblasting devices **B24C**; implements for applying plaster **E04F 21/06**)
- CL M **33/00 Screw or rotary spiral conveyers** (feeding or discharging conveyers by devices incorporated in, or operatively associated with, conveyers **B65G 47/00**; screws for extruding, compressing, kneading, mixing, pumping, or other special operations, see the relevant classes)
- CL M **35/00 Mechanical conveyers not otherwise provided for** (feeding or discharging conveyers by devices incorporated in, or operatively associated with, conveyers **B65G 47/00**)
- CL M **37/00 Combinations of mechanical conveyers of the same kind, or of different kinds, of interest apart from their application in particular machines or use in particular manufacturing processes** (mechanical storage devices **B65G 1/04**; series of co-operating belt conveyer units **B65G 15/22**; series of co-operating chain conveyer units **B65G 17/26**; sequence control of combined conveyers **B65G 43/10**; feeding or discharging conveyers by devices incorporated in, or operatively associated with, conveyers **B65G 47/00**; specially adapted for handling radioactive materials **G21**)
- CL M Guidance **Non-mechanical conveying through pipes or tubes; Floating in troughs**  
heading  
51/00-  
53/00
- CL M **53/00 Conveying materials in bulk through troughs, pipes, or tubes by floating the materials, or by flow of gas, liquid, or foam** (fluidising in connection with loading or unloading **B65G 69/06**; loaders for hay or like field crops **A01D 87/00**; fluidising devices facilitating filling or emptying of large containers **B65D 88/72**; dredging **E02F**; winning materials out

of alluvial deposits **E21C 45/00**; hydraulic or pneumatic mine-filling-up machines **E21F 15/00**; fluid dynamics **F15D**; pipe-line systems **F17D**)

- CL M Guidance **Stacking or de-stacking; Loading or unloading**  
heading  
57/00-  
61/00
- CL M **65/00 Loading or unloading** (by means incorporated in, or operatively associated with, conveyers **B65G 47/00**; of vehicles **B65G 67/00**)
- CL M **67/00 Loading or unloading vehicles** (by means incorporated in, or operatively associated with, conveyers **B65G 47/00**; by means incorporated in the vehicles **B60-B64**; ground or aircraft-carrier-deck installations **B64F**; transferring of refuse between vehicles or containers **B65F 9/00**)
- CL M **69/00 Auxiliary measures taken, or devices used, in connection with loading or unloading** (by means incorporated in, or operatively associated with, conveyers **B65G 47/00**; preventing, minimising, or fighting fire **A62C**; in vehicles, see the relevant subclasses)
- 

ANNEX 105E B65H [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Guidance **Feeding articles to machines; Separating articles from piles; Pile supports**  
heading  
1/00-  
11/00
- CL M **1/00 Supports or magazines for piles from which articles are to be separated** (carriers used for associating, collating, or gathering articles **B65H 39/00**; combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling **B65H 83/00**)
- CL M **3/00 Separating articles from piles** (associating, collating, or gathering articles **B65H 39/00**; machines for separating superposed webs **B65H 41/00**; unpiling thin material combined with folding **B65H 45/26**; combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling **B65H 83/00**)
- CL M **5/00 Feeding articles separated from piles; Feeding articles to machines** (identical mechanisms or parts for delivering or advancing articles from machines **B65H 29/00**; recirculating articles **B65H 85/00**)
- CL M Guidance **Feeding webs to or from machines; Winding or unwinding webs; Splicing webs**  
heading  
16/00-  
27/00
- CL M **20/00 Advancing webs** (web-delivering apparatus incorporating devices for performing auxiliary operations **B65H 35/00**, **B65H 37/00**)
- CL M **21/00 Apparatus for splicing webs** (during web-roll changing **B65H 19/00**; associating two or more webs **B65H 39/16**)

- CL M **27/00** **Special constructions, e.g. surface features, of feed or guide rollers for webs** (rollers in general [F16C 13/00](#))
- CL M Guidance heading [Delivering articles from machines; Piling articles; Article or web delivery apparatus incorporating devices for performing specified auxiliary operations; Associating or gathering articles or webs; Machines for separating superposed webs](#)  
29/00-  
43/00
- CL M **29/00** **Delivering or advancing articles from machines; Advancing articles to or into piles** (associating, collating or gathering articles [B65H 39/00](#); combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling [B65H 83/00](#); recirculating articles [B65H 85/00](#); for articles other than those defined by Note (3) (i) of this subclass, [see B65G](#))
- CL M **31/00** **Pile receivers** (carriers used for associating, collating, or gathering articles [B65H 39/00](#); combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling [B65H 83/00](#))
- CL M **39/00** **Associating, collating, or gathering articles or webs** (combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling [B65H 83/00](#); machines for both collating or gathering and permanently attaching together sheets or signatures [B42C 1/00](#))
- CL M Guidance heading [Unwinding, paying-out, forwarding, winding, coiling, or depositing filamentary material](#)  
49/00-  
73/00
- CL M **54/00** **Winding, coiling, or depositing filamentary material** (cores, formers, holders, cans, or receptacles [B65H 75/02](#); devices specially adapted or mounted for storing and repeatedly paying-out and re-storing lengths of material [B65H 75/34](#))
- CL M **63/00** **Warning or safety devices for use when unwinding, paying-out, forwarding, winding, coiling or depositing filamentary material, e.g. automatic fault detectors, stop-motions** (safety devices in general [F16P](#); indicating devices in general [G08B](#))
- CL M Guidance heading [Methods, apparatus, or devices of general interest or not otherwise provided for in connection with the handling of webs, tapes, or filamentary materials](#)  
75/00-  
81/00

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ANNEX 106E B66B [ Project-Rapporteur : M031/IB ] <CE40>

- CL M **3/00** **Applications of devices for indicating or signalling operating conditions of elevators**
- CL M **5/00** **Applications of checking, fault-correcting, or safety devices in elevators**
- CL M **31/00** **Accessories for escalators, or moving walkways, e.g. for sterilising or cleaning** (for safety [B66B 29/00](#))
-

ANNEX 107E B66C [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance Kinds or types of cranes  
heading  
17/00-  
23/00

CL M 17/00 **Overhead travelling cranes comprising one or more substantially-horizontal girders the ends of which are directly supported by wheels or rollers running on tracks carried by spaced supports** (adaptations of girders or of track-supporting structures **B66C 6/00**)

CL M 19/00 **Cranes comprising trolleys or crabs running on fixed or movable bridges or gantries** (**B66C 17/00** takes precedence; base-supporting structures with legs **B66C 5/00**; adaptations of girders or of track-supporting structures **B66C 6/00**; jib cranes **B66C 23/00**)

CL M 21/00 **Cable cranes, i.e. comprising hoisting devices running on aerial cable-ways** (adaptations of girders or of track-supporting structures **B66C 6/00**; rope or cable drives for trolleys, combinations of such drives with hoisting gear **B66C 11/16**; railway systems **B61B**; rope or cable winding mechanisms **B66D 1/00**)

CL M 23/00 **Cranes comprising essentially a beam, boom, or triangular structure acting as a cantilever and mounted for translatory or swinging movements in vertical or horizontal planes or a combination of such movements, e.g. jib cranes, derricks, tower cranes** (base-supporting structures with legs **B66C 5/00**; adaptations of girders or of track-supporting structures **B66C 6/00**)

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ANNEX 108E B67B [ Project-Rapporteur : M099/IB ] <CE40>

CL N 6/00 *Closing bottles, jars or similar containers by applying closure members, not provided for in groups **B67B 1/00-B67B 5/00***

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ANNEX 109E B68G [ Project-Rapporteur : M099/IB ] <CE40>

CL N 99/00 *Subject matter not provided for in other groups of this subclass*

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ANNEX 110E C [ Project-Rapporteur : M702/EP ] <CE40>

CL M Note C 1. In section C, the definitions of groups of chemical elements are as follows:

Alkali metals: Li, Na, K, Rb, Cs, Fr

Alkaline earth metals: Ca, Sr, Ba, Ra

Lanthanides: elements with atomic numbers 57 to 71 inclusive

Rare earths: Sc, Y, Lanthanides

Actinides: elements with atomic numbers 89 to 103 inclusive

Refractory metals: Ti, V, Cr, Zr, Nb, Mo, Hf, Ta, W

Halogens: F, Cl, Br, I, At

Noble gases: He, Ne, Ar, Kr, Xe, Rn

Platinum group: Os, Ir, Pt, Ru, Rh, Pd

Noble metals: Ag, Au, Platinum group

Light metals: alkali metals, alkaline earth metals, Be, Al, Mg

Heavy metals: metals other than light metals

Iron group: Fe, Co, Ni

Non-metals: H, B, C, Si, N, P, O, S, Se, Te, noble gases, halogens

Metals: elements other than non-metals

Transition elements: elements with atomic numbers 21 to 30 inclusive, 39 to 48 inclusive, 57 to 80 inclusive, 89 upwards

2. Section C covers :

- a. pure chemistry, which covers inorganic compounds, organic compounds, macromolecular compounds, and their methods of preparation;
  - b. applied chemistry, which covers compositions containing the above compounds, such as: glass, ceramics, fertilisers, plastics compositions, paints, products of the petroleum industry. It also covers certain compositions on account of their having particular properties rendering them suitable for certain purposes, as in the case of explosives, dyestuffs, adhesives, lubricants, and detergents;
  - c. certain marginal industries, such as the manufacture of coke and of solid or gaseous fuels, the production and refining of oils, fats and waxes, the fermentation industry (e.g., brewing and wine-making), the sugar industry;
  - d. certain operations or treatments, which are either purely mechanical, e.g., the mechanical treatment of leather and skins, or partly mechanical, e.g., the treatment of water or the prevention of corrosion in general;
  - e. metallurgy, ferrous or non-ferrous alloys.
3. In all sections of the IPC, in the absence of an indication to the contrary, the Periodic System of chemical elements referred to is the one with 8 groups as represented in the table below. For example, group **C07F 3/00** "Compounds containing elements of the 2nd Group of the Periodic System" refers to the elements of columns IIa and IIb. **[new.]**

Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	IA	IIA	IIIB	IVB	VB	VIB	VII B	VIII B			IB	IIB	IIIA	IVA	VA	VIA	VIIA	VIIIA
1	H																	He
2	Li	Be											B	C	N	O	F	Ne
3	Na	Mg											Al	Si	P	S	Cl	Ar
4	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
5	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
6	Cs	Ba	Lanthanides	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
7	Fr	Ra	Actinides	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg							

Lanthanides	La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Actinides	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr

4.

- a. In the case of operations, treatments, products or articles having both a chemical and a non-chemical part or aspect, the general rule is that the chemical part or aspect is covered by section C.
- b. In some of these cases, the chemical part or aspect brings with it a non-

chemical one, even though purely mechanical, because this latter aspect either is essential to the operation or treatment or constitutes an important element thereof. It has seemed, in fact, more logical not to dissociate the different parts or aspects of a coherent whole. This is the case for applied chemistry and for the industries, operations and treatments mentioned in Notes (1)(c), (d) and (e). For example, furnaces peculiar to the manufacture of glass are covered by class **C03** and not by class **F27**.

- c. There are, however, some exceptions in which the mechanical (or non-chemical) aspect carries with it the chemical aspect, for example:
- Certain extractive processes, in subclass **A61K**;
  - The chemical purification of air, in subclass **A61L**;
  - Chemical methods of fire-fighting, in subclass **A62D**;
  - Chemical processes and apparatus, in class **B01**;
  - Impregnation of wood, in subclass **B27K**;
  - Chemical methods of analysis or testing, in subclass **G01N**;
  - Photographic materials and processes, in class **G03**, and, generally, the chemical treatment of textiles and the production of cellulose or paper, in section D.
- d. In still other cases, the pure chemical aspect is covered by section C and the applied chemical aspect by another section, such as A, B or F, e.g., the use of a substance or composition for:
- treatment of plants or animals, covered by subclass **A01N**;
  - foodstuffs, covered by class **A23**;
  - ammunition or explosives, covered by class **F42**.
- e. When the chemical and mechanical aspects are so closely interlocked that a neat and simple division is not possible, or when certain mechanical processes follow as a natural or logical continuation of a chemical treatment, section C may cover, in addition to the chemical aspect, a part only of the mechanical aspect, e.g., after-treatment of artificial stone, covered by class **C04**. In this latter case, a note or a reference is usually given to make the position clear, even if sometimes the division is rather arbitrary.

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ANNEX 111E C03B

[ Project-Rapporteur : M031/IB ] <CE40>

CL M Title **MANUFACTURE OR SHAPING OF GLASS, OR OF MINERAL OR SLAG WOOL; SUPPLEMENTARY PROCESSES IN THE MANUFACTURE OR SHAPING OF GLASS, OR OF MINERAL OR SLAG WOOL** (surface treatment **C03C**)

CL M 1/00 **Preparing the batches**

CL M Guidance Shaping of glass  
heading  
9/00-  
21/00

CL M Guidance After-treatment of glass product  
heading  
25/00-  
35/00

CL M **25/00 Annealing glass products** (after-treatment of fibres **C03B 37/10**)

CL M **27/00 Tempering glass products** (after-treatment of fibres **C03B 37/10**)

CL M **29/00 Reheating glass products for softening or fusing their surfaces; Fire-polishing; Fusing of margins** (after-treatment of fibres **C03B 37/10**)

CL M **32/00 Thermal after-treatment of glass products not provided for in groups **C03B 25/00-  
C03B 31/00**, e.g. crystallisation, eliminating gas inclusions or other impurities** (after-treatment of fibres **C03B 37/10**)

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ANNEX 112E C03C [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance Joining glass to glass or to other materials  
heading  
27/00-  
29/00

CL M **27/00 Joining pieces of glass to pieces of other inorganic material; Joining glass to glass other than by fusing** (**C03C 17/00** takes precedence; fusion seal compositions **C03C 8/24**; wired glass **C03B**; joining glass to ceramics **C04**)

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ANNEX 113E C04B [ Project-Rapporteur : M032/IB ] <CE40>

CL M **2/00 Lime, magnesia or dolomite**

AL M 2/12 · · in shaft or vertical furnaces

CL M **5/00 Treatment of molten slag** (manufacture of slag wool **C03B**; treatment of slag in, or for the production of metals **C21B, C22B**) ; **Artificial stone from molten slag**

AL M 5/02 · Granulating (granulating apparatus **B01J 2/00**) ; Dehydrating; Drying

CL M **7/00 Hydraulic cements**

AL M 7/12 · Natural pozzuolanas; Natural pozzuolana cements

AL M 7/40 · · · Dehydrating; Forming, e.g. granulating (granulating apparatus **B01J 2/00**)

AL M 7/42 · · · Active ingredients added before, or during, the burning process

AL M 11/26 · starting from phosphogypsum or from waste, e.g. purification products of smoke (**C04B 11/02** takes precedence)

AL M 12/02 · Phosphate cements

AL M 12/04 · Alkali metal or ammonium silicate cements

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**ANNEX 114E C04B [ Project-Rapporteur : M031/IB ] <CE40>**

CL M Guidance **Use of materials as fillers for mortars, concrete or artificial stone**  
heading  
14/00-  
20/00

CL M **14/00 Use of inorganic materials as fillers, e.g. pigments, for mortars, concrete or artificial stone; Treatment of inorganic materials specially adapted to enhance their filling properties in mortars, concrete or artificial stone** (expanding or defibrillating materials **C04B 20/00**; reinforcing elements for building **E04C 5/00**)

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**ANNEX 115E C04B [ Project-Rapporteur : M032/IB ] <CE40>**

CL M **14/00 Use of inorganic materials as fillers, e.g. pigments, for mortars, concrete or artificial stone; Treatment of inorganic materials specially adapted to enhance their filling properties in mortars, concrete or artificial stone**

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**ANNEX 116E C04B [ Project-Rapporteur : M031/IB ] <CE40>**

CL M **16/00 Use of organic materials as fillers, e.g. pigments, for mortars, concrete or artificial stone; Treatment of organic materials specially adapted to enhance their filling properties in mortars, concrete or artificial stone** (reinforcing elements for building **E04C 5/00**)

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**ANNEX 117E C04B [ Project-Rapporteur : M032/IB ] <CE40>**

AL M 16/02 · Cellulosic materials

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**ANNEX 118E C04B [ Project-Rapporteur : M031/IB ] <CE40>**

CL M **18/00 Use of agglomerated or waste materials or refuse as fillers for mortars, concrete or artificial stone** (use of waste materials for the manufacture of cement **C04B 7/24**) ;  
**Treatment of agglomerated or waste materials or refuse, specially adapted to enhance their filling properties in mortars, concrete or artificial stone** (reinforcing elements for building **E04C 5/00**)

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ANNEX 119E C04B [ Project-Rapporteur : M032/IB ] <CE40>

CL M 18/00 Use of agglomerated or waste materials or refuse as fillers for mortars, concrete or artificial stone; Treatment of agglomerated or waste materials or refuse, specially adapted to enhance their filling properties in mortars, concrete or artificial stone

AL M 18/14 · · from metallurgical processes (treatment of molten slag C04B 5/00)

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ANNEX 120E C04B [ Project-Rapporteur : M031/IB ] <CE40>

CL M 20/00 Use of materials as fillers for mortars, concrete or artificial stone according to more than one of groups C04B 14/00-C04B 18/00 and characterised by shape or grain distribution; Treatment of materials according to more than one of the groups C04B 14/00-C04B 18/00 specially adapted to enhance their filling properties in mortars, concrete or artificial stone; Expanding or defibrillating materials (reinforcing elements for building E04C 5/00)

CL M Guidance Compositions of mortars, concrete or artificial stone  
heading  
26/00-  
32/00

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ANNEX 121E C04B [ Project-Rapporteur : M032/IB ] <CE40>

AL M 28/06 · · Aluminous cements

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ANNEX 122E C04B [ Project-Rapporteur : M031/IB ] <CE40>

CL M 30/00 Compositions for artificial stone, not containing binders (artificial stone from molten slag C04B 5/00)

CL M 32/00 Artificial stone not provided for in other groups of this subclass (artificial stone from molten slag C04B 5/00)

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ANNEX 123E C04B [ Project-Rapporteur : M032/IB ] <CE40>

AL M 33/28 · Slip casting

CL M 35/00 Shaped ceramic products characterised by their composition; Ceramic compositions (containing free metal bonded to carbides, diamond, oxides, borides, nitrides, silicides, e.g. cermets, or other metal compounds, e.g. oxynitrides or sulfides, other than as macroscopic reinforcing agents C22C) ; Processing powders of inorganic compounds preparatory to the manufacturing of ceramic products

- CL M 35/51 • based on compounds of actinides
- CL M 37/00 **Joining burned ceramic articles with other burned ceramic articles or other articles by heating**
- CL M 40/00 **Processes, in general, for influencing or modifying the properties of mortars, concrete or artificial stone compositions, e.g. their setting or hardening ability** (by selecting active ingredients **C04B 22/00-C04B 24/00**; hardening of a well-defined composition **C04B 26/00-C04B 28/00**; making porous, cellular or lightening **C04B 38/00**)
- CL M 41/00 **After-treatment of mortars, concrete, artificial stone or ceramics; Treatment of natural stone** (glazes, other than cold glazes, **C03C 8/00**)
- CL M 41/45 • Coating or impregnating
- 

**ANNEX 124E C07C [ Project-Rapporteur : M031/IB ] <CE40>**

- CL M Title **ACYCLIC OR CARBOCYCLIC COMPOUNDS** (preparation of macromolecular compounds **C08F**; production of organic compounds by electrolysis or electrophoresis **C25B 3/00, C25B 7/00**)
- CL M Guidance **Hydrocarbons**  
heading  
1/00-  
15/00
- 

**ANNEX 125E C07C [ Project-Rapporteur : M032/IB ] <CE40>**

- CL M 2/00 **Preparation of hydrocarbons from hydrocarbons containing a smaller number of carbon atoms**
- AL M 2/88 • • Growth and elimination reactions
- CL M 4/00 **Preparation of hydrocarbons from hydrocarbons containing a larger number of carbon atoms**
- AL M 5/02 • by hydrogenation
- AL M 5/22 • by isomerisation (with simultaneous hydrogenation **C07C 5/13**)
- 

**ANNEX 126E C07C [ Project-Rapporteur : M031/IB ] <CE40>**

- CL M 7/00 **Purification, separation or stabilisation of hydrocarbons; Use of additives** (working-up undefined gaseous mixtures obtained by cracking hydrocarbon oils **C10G 70/00**)
-

**ANNEX 127E C07C [ Project-Rapporteur : M032/IB ] <CE40>**

CL M 7/00 **Purification; Separation; Stabilisation; Use of additives**

AL M 9/02 · with one to four carbon atoms

AL M 9/04 · · Methane (production by treatment of sewage [C02F 11/04](#))

AL M 13/21 · · · · Menthadienes

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**ANNEX 128E C07C [ Project-Rapporteur : M031/IB ] <CE40>**

CL M Guidance [Compounds containing carbon and halogens with or without hydrogen](#)  
heading  
17/00-  
25/00

CL M Guidance [Compounds containing carbon and oxygen, with or without hydrogen or halogens](#)  
heading  
27/00-  
71/00

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**ANNEX 129E C07C [ Project-Rapporteur : M032/IB ] <CE40>**

AL M 29/03 · by addition of hydroxy groups to unsaturated carbon-to-carbon bonds, e.g. with the aid of H<sub>2</sub>O<sub>2</sub>

AL M 29/05 · · · with formation of absorption products in mineral acids and their hydrolysis

AL M 31/28 · Metal alcoholates

AL M 45/27 · by oxidation

AL M 45/85 · · by treatment giving rise to a chemical modification

AL M 45/87 · Preparation of ketenes or dimeric ketenes

AL M 47/19 · · containing hydroxy groups

CL M **49/00 Ketones; Ketenes; Dimeric ketenes; Ketonic chelates**

AL M 49/17 · · containing hydroxy groups

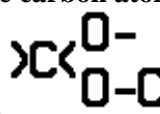
CL M **51/00 Preparation of carboxylic acids or their salts, halides, or anhydrides**

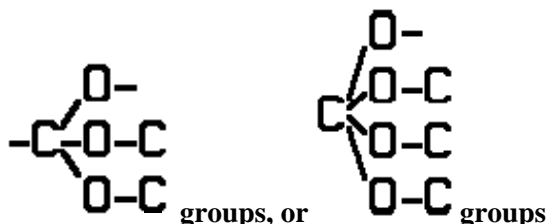
AL M 53/08 · Acetic acid

CL M 55/00 Saturated compounds having more than one carboxyl group bound to acyclic carbon atoms

CL M 57/00 Unsaturated compounds having carboxyl groups bound to acyclic carbon atoms

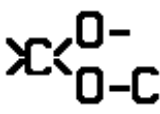
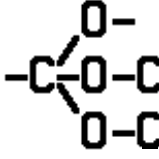
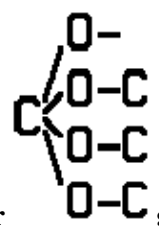
CL M 59/00 Compounds having carboxyl groups bound to acyclic carbon atoms and containing

any of the groups OH, O-metal, —CHO, keto, ether,  groups,



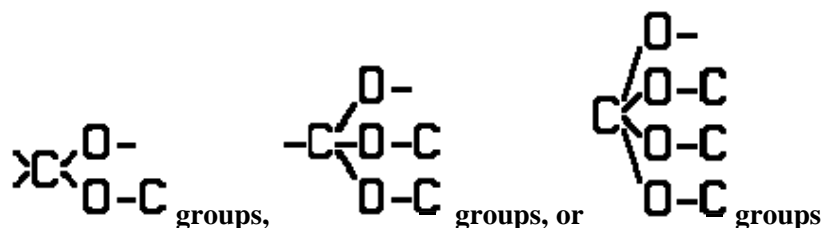
CL M 61/00 Compounds having carboxyl groups bound to carbon atoms of rings other than six-membered aromatic rings

CL M 62/00 Compounds having carboxyl groups bound to carbon atoms of rings other than six-membered aromatic rings and containing any of the groups OH, O-metal, —CHO,

keto, ether,  groups,  groups, or  groups

CL M 63/00 Compounds having carboxyl groups bound to carbon atoms of six-membered aromatic rings

CL M 65/00 Compounds having carboxyl groups bound to carbon atoms of six-membered aromatic rings and containing any of the groups OH, O-metal, —CHO, keto, ether,



CL M 66/00 Quinone carboxylic acids

AL M 67/10 · by reacting carboxylic acids or symmetrical anhydrides with ester groups or with a carbon-halogen bond

CL M 69/00 Esters of carboxylic acids; Esters of carbonic or haloformic acids (ortho esters, see the relevant groups, e.g. [C07C 43/32](#))

AL M 69/21 · · · of hydroxy compounds with more than three hydroxy groups

AL M 69/30 · · · esterified with trihydroxylic compounds

AL M 69/33 · · · esterified with hydroxy compounds having more than three hydroxy groups

AL M 69/62 · Halogen-containing esters

---

**ANNEX 130E C07C [ Project-Rapporteur : M031/IB ] <CE40>**

CL M Guidance Compounds containing carbon and nitrogen with or without hydrogen, halogens or oxygen  
heading oxygen  
201/00-  
291/00

---

**ANNEX 131E C07C [ Project-Rapporteur : M032/IB ] <CE40>**

AL M 237/12 · · · having the nitrogen atom of at least one of the carboxamide groups bound to an acyclic carbon atom of a hydrocarbon radical substituted by carboxyl groups

AL M 237/22 · · having nitrogen atoms of amino groups bound to the carbon skeleton of the acid part, further acylated

CL M **239/00 Compounds containing nitrogen-to-halogen bonds; Hydroxylamino compounds or ethers or esters thereof**

---

**ANNEX 132E C07C [ Project-Rapporteur : M031/IB ] <CE40>**

CL M Guidance Compounds containing carbon together with sulfur, selenium, or tellurium, with or without hydrogen, halogens, oxygen, or nitrogen  
heading without hydrogen, halogens, oxygen, or nitrogen  
301/00-  
395/00

---

**ANNEX 133E C07C [ Project-Rapporteur : M032/IB ] <CE40>**

CL M **301/00 Esters of sulfurous acid**

CL M **305/00 Esters of sulfuric acids**

AL M 309/62 · · Sulfonated fats, oils or waxes of undetermined constitution

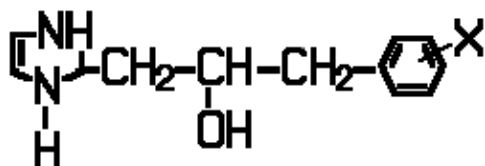
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**ANNEX 134E C07D [ Project-Rapporteur : M012/IB ] <CE40>**

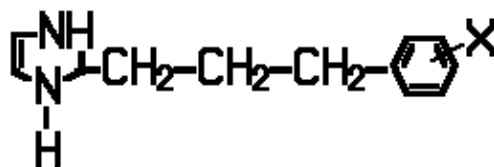
AL M Note C07D 1. This subclass does not cover compounds containing saccharide radicals (as defined in Note (3) following the title of subclass **C07H**), which are covered by subclass **C07H. [2]**

2. In this subclass, in compounds containing a hetero ring covered by group **C07D 295/00** and at least one other hetero ring, the hetero ring covered by group **C07D 295/00** is considered as an acyclic chain containing nitrogen atoms. [3]
3. In this subclass, the following terms or expressions are used with the meanings indicated:
  - "hetero ring" is a ring having at least one halogen, nitrogen, oxygen, sulfur, selenium, or tellurium atom as a ring member; [2]
  - "bridged" means the presence of at least one fusion other than ortho, peri or spiro; [2]
  - two rings are "condensed" if they share at least one ring member, i.e. "spiro" and "bridged" are considered as condensed; [2]
  - "condensed ring system" is a ring system in which all rings are condensed among themselves; [2]
  - "number of relevant rings" in a condensed ring system equals the number of scissions necessary to convert the ring system into one acyclic chain; [2]
  - "relevant rings" in a condensed ring system, i.e. the rings which taken together describe all the links between every atom of the ring system, are chosen according to the following criteria consecutively:
    - a. lowest number of ring members;
    - b. highest number of hetero atoms as ring members;
    - c. lowest number of members shared with other rings;
    - d. last place in the classification scheme. [2]
4. Attention is drawn to Note (3) after class **C07**, which defines the last place priority rule applied in the range of subclasses **C07C-C07K** and within these subclasses. [8]
5. Therapeutic activity of compounds is further classified in subclass **A61P**. [7]
6. In this subclass, in the absence of an indication to the contrary:
  - a. compounds having only one hetero ring are classified in the last appropriate place in one of the groups **C07D 203/00-C07D 347/00**. The same applies for compounds having more hetero rings covered by the same main group, neither condensed among themselves nor condensed with a common carbocyclic ring system; [2]
  - b. compounds having two or more hetero rings covered by different main groups neither condensed among themselves nor condensed with a common carbocyclic ring system are classified in the last appropriate place in one of the groups **C07D 401/00-C07D 421/00**; [2]
  - c. compounds having two or more relevant hetero rings, covered by the same or by different main groups, which are condensed among themselves or condensed with a common carbocyclic ring system, are classified in the last appropriate place in one of the groups **C07D 451/00-C07D 519/00**. [2]
7. In this subclass:
  - where a compound may exist in tautomeric forms, it is classified as though existing in the form which is classified last in the system. Therefore, double bonds between ring members and non-ring members and double bonds between ring members themselves are considered equivalent in determining the degree of hydrogenation of the ring. Formulae are considered to be written in Kekule form; [2]
  - hydrocarbon radicals containing a carbocyclic ring and an acyclic chain by which it is linked to the hetero ring and being substituted on both the carbocyclic ring and the acyclic chain by hetero atoms or by carbon atoms

having three bonds to hetero atoms with at the most one bond to halogen, are classified according to the substituents on the acyclic chain. For example, the compound



is classified in group **C07D**



**233/22**, and the compound

is classified in groups **C07D 233/24** and **C07D 233/26**, where X —NH<sub>2</sub>, —NHCOCH<sub>3</sub>, or —COOCH<sub>3</sub>. [2]

CL M Note  
only C07D

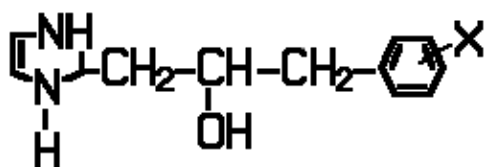
1. This subclass does not cover compounds containing saccharide radicals (as defined in Note (3) following the title of subclass **C07H**), which are covered by subclass **C07H**. [2]
2. In this subclass, in compounds containing a hetero ring covered by group **C07D 295/00** and at least one other hetero ring, the hetero ring covered by group **C07D 295/00** is considered as an acyclic chain containing nitrogen atoms. [3]
3. In this subclass, the following terms or expressions are used with the meanings indicated:
  - "hetero ring" is a ring having at least one halogen, nitrogen, oxygen, sulfur, selenium, or tellurium atom as a ring member; [2]
  - "bridged" means the presence of at least one fusion other than ortho, peri or spiro; [2]
  - two rings are "condensed" if they share at least one ring member, i.e. "spiro" and "bridged" are considered as condensed; [2]
  - "condensed ring system" is a ring system in which all rings are condensed among themselves; [2]
  - "number of relevant rings" in a condensed ring system equals the number of scissions necessary to convert the ring system into one acyclic chain; [2]
  - "relevant rings" in a condensed ring system, i.e. the rings which taken together describe all the links between every atom of the ring system, are chosen according to the following criteria consecutively:
    - a. lowest number of ring members;
    - b. highest number of hetero atoms as ring members;
    - c. lowest number of members shared with other rings;
    - d. last place in the classification scheme. [2]
4. Attention is drawn to Note (3) after class **C07**, which defines the last place priority rule applied in the range of subclasses **C07C-C07K** and within these subclasses. [8]
5. Therapeutic activity of compounds is further classified in subclass **A61P**. [7]
6. In this subclass, in the absence of an indication to the contrary:
  - a. compounds having only one hetero ring are classified in the last appropriate place in one of the groups **C07D 203/00-C07D 347/00**. The same applies for compounds having more hetero rings covered by the same main group,

neither condensed among themselves nor condensed with a common carbocyclic ring system; [2]

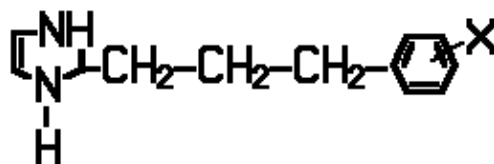
- b. compounds having two or more hetero rings covered by different main groups neither condensed among themselves nor condensed with a common carbocyclic ring system are classified in the last appropriate place in one of the groups **C07D 401/00-C07D 421/00**; [2]
- c. compounds having two or more relevant hetero rings, covered by the same or by different main groups, which are condensed among themselves or condensed with a common carbocyclic ring system, are classified in the last appropriate place in one of the groups **C07D 451/00-C07D 519/00**. [2]

7. In this subclass:

- where a compound may exist in tautomeric forms, it is classified as though existing in the form which is classified last in the system. Therefore, double bonds between ring members and non-ring members and double bonds between ring members themselves are considered equivalent in determining the degree of hydrogenation of the ring. Formulae are considered to be written in Kekule form; [2]
- hydrocarbon radicals containing a carbocyclic ring and an acyclic chain by which it is linked to the hetero ring and being substituted on both the carbocyclic ring and the acyclic chain by hetero atoms or by carbon atoms having three bonds to hetero atoms with at the most one bond to halogen, are classified according to the substituents on the acyclic chain. For example, the compound



is classified in group **C07D**



**233/22**, and the compound

is classified in group **C07D 233/00**, where X —NH<sub>2</sub>, —NHCOCH<sub>3</sub>, or —COOCH<sub>3</sub>. [2]

CL N *Note* 521/00 This group is only used for the classification of heterocyclic compounds the chemical structure of which is not specified, i.e. only in those cases where the heterocyclic compounds cannot be classified in any of groups **C07D 201/00-C07D 519/00**.

ANNEX 136E C07G [ Project-Rapporteur : M099/IB ] <CE40>

CL M Title **COMPOUNDS OF UNKNOWN CONSTITUTION** (sulfonated fats, oils or waxes of undetermined constitution [C07C 309/62](#))

CL D 17/00 (transferred to [C07G 99/00](#) )

CL N *99/00 Subject matter not provided for in other groups of this subclass*

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ANNEX 137E C07K [ Project-Rapporteur : M032/IB ] <CE40>

CL M Title **PEPTIDES** (peptides containing  $\beta$ -lactam rings [C07D](#); cyclic dipeptides not having in their molecule any other peptide link than those which form their ring, e.g. piperazine-2,5-diones, [C07D](#); ergot alkaloids of the cyclic peptide type [C07D 519/02](#); single cell proteins, enzymes [C12N](#); genetic engineering processes for obtaining peptides [C12N 15/00](#))

AL M 7/08 · · having 12 to 20 amino acids

AL M 14/575 · · Hormones

CL M 16/46 · Hybrid immunoglobulins (hybrids of an immunoglobulin with a peptide not being an immunoglobulin [C07K 19/00](#))

CL M **17/00 Carrier-bound or immobilised peptides; Preparation thereof**

CL M **19/00 Hybrid peptides** (hybrid immunoglobulins composed solely of immunoglobulins [C07K 16/46](#))

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ANNEX 138E C08B [ Project-Rapporteur : M031/IB ] <CE40>

CL M **9/00 Preparation of cellulose xanthate or viscose**

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ANNEX 139E C08F [ Project-Rapporteur : M031/IB ] <CE40>

CL M Title **MACROMOLECULAR COMPOUNDS OBTAINED BY REACTIONS ONLY INVOLVING CARBON-TO-CARBON UNSATURATED BONDS** (production of liquid hydrocarbon mixtures from lower carbon number hydrocarbons, e.g. by oligomerisation, [C10G 50/00](#); graft polymerisation of monomers containing carbon-to-carbon unsaturated bonds on to fibres, threads, yarns, fabrics or fibrous goods made from such materials [D06M 14/00](#))

CL M Guidance [Graft polymers](#); [Polymers crosslinked with unsaturated monomers](#)  
heading  
251/00-  
292/00

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ANNEX 140EF C08H [ Project-Rapporteur : M031/IB ] <CE40>

CL D Guidance < Deleted / Supprimé >  
heading /  
Rubrique  
d'orientation  
1/00- 5/00

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ANNEX 141E C08J [ Project-Rapporteur : M032/IB ] <CE40>

- CL M Title **WORKING-UP; GENERAL PROCESSES OF COMPOUNDING; AFTER-TREATMENT NOT COVERED BY SUBCLASSES C08B, C08C, C08F, C08G or C08H** (working, e.g. shaping, of plastics **B29**)
- CL M 5/00 **Manufacture of articles or shaped materials containing macromolecular substances** (manufacture of semi-permeable membranes **B01D 67/00-B01D 71/00**)
- CL M 5/04 • Reinforcing macromolecular compounds with loose or coherent fibrous material
- CL M 9/00 **Working-up of macromolecular substances to porous or cellular articles or materials; After-treatment thereof** (mechanical aspects of shaping of plastics or substances in a plastic state for the production of porous or cellular articles **B29C**)
- AL M 9/32 • from compositions containing micro-balloons, e.g. syntactic foams
- AL M 11/08 • • • using selective solvents for polymer components
- AL M 11/10 • • • by chemically breaking down the molecular chains of polymers or breaking of crosslinks, e.g. devulcanisation (depolymerisation to the original monomer **C07**)
- AL M 11/12 • • • by dry-heat treatment only

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ANNEX 142E C08L [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Guidance **Compositions of natural macromolecular compounds or of derivatives thereof**  
heading  
89/00-  
99/00
- AL M 93/00 **Compositions of natural resins; Compositions of derivatives thereof** (of polysaccharides **C08L 1/00-C08L 5/00**; of natural rubber **C08L 7/00**; polishing compositions **C09G**)
- CL M 93/00 **Compositions of natural resins; Compositions of derivatives thereof** (of polysaccharides only **C08L 1/00-C08L 5/00**; of natural rubber **C08L 7/00**; French polish **C09F**; polishing compositions **C09G**)

CL M 97/00 Compositions of lignin-containing materials (of polysaccharides [C08L 1/00-C08L 5/00](#))

CL M 99/00 Compositions of natural macromolecular compounds or of derivatives thereof not provided for in groups [C08L 1/00-C08L 7/00](#) or [C08L 89/00-C08L 97/00](#)

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ANNEX 143E C09B [ Project-Rapporteur : M031/IB ] <CE40>

CL M 27/00 Azo dyes in which the azo group is formed in any way other than by diazotising and coupling

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ANNEX 144E C09D [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance [Coating compositions based on natural macromolecular compounds or on derivatives thereof](#)  
heading  
189/00-  
199/00

CL M 193/00 Coating compositions based on natural resins; Coating compositions based on derivatives thereof (based on polysaccharides [C09D 101/00-C09D 105/00](#); based on natural rubber [C09D 107/00](#); polishing compositions [C09G](#))

CL M 197/00 Coating compositions based on lignin-containing materials (based on polysaccharides [C09D 101/00-C09D 105/00](#))

CL M 199/00 Coating compositions based on natural macromolecular compounds or on derivatives thereof, not provided for in groups [C09D 101/00-C09D 107/00](#) or [C09D 189/00-C09D 197/00](#)

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ANNEX 145E C09J [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance [Adhesives based on natural macromolecular compounds or on derivatives thereof](#)  
heading  
189/00-  
199/00

CL M 193/00 Adhesives based on natural resins; Adhesives based on derivatives thereof (based on polysaccharides [C09J 101/00-C09J 105/00](#); based on natural rubber [C09J 107/00](#); polishing compositions [C09G](#))

CL M 197/00 Adhesives based on lignin-containing materials (based on polysaccharides [C09J 101/00-C09J 105/00](#))

CL M 199/00 Adhesives based on natural macromolecular compounds or on derivatives thereof, not provided for in groups [C09J 101/00-C09J 107/00](#) or [C09J 189/00-C09J 197/00](#)

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**ANNEX 146E C09K [ Project-Rapporteur : M032/IB ] <CE40>**

- CL M 3/10 · for sealing or packing joints or covers
  - CL M 3/12 · for stopping leaks, e.g. in radiators, in tanks
  - CL M 3/14 · Anti-slip materials; Abrasives
  - CL M 3/18 · for application to surface to minimize adherence of ice, mist or water thereto; Thawing or antifreeze materials for application to surfaces
  - CL M 3/30 · for aerosols
  - CL M 3/32 · for treating liquid pollutants, e.g. oil, gasoline, fat (processes for making harmful chemical substances harmless, or less harmful, by effecting a chemical change in the substances [A62D 3/00](#))
  - AL M 5/20 · Antifreeze additives therefor, e.g. for radiator liquids
  - CL M 8/42 · Compositions for cementing, e.g. for cementing casings into boreholes; Compositions for plugging, e.g. for killing wells (compositions for plastering borehole walls [C09K 8/50](#))
  - CL M 8/50 · Compositions for plastering borehole walls, i.e. compositions for temporary consolidation of borehole walls
  - CL M 8/56 · Compositions for consolidating loose sand or the like around wells without excessively decreasing the permeability thereof
  - CL M 9/00 **Tenebrescent materials, i.e. materials for which the range of wavelengths for energy adsorption is changed as a result of excitation by some form of energy**
  - CL M 11/65 · · containing carbon
  - CL M 13/00 **Etching, surface-brightening or pickling compositions**
  - CL M 15/00 **Anti-oxidant compositions; Compositions inhibiting chemical change**
  - CL M 17/00 **Soil-conditioning materials or soil-stabilising materials**
  - CL M 21/00 **Fireproofing materials**
- 

**ANNEX 147E C10B [ Project-Rapporteur : M031/IB ] <CE40>**

- CL M 31/00 **Charging devices for coke ovens**
- CL M 33/00 **Discharging devices for coke ovens; Coke guides**
- CL M 35/00 **Combined charging and discharging devices for coke ovens**

CL M 57/00 **Other carbonising or coking processes; Features of destructive distillation processes in general**

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ANNEX 148E C10G [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance Hydrotreatment processes  
heading  
45/00-  
49/00

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ANNEX 149E C10L [ Project-Rapporteur : M032/IB ] <CE40>

CL M Title **FUELS NOT OTHERWISE PROVIDED FOR; NATURAL GAS; SYNTHETIC NATURAL GAS OBTAINED BY PROCESSES NOT COVERED BY SUBCLASSES C10G OR C10K; LIQUEFIED PETROLEUM GAS; USE OF ADDITIVES TO FUELS OR FIRES; FIRE-LIGHTERS**

CL M 5/00 **Solid fuels** (produced by solidifying fluid fuels C10L 7/00; peat briquettes C10F 7/06)

AL M 5/06 · · Briquetting processes

AL M 5/08 · · · without the aid of extraneous binders

AL M 7/02 · liquid fuels

CL M 10/00 **Use of additives to fuels or fires for particular purposes** (using binders for briquetting solid fuels C10L 5/10; using additives to improve the combustion of solid fuels C10L 9/10)

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ANNEX 150E C22C [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance Non-ferrous alloys, i.e. alloys based essentially on metals other than iron  
heading  
1/00-  
32/00

CL N Note Groups C22C 43/00-C22C 49/00 take precedence over groups C22C 1/00-C22C 1/00-38/00. [new]  
38/00

CL M 1/00 **Making non-ferrous alloys** (powder-metallurgical apparatus or processes, not specially modified for making alloys B22F; by electrothermic methods C22B 4/00; by electrolysis C25C)

CL M 3/00 **Removing material from non-ferrous alloys to produce alloys of different constitution**

CL M Guidance Ferrous alloys, i.e. alloys based on iron  
heading  
33/00-  
38/00

CL M 33/00 Making ferrous alloys (heat treatment thereof **C21D 5/00**, **C21D 6/00**)

---

ANNEX 151E C23C [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance Coating by applying the coating material in the molten state  
heading  
2/00-  
6/00

CL M 4/00 **Coating by spraying the coating material in the molten state, e.g. by flame, plasma or electric discharge** (built-up welding **B23K**, e.g. **B23K 5/18**, **B23K 9/04**; spraying guns **B05B**; making alloys containing fibres or filaments by thermal spraying of metal **C22C 47/16**; plasma guns **H05H**)

CL M Guidance Chemical deposition or plating by decomposition; Contact plating  
heading  
16/00-  
20/00

CL D Guidance < Deleted / Supprimé >  
heading /  
Rubrique  
d'orientation  
22/00

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ANNEX 152E C23D [ Project-Rapporteur : M031/IB ] <CE40>

CL M 11/00 Continuous processes for firing enamels; Apparatus therefor

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ANNEX 153E D01H [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance Common features or details of, or accessories for, spinning or twisting machines of various kinds or types  
heading  
9/00-  
17/00

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ANNEX 154E D04B [ Project-Rapporteur : M031/IB ] <CE40>

CL M 3/00 Hand tools or implements for weft knitting

- CL M 5/00 **Weft knitting apparatus or machines without needles for domestic use** (with needles [D04B 7/08](#))
- CL M 9/00 **Circular weft knitting machines with independently-movable needles** (with fixed spring or bearded needles [D04B 13/00](#))
- CL M 13/00 **Circular weft knitting machines with fixed spring or bearded needles, e.g. loop-wheel machines** (with independently-movable needles [D04B 9/00](#))
- CL M Guidance [Crocheting](#); [Apparatus therefor](#)  
heading  
31/00-  
33/00
- CL M 33/00 **Crocheting tools or apparatus** (galloon crocheting machines for warp knitting [D04B 25/06](#))

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ANNEX 155E D04G [ Project-Rapporteur : M099/IB ] <CE40>

- CL M 5/00 **Knotting not otherwise provided for**

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ANNEX 156E D05B [ Project-Rapporteur : M031/IB ] <CE40>

- CL M 27/00 **Work-feeding means for sewing machines**
- CL M 29/00 **Pressers or presser feet for sewing machines** (for feeding [D05B 27/04](#))
- CL M 35/00 **Work-feeding or work-handling elements for sewing machines, not otherwise provided for**
- CL M 39/00 **Workpiece carriers for sewing machines** (for automatically controlling movement of work-carrier to obtain particular configuration of seam [D05B 21/00](#); in general [A41H 15/00](#))
- CL M 41/00 **Work-collecting devices for sewing machines**
- CL M 47/00 **Needle-thread tensioning devices for sewing machines; Applications of tensometers in sewing machines**
- CL M 49/00 **Take-up devices, e.g. levers, for the needle thread of sewing machines**
- CL M 51/00 **Applications of needle-thread guards in sewing machines; Thread-break detectors for sewing machines** (for embroidery machines [D05C 11/00](#))
- CL M 53/00 **Thread- or cord-laying mechanisms for sewing machines; Thread fingers for sewing machines**
- CL M 55/00 **Needle holders for sewing machines; Needle bars for sewing machines** (needles [D05B 85/00](#))

- CL M 57/00 Loop takers, e.g. loopers, for sewing machines
- CL M 59/00 Applications of bobbin-winding or -changing devices in sewing machines; Indicating or control devices associated therewith
- CL M 61/00 Loop holders; Loop spreaders for sewing machines; Stitch-forming fingers for sewing machines
- CL M 63/00 Devices associated with the loop-taker thread of sewing machines, e.g. for tensioning
- CL M 65/00 Devices for severing the needle or lower thread in sewing machines
- CL M 69/00 Driving-gear or control devices for sewing machines
- CL M 71/00 Lubricating or cooling devices for sewing machines
- CL M 73/00 Casings for sewing machines
- CL M 79/00 Incorporations or adaptations of lighting equipment for sewing machines
- CL M 83/00 Guards or like devices for preventing injury to operator of sewing machines (machine safety devices in general [F16P](#))
- CL M 93/00 Stitches; Stitch seams for hand sewing

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ANNEX 157E D05C [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Title **EMBROIDERING** (programme-controlled sewing machines with embroidering capability [D05B 19/00](#), [D05B 21/00](#)) ; **TUFTING** (making non-woven fabrics [D04H](#); sewing [D05B](#))
- CL M Guidance [Embroidering machines](#)  
heading  
3/00-  
13/00

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ANNEX 158E D06F [ Project-Rapporteur : C446/EP ] <CE40>

- CL M Subclass  
index
- |   |   |
|---|---|
| RECEPTACLES; REMOVABLE DEVICES FOR USE WITH DIFFERENT RECEPTACLES | <a href="#">1/00</a> ; <a href="#">7/00</a>   |
| HAND IMPLEMENTS   | <a href="#">5/00</a>  |
| IMPLEMENTS FOR WASHING BY HAND                                    |   |
| Receptacles; hand rubbing apparatus                               | <a href="#">1/00</a> ; <a href="#">3/00</a>   |
| WASHING MACHINES  |   |
| using brushes, rollers  | <a href="#">9/00</a> , <a href="#">11/00</a>  |
| with stationary receptacle: using agitators; using                | <a href="#">13/00</a> ; <a href="#">15/00</a> ; <a href="#">17/00</a> ; <a href="#">18/00</a> |

beating or squeezing means; with agitation of liquid; with additional drying means	
with moving receptacle	
with rotary movement, e.g. oscillatory: for washing; for washing and draining; for washing and draining with additional drying means	<b>21/00; 23/00; 25/00</b>
with bodily movements, e.g. reciprocating or swinging	<b>27/00</b>
using vibrations for washing	<b>19/00</b>
Details of above machines	<b>1/00, 7/00, 37/00, 39/00</b>
Combinations with other apparatus or machines	<b>29/00, 31/00</b>
Control of washing operations	<b>33/00</b>
Other washing machines or methods	<b>35/00</b>
<b>RINSING APPARATUS</b>	<b>29/00, 41/00</b>
<b>DRY-CLEANING</b>	<b>43/00</b>
<b>EXPELLING WATER FROM LINEN; SMOOTHING BY COLD ROLLING</b>	
by rollers; by presses	<b>45/00; 47/00</b>
by centrifugal movement of the receptacle	<b>23/00, 25/00, 49/00</b>
Apparatus not otherwise provided for	<b>51/00</b>
<b>DRYING; AIRING</b>	
Clothes-lines; clothes-pegs; other supporting means	<b>53/00; 55/00; 57/00</b>
Driers	<b>58/00</b>
Special supports retaining shape of articles to be dried	<b>59/00</b>
Other drying	<b>60/00</b>
<b>IRONING; PRESSING</b>	
Ironing	
by hand:	
Irons; accessories; ironing boards	<b>75/00; 77/00, 79/00; 81/00</b>
by machine:	
using rollers; using rollers coating with table; using rollers coating with curved surfaces	<b>61/00; 63/00; 65/00</b>
Details	<b>67/00</b>
Other ironing machines	<b>69/00</b>
Pressing	
Hot or cold pressing; smoothing by use of formers with heat or steam	<b>71/00; 73/00</b>
Coverings or pads for equipment, elements interposed between article and ironing or pressing surface	<b>83/00, 85/00</b>
<b>AUXILIARY APPARATUS; LAUNDRY SYSTEMS</b>	
Conditioning; folding; starching; counting, sorting, marking	<b>87/00; 89/00; 91/00; 93/00</b>

Laundry systems, arrangements of apparatus or  
machines

95/00

CL M Guidance **Drying; Airing**  
heading  
53/00-  
60/00

CL N **60/00 Drying not provided for in groups D06F 53/00-D06F 59/00**

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ANNEX 159E D06F [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance **Ironing; Pressing**  
heading  
61/00-  
85/00

CL M **71/00 Apparatus for hot-pressing clothes, linen, or other textile articles, i.e. wherein there is substantially no relative movement between pressing element and article while pressure is being applied to the article; Similar machines for cold-pressing clothes, linen, or other textile articles** (smoothing by cold rolling between two or more co-operating rollers **D06F 45/00**; devices, for household use, for cold-pressing garments **A47G**)

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ANNEX 160E D21F [ Project-Rapporteur : M108/EP ] <CE40>

CL M **1/00 Wet end of machines for making continuous webs of paper**

CL M 1/10 • Wire-cloths

AL M 1/36 • Guiding mechanisms

AL M 1/68 • • using hydrocyclones

CL M **2/00 Transferring continuous webs from wet ends to press sections**

CL M **13/00 Methods or apparatus for making discontinuous sheets of paper, pulpboard, or cardboard, or of wet web, for fibreboard production** (making discontinuous sheets of board in moulds **D21J**; drying paper, pulpboard, or cardboard, in discontinuous-sheet form **F26B**)

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**ANNEX 161E E01B [ Project-Rapporteur : M031/IB ] <CE40>**

CL M Title **PERMANENT WAY; PERMANENT-WAY TOOLS; MACHINES FOR MAKING RAILWAYS OF ALL KINDS** (derailing or rerailing blocks on track, track brakes or retarders **B61K**; removal of foreign matter from the permanent way, vegetation control, applying liquids **E01H**)

CL M Guidance **Making, maintaining, renewing, or taking-up the ballastway or the track; Tools or machines specially designed therefor**  
heading  
27/00-  
37/00

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**ANNEX 162E E01C [ Project-Rapporteur : C439/SE ] <CE40>**

AL M 13/10 · for artificial surfaces for outdoor or indoor practice of snow or ice sports (**E01C 13/08** takes precedence; production of snow or ice for winter sports or similar recreational purposes **F25C 3/00**)

---

**ANNEX 163E E01C [ Project-Rapporteur : M031/IB ] <CE40>**

CL M Guidance **Machines, tools, or auxiliary devices for constructing or repairing the surfacing of roads or like structures**  
heading  
19/00-  
23/00

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**ANNEX 164E E01H [ Project-Rapporteur : C439/SE ] <CE40>**

CL M 4/00 **Working on surfaces of snow or ice in order to make them suitable for traffic or sporting purposes, e.g. by compacting snow** (production of artificial snow **F25C 3/04**)

AL M 4/02 · for sporting purposes, e.g. preparation of ski trails (production of snow or ice for winter sports or similar recreational purposes **F25C 3/00**)

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**ANNEX 165E E04G [ Project-Rapporteur : M031/IB ] <CE40>**

CL M Guidance **Falsework, forms, or shutterings for shaping of building parts in situ**  
heading  
9/00-  
19/00

CL M 13/00 **Falsework, forms, or shutterings for particular parts of buildings, e.g. stairs, steps, cornices, balconies** (moulds for making units for prefabricated buildings or prefabricated stair units **B28B 7/22**)

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ANNEX 166E E05B [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Guidance Details or accessories of locks or the like; keys  
heading  
1/00-  
19/00
- CL M 9/00 Lock or latch-mechanism casings mountable on or in wings (padlock casings **E05B 67/02**)
- CL M 21/00 Locks with rotary keys moving lamelliform tumblers perpendicular to the key, in which the tumblers do not follow the movement of the bolt
- CL M 23/00 Locks with rotary keys moving lamelliform tumblers perpendicular to the key, in which the tumblers follow the movement of the bolt
- CL M 25/00 Locks with rotary keys moving lamelliform tumblers perpendicular to the key, characterised by the tumblers
- CL M 27/00 Cylinder locks with tumbler pins or balls that are set by pushing the key in
- CL M 29/00 Cylinder locks with plate tumblers that are set by pushing the key in
- CL M 31/00 Cylinder locks with both tumbler pins or balls and plate tumblers that are set by pushing the key in
- CL M 33/00 Cylinder locks with tumblers that are set by pushing the key in, in which the bolt is moved by means other than the key
- CL M Guidance Operation or control of locks by non-mechanical means, e.g. from a distance  
heading  
47/00-  
51/00
- CL M 47/00 Operating or controlling locks or other fastening devices by electric or magnetic means (electric permutation locks **E05B 49/00**; holding in open position or limiting movement of wings by magnetic or electromagnetic attraction **E05C 17/56**; key switches **H01H 27/00**)
- CL M Guidance Locks with provision for latching  
heading  
55/00-  
61/00

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ANNEX 167E E05C [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Guidance Bolts, latches, or equivalent wing-fastening devices, characterised by special way of movement, e.g. moving rectilinearly, pivotally, or rotatively  
heading  
1/00-  
5/00

- CL M 1/00 **Fastening devices with bolts moving rectilinearly** (devices released automatically by pull or pressure on the wing [E05C 19/02](#))
- CL M 3/00 **Fastening devices with bolts moving pivotally or rotatively** (devices released automatically by pull or pressure on the wing [E05C 19/02](#))
- CL M 5/00 **Fastening devices with bolts moving otherwise than only rectilinearly and only pivotally or rotatively** (devices released automatically by pull or pressure on the wing [E05C 19/02](#))
- 

ANNEX 168E E05F [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Guidance [Operating mechanisms for wings](#)  
heading  
9/00-  
17/00
- CL M 13/00 **Operating mechanisms for wings, operated by the movement or weight of a person or vehicle** (through power-operated wing-operating mechanisms [E05F 15/00](#))
- 

ANNEX 169E E21B [ Project-Rapporteur : M031/IB ] <CE40>

- CL M 4/00 **Drives for drilling, used in the borehole**
- 

ANNEX 170E E21C [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Guidance [Methods of mining or quarrying; Open-pit mining; Layouts therefor](#)  
heading  
41/00-  
51/00
- 

ANNEX 171E E21D [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Guidance [Tunnels; Galleries; Large underground chambers; Linings therefor](#)  
heading  
9/00-  
13/00
- CL M 9/00 **Tunnels or galleries, with or without linings; Methods or apparatus for making thereof** (linings per se [E21D 11/00](#); galleries protecting against falling rocks or avalanches [E01F 7/04](#)) ; **Layout of tunnels or galleries**
-

ANNEX 172E E21F [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance Safety devices; Rescue devices  
heading  
5/00-  
13/00

CL M 5/00 **Means or methods for preventing, binding, depositing, or removing dust; Preventing explosions or fires** (dams **E21F 17/103**; applying liquids or other fluent materials to surfaces in general **B05**; flue-gas indicators **G01N**)

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ANNEX 173E F01K [ Project-Rapporteur : M031/IB ] <CE40>

CL M 7/00 **Steam engine plants characterised by the use of specific types of engine (F01K 3/02 takes precedence) ; Plants or engines characterised by their use of special steam systems, cycles, or processes** (reciprocating-piston engines using uniflow principle **F01B 17/04**) ; **Regulating means peculiar to such systems, cycles, or processes; Use of withdrawn or exhaust steam for feed-water heating**

CL M 9/00 **Steam engine plants characterised by condensers arranged or modified to co-operate with the engines** (by condensers structurally combined with engines **F01K 11/00**; steam condensers per se **F28B**)

CL M 11/00 **Steam engine plants characterised by the engines being structurally combined with boilers or condensers**

CL M 13/00 **General layout or general methods of operation, of complete steam engine plants**

CL M 15/00 **Adaptations of steam engine plants for special use**

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ANNEX 174E F01L [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Note  
F01L
1. *Groups **F01L 1/00-F01L 13/00** cover only valve-gear or valve arrangements without provision for variable fluid distribution. [new]*
  2. *Valve gear or valve arrangements specially adapted for steam engines are covered by groups **F01L 15/00-F01L 35/00**. [new]*
  3. *Valve-gear or valve arrangements specially adapted for machines or engines with variable working-fluid distribution are covered by groups **F01L 15/00-F01L 35/00**. [new]*
  4. Attention is drawn to the Notes preceding class **F01**, especially Note (3).
  5. As regards the above-mentioned Note (3), attention is drawn to **F01B 3/10, F01B 15/06, F01C 20/20, F01C 21/18, F02B 53/06, F03C 1/08, F04B 1/18, F04B 7/00, F04B 39/08, F04B 39/10, F04C 14/00, F04C 15/06, F04C 28/00** and **F04C 29/12**.

- CL M Guidance Valve-gear or valve arrangements for positive-displacement machines or engines other than steam engines, e.g. for internal-combustion piston engines, without provision for variable fluid distribution  
heading 1/00-13/00
- CL M Guidance Valve-gear or valve arrangements specially adapted for steam engines, or specially adapted for other positive-displacement machines or engines with variable working-fluid distribution  
heading 15/00-31/00
- CL U Note < unchanged >  
15/00
- CL M Guidance Rotary or oscillatory slide-valve gear or lift-valve gear or such valve arrangements specially adapted for steam engines, or specially adapted for other positive-displacement machines or engines with variable working-fluid distribution  
heading 33/00-35/00
- CL M **33/00 Rotary or oscillatory slide-valve gear or valve arrangements, specially adapted for machines or engines with variable fluid distribution** (drive, adjustment during operation, tripping-gear, reversing-gear, use of working pistons or piston-rods as valves or as valve-supporting elements, valve-gear or valve arrangements peculiar to free-piston machines or engines **F01L 15/00-F01L 31/00**)
- CL M **35/00 Lift-valve gear or valve arrangements specially adapted for machines or engines with variable fluid distribution** (drive, adjustment during operation, tripping-gear, reversing-gear, use of working pistons or piston-rods as valves or as valve-supporting elements, valve-gear or valve arrangements peculiar to free-piston machines or engines **F01L 15/00-F01L 31/00**)

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ANNEX 175E F01M [ Project-Rapporteur : M032/IB ] <CE40>

- CL M Title **LUBRICATING OF MACHINES OR ENGINES IN GENERAL; LUBRICATING INTERNAL-COMBUSTION ENGINES; CRANKCASE VENTILATING**
- CL M 1/02 • using lubricating pumps
- CL M 1/06 • Lubricating systems characterised by the provision therein of crankshafts or connecting-rods with lubricant passageways, e.g. bores
- CL M 1/16 • Controlling lubricant pressure or quantity
- AL M 1/20 • • concerning lubricant pressure
- CL M 11/03 • Mounting or connecting of lubricant purifying means relative to the machine or engine; Details of lubricant purifying means
- AL M 11/08 • Separating lubricant from air or fuel-air mixture before entry into cylinder
- AL M 11/12 • • concerning lubricant level
-

ANNEX 176E F01P [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance Air cooling; Liquid cooling  
heading  
1/00-  
3/00

CL M 1/00 **Air cooling** (propelling cooling-air or liquid coolants **F01P 5/00**; controlling supply or circulation of coolants **F01P 7/00**)

CL M 3/00 **Liquid cooling** (propelling cooling-air or liquid coolants **F01P 5/00**; controlling supply or circulation of coolants **F01P 7/00**)

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ANNEX 177E F02B [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance Engines characterised by the working fluid to be compressed, or characterised by the type of ignition  
heading  
1/00-  
11/00

CL M 1/00 **Engines characterised by fuel-air mixture compression** (characterised by both fuel-air mixture compression and air compression, or characterised by both positive ignition and compression ignition **F02B 11/00**; characterised by precombustion chambers **F02B 19/00**; characterised by air-storage chambers **F02B 21/00**; characterised by special shape or construction of combustion chambers **F02B 23/00**)

CL M 3/00 **Engines characterised by air compression and subsequent fuel addition** (characterised by both fuel-air mixture compression and air compression, or characterised by both positive ignition and compression ignition **F02B 11/00**; characterised by precombustion chambers **F02B 19/00**; characterised by air-storage chambers **F02B 21/00**; characterised by special shape or construction of combustion chambers **F02B 23/00**)

CL M 5/00 **Engines characterised by positive ignition** (**F02B 1/02**, **F02B 3/02** take precedence; with non-timed positive ignition **F02B 9/06**; characterised by both fuel-air mixture compression and air compression, or characterised by both positive ignition and compression ignition **F02B 11/00**; characterised by precombustion chambers **F02B 19/00**; characterised by air-storage chambers **F02B 21/00**; characterised by special shape or construction of combustion chambers **F02B 23/00**)

CL M 7/00 **Engines characterised by the fuel-air charge being ignited by compression ignition of an additional fuel** (characterised by both fuel-air mixture compression and air compression, or characterised by both positive ignition and compression ignition **F02B 11/00**; characterised by precombustion chambers **F02B 19/00**; characterised by air-storage chambers **F02B 21/00**; characterised by special shape or construction of combustion chambers **F02B 23/00**)

CL M 9/00 **Engines characterised by other types of ignition** (characterised by both fuel-air mixture compression and air compression, or characterised by both positive ignition and compression ignition **F02B 11/00**; characterised by precombustion chambers **F02B 19/00**; characterised by air-storage chambers **F02B 21/00**; characterised by special shape or construction of combustion chambers **F02B 23/00**)

- CL M 11/00 **Engines characterised by both fuel-air mixture compression and air compression, or characterised by both positive ignition and compression ignition, e.g. in different cylinders** (characterised by precombustion chambers **F02B 19/00**; characterised by air-storage chambers **F02B 21/00**; characterised by special shape or construction of combustion chambers **F02B 23/00**)
- CL M Guidance **Engines characterised by the method of introducing liquid fuel into cylinders**  
heading  
13/00-  
15/00
- CL M 13/00 **Engines characterised by the introduction of liquid fuel into cylinders by use of auxiliary fluid**
- CL M 15/00 **Engines characterised by the method of introducing liquid fuel into cylinders and not otherwise provided for**
- CL M Guidance **Engines characterised by precombustion chambers or air-storage chambers, or characterised by special shape or construction of combustion chambers to improve operation**  
heading  
19/00-  
23/00
- CL M 19/00 **Engines characterised by precombustion chambers** (engines with incandescent chambers **F02B 9/08**)
- CL M 21/00 **Engines characterised by air-storage chambers**
- CL M 23/00 **Other engines characterised by special shape or construction of combustion chambers to improve operation** (engines with incandescent chambers **F02B 9/08**)
- CL M Guidance **Engines characterised by provision for charging or scavenging**  
heading  
25/00-  
29/00
- CL M 25/00 **Engines characterised by using fresh charge for scavenging cylinders**  
(aspects characterised by provision of driven charging or scavenging pumps **F02B 33/00-F02B 39/00**)
- CL M 27/00 **Use of kinetic or wave energy of charge in induction systems, or of combustion residues in exhaust systems, for improving quantity of charge or for increasing removal of combustion residues** (aspects characterised by provision of driven charging or scavenging pumps **F02B 33/00-F02B 39/00**, e.g. use of driven apparatus for immediate conversion of combustion gas pressure into pressure of fresh charge **F02B 33/42**)
- CL M 29/00 **Engines characterised by provision for charging or scavenging not provided for in groups **F02B 25/00**, **F02B 27/00** or **F02B 33/00-F02B 39/00**; Details thereof**
- CL M Guidance **Engines characterised by provision of driven charging or scavenging pumps**  
heading  
33/00-  
39/00

- CL M **33/00 Engines characterised by provision of pumps for charging or scavenging** (characterised by the introduction of liquid fuel into cylinders by use of auxiliary fluid **F02B 13/00**; characterised by after-charging **F02B 29/06**; characterised by provision of pumps for sucking combustion residues from cylinders **F02B 35/00**; characterised by provision of exhaust-driven pumps **F02B 37/00**)
- CL M **35/00 Engines characterised by provision of pumps for sucking combustion residues from cylinders**
- CL M **37/00 Engines characterised by provision of pumps driven at least for part of the time by exhaust** (characterised by the introduction of liquid fuel into cylinders by use of auxiliary fluid **F02B 13/00**; characterised by after-charging **F02B 29/06**; characterised by passages conducting the charge from the pump to the engine inlet **F02B 33/44**)
- CL M **39/00 Component parts, details, or accessories relating to driven charging or scavenging pumps, not provided for in groups F02B 33/00-F02B 37/00**
- CL M **41/00 Engines characterised by special means for improving conversion of heat or pressure energy into mechanical power**
- CL M Guidance **Engines operating on non-liquid fuels; Plants including such engines, i.e. combinations of the engine with fuel-generating apparatus**  
heading 43/00-  
45/00
- CL M **43/00 Engines characterised by operating on gaseous fuels; Plants including such engines** (engines characterised by the gas-air charge being ignited by compression ignition of an additional fuel **F02B 7/06**; engines convertible from gas to other fuel consumption **F02B 69/04**)
- CL M **45/00 Engines characterised by operating on non-liquid fuels other than gas; Plants including such engines** (plants involving generation of gaseous fuel from solid fuel **F02B 43/08**; engines convertible from gas to other fuel consumption **F02B 69/04**)
- CL M Guidance **Methods of operating engines involving specific pre-treating of, or adding specific substances to, combustion air, fuel, or fuel-air mixture of the engines, and not otherwise provided for**  
heading 47/00-  
51/00
- CL M Guidance **Adaptations of engines for special use; Combinations of engines with devices other than engine parts or auxiliaries**  
heading 61/00-  
65/00
- CL M **61/00 Adaptations of engines for driving vehicles or for driving propellers; Combinations of engines with gearing** (the engine torque being divided by a differential gear for driving a scavenging or charging pump and the engine output shaft **F02B 39/06**; adaptations or combinations of rotary-piston or oscillating-piston engines **F02B 53/14**; arrangements in vehicles, see the relevant classes for vehicles)
- CL M **63/00 Adaptations of engines for driving pumps, hand-held tools or electric generators; Portable combinations of engines with engine-driven devices** (of rotary-piston or oscillating-piston engines **F02B 53/14**)

- CL M 65/00 **Adaptations of engines for special uses not provided for in groups F02B 61/00 or F02B 63/00; Combinations of engines with other devices, e.g. with non-driven apparatus** (of rotary-piston or oscillating-piston engines F02B 53/14; combinations of prime-movers consisting of electric motors and internal combustion engines for mutual or common propulsion B60K 6/20)
- 

ANNEX 178E F02D [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Guidance Controlling, e.g. regulating, fuel injection  
heading  
1/00-  
7/00

- CL M Guidance Other non-electrical control of combustion engines  
heading  
31/00-  
39/00

- CL M 31/00 **Use of non-electrical speed-sensing governors to control combustion engines, not otherwise provided for**

- CL M 33/00 **Non-electrical control of delivery of fuel or combustion-air, not otherwise provided for**

- CL M 35/00 **Non-electrical control of engines, dependent on conditions exterior or interior to engines, not otherwise provided for**

- CL M 37/00 **Non-electrical conjoint control of two or more functions of engines, not otherwise provided for**
- 

ANNEX 179E F02K [ Project-Rapporteur : M099/IB ] <CE40>

- CL D 11/00 (transferred to F02K 99/00 )

- CL N 99/00 *Subject matter not provided for in other groups of this subclass*
- 

ANNEX 180E F02M [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Guidance Carburettors for liquid fuels  
heading  
1/00-  
19/00

- CL M 3/00 **Idling devices for carburettors** (with means for facilitating idling below operational temperatures F02M 1/00)

- CL M 5/00 **Float-controlled apparatus for maintaining a constant fuel level in carburettors**

CL M Guidance **Fuel-injection apparatus**  
heading  
39/00-  
65/00

CL N *Note* Low-pressure fuel injection is classified in groups **F02M 51/00**, **F02M 69/00** or **F02M 39/00- 71/00**.  
67/00

CL M **61/00 Fuel injectors not provided for in groups F02M 39/00-F02M 57/00 or F02M 67/00**

CL M **63/00 Other fuel-injection apparatus having pertinent characteristics not provided for in groups F02M 39/00-F02M 57/00 or F02M 67/00; Details, component parts, or accessories of fuel-injection apparatus, not provided for in, or of interest apart from, the apparatus of groups F02M 39/00-F02M 61/00 or F02M 67/00**

CL D Guidance < Deleted / Supprimé >  
heading /  
Rubrique  
d'orientation  
67/00-  
71/00

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ANNEX 181E F02N [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance **Muscle-operated starting apparatus**  
heading  
1/00-  
3/00

CL M **1/00 Starting apparatus having hand cranks (with intermediate power storage F02N 5/00-F02N 15/00)**

CL M **3/00 Other muscle-operated starting apparatus (with intermediate power storage F02N 5/00-F02N 15/00)**

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ANNEX 182E F02P [ Project-Rapporteur : M031/IB ] <CE40>

CL M **3/00 Other electric spark ignition installations characterised by the type of ignition power generation storage**

CL M **5/00 Advancing or retarding electric ignition spark; Control therefor**

CL M **7/00 Arrangement of distributors, circuit-makers, circuit-breakers or pick-up devices for electric spark ignition (advancing or retarding ignition or control therefor F02P 5/00; such devices per se , see the relevant classes of section H, e.g. rotary switches H01H 19/00, contact-breakers, distributors H01R 39/00, generators H02K)**

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**ANNEX 183EF F03B [ Project-Rapporteur : M031/IB ] <CE40>**

CL D Guidance < Deleted / Supprimé >  
heading /  
Rubrique  
d'orientation  
1/00- 9/00

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**ANNEX 184E F03H [ Project-Rapporteur : M099/IB ] <CE40>**

CL D 5/00 (transferred to **F03H 99/00** )

CL N **99/00** *Subject matter not provided for in other groups of this subclass*

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**ANNEX 185E F04B [ Project-Rapporteur : M031/IB ] <CE40>**

- CL M Note  
F04B
1. In this subclass, the following term is used with the meaning indicated:
    - "piston" also covers a plunger.
  2. Attention is drawn to the Notes following the titles of class **B81** and subclass **B81B** relating to "micro-structural devices" and "micro-structural systems". [7]
  3. Attention is drawn to the Notes preceding class **F01**, especially as regards the definitions of "machines", "pumps", and "positive-displacement".
  4. *Machines, pumps or pumping installations having flexible working members are classified in groups **F04B 43/00** or **F04B 45/00**. [new]*

CL M Guidance **Pumps for liquids or for liquid and elastic fluids; Positive-displacement machines for liquids**  
heading  
1/00-  
23/00

CL M Guidance **Pumps specially adapted for elastic fluids**  
heading  
25/00-  
41/00

CL M **25/00 Multi-stage pumps specially adapted for elastic fluids**

CL M **27/00 Multi-cylinder pumps specially adapted for elastic fluids and characterised by number or arrangement of cylinders** (**F04B 25/00** takes precedence; control of reciprocating machines or pumps in general **F04B 49/00**)

CL M **31/00 Free-piston pumps specially adapted for elastic fluids; Systems incorporating such pumps** (muscle-driven pumps in which the stroke is not defined by gearing **F04B 33/00**; free-piston combustion engines, free-piston gas generators **F02B 71/00**; systems predominated by prime mover aspects, see the relevant class for the prime mover)

- CL M 33/00 **Pumps specially adapted for elastic fluids actuated by muscle power, e.g. for inflating**
  - CL M 35/00 **Piston pumps specially adapted for elastic fluids and characterised by the driving means to their working members, or by combination with, or adaptation to, specific driving engines or motors, not otherwise provided for** (predominant aspects of the engines or motors, see the relevant classes)
  - CL M 37/00 **Pumps specially adapted for elastic fluids and having pertinent characteristics not provided for in, or of interest apart from, groups F04B 25/00-F04B 35/00**
  - CL M 39/00 **Component parts, details, or accessories, of pumps or pumping systems specially adapted for elastic fluids, not otherwise provided for in, or of interest apart from, groups F04B 25/00-F04B 37/00** (for controlling F04B 49/00)
  - CL M 41/00 **Pumping installations or systems specially adapted for elastic fluids (F04B 31/00, F04B 35/00 take precedence)**
- 

ANNEX 186E F04D [ Project-Rapporteur : M031/IB ] <CE40>

- CL D Guidance < Deleted / Supprimé >  
heading /  
Rubrique  
d'orientation  
1/00- 15/00
- CL M 1/00 **Radial-flow pumps, e.g. centrifugal pumps; Helico-centrifugal pumps** (adapted for pumping specific fluids F04D 7/00; priming or boosting F04D 9/00; pumping liquids and elastic fluids at the same time F04D 31/00)
- CL M 3/00 **Axial-flow pumps** (priming or boosting F04D 9/00; pumping liquids and elastic fluids at the same time F04D 31/00)
- CL M 5/00 **Pumps with circumferential or transverse flow** (pumping liquids and elastic fluids at the same time F04D 31/00)
- CL M 7/00 **Pumps adapted for handling specific fluids, e.g. by selection of specific materials for pumps or pump parts** (pumping liquids and elastic fluids at the same time F04D 31/00)
- CL M 11/00 **Other rotary non-positive-displacement pumps** (pumping installations or systems F04D 13/00; pumping liquids and elastic fluids at the same time F04D 31/00)
- CL M 13/00 **Pumping installations or systems** (controlling F04D 15/00; pumping liquids and elastic fluids at the same time F04D 31/00)
- CL M Guidance **Rotary pumps specially adapted for elastic fluids**  
heading  
17/00-  
27/00
- CL M 17/00 **Radial-flow pumps specially adapted for elastic fluids, e.g. centrifugal pumps; Helico-centrifugal pumps specially adapted for elastic fluids** (F04D 21/00 takes precedence)
- CL M 19/00 **Axial-flow pumps specially adapted for elastic fluids** (F04D 21/00 takes precedence)

- CL M 21/00 **Pumps specially adapted for elastic fluids involving supersonic speed of pumped fluids**
- CL M 23/00 **Other rotary non-positive-displacement pumps specially adapted for elastic fluids**  
(pumping installations or systems **F04D 25/00**)
- CL M 25/00 **Pumping installations or systems specially adapted for elastic fluids** (controlling **F04D 27/00**)
- CL M 27/00 **Control, e.g. regulation, of pumps, pumping installations, or systems specially adapted for elastic fluids**
- 

**ANNEX 187E F04F** [ Project-Rapporteur : M099/IB ] <CE40>

- CL M Subclass  
index
- |   |                         |
|---|-------------------------|
| PUMPS USING PRESSURE OR FLOW OF ANOTHER FLUID                   | <b>1/00, 5/00</b>       |
| PUMPS USING NEGATIVE PRESSURE; PUMPS USING INERTIA OF THE FLUID | <b>1/00, 3/00; 7/00</b> |
| DIFFUSION PUMPS, e.g. WITH FORE PUMPS                           | <b>9/00</b>             |
| SIPHONS; OTHER PUMPS  | <b>10/00; 99/00</b>     |
| JET-PUMP INSTALLATIONS  | <b>5/54</b>             |
- CL D 11/00 (transferred to **F04F 99/00** )
- AL D 11/02 (transferred to **F04F 13/00** )
- CL N **13/00 Pressure exchangers**
- CL N **99/00 Subject matter not provided for in other groups of this subclass**
- 

**ANNEX 188E F15B** [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Guidance **Fluid-pressure actuator systems**  
heading  
7/00-  
21/00
- CL M Note 1. Groups **F15B 7/00-F15B 21/00** cover systems in which members are moved into one or more definite positions by means of fluid pressure.  
7/00-  
21/00 2. Pump, motor, and control features so far as not peculiar to this purpose are classified in the relevant classes.
- CL M **7/00 Fluid-pressure actuator systems in which the movement produced is definitely related to the output of a volumetric pump; Telemotors**

- CL M 19/00 **Testing fluid-pressure actuator systems or apparatus, so far as not provided for elsewhere**
  - CL M 20/00 **Safety arrangements for fluid actuator systems; Applications of safety devices in fluid actuator systems; Emergency measures for fluid actuator systems**
  - CL M 21/00 **Common features of fluid actuator systems; Fluid-pressure actuator systems, or details thereof, not covered by any other group of this subclass**
- 

ANNEX 189E F16B [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Title **DEVICES FOR FASTENING OR SECURING CONSTRUCTIONAL ELEMENTS OR MACHINE PARTS TOGETHER, e.g. NAILS, BOLTS, CIRCLIPS, CLAMPS, CLIPS, WEDGES; JOINTS OR JOINTING** (couplings for transmitting rotation **F16D**)

CL M Guidance **Fastenings for constructional elements or machine parts in general**  
heading  
2/00-  
9/00

CL M Guidance **Fastening means without screw-thread**  
heading  
15/00-  
21/00

- CL M 17/00 **Fastening means without screw-thread for connecting constructional elements or machine parts by a part of or on one member entering a hole in the other** (construction of bolts, pins, or rivets **F16B 19/00**; riveting **F16B 19/04**; means for preventing withdrawal of a pin, spigot, or the like from its operative position, stud-and-socket releasable fastenings **F16B 21/00**)

- CL M 21/00 **Means without screw-thread for preventing relative axial movement of a pin, spigot, shaft, or the like and a member surrounding it** (riveted or deformable spigots **F16B 19/04**; for gudgeon pins **F16J 1/18**) ; **Stud-and-socket releasable fastenings without screw-thread**

CL M Guidance **Fastening means using screw-thread**  
heading  
23/00-  
39/00

- CL M 29/00 **Screwed connection with deformation of nut or auxiliary member while fastening** (wall-dowels **F16B 13/00**; members deformed for locking screws, bolts or nuts **F16B 39/22**)

- CL M 33/00 **Features common to bolt and nut** (wall-dowels **F16B 13/00**)

- CL M 35/00 **Screw-bolts; Stay bolts; Screw-threaded studs; Screws; Set screws** (wall-dowels **F16B 13/00**; thread-cutting screws **F16B 25/00**)

- CL M 37/00 **Nuts or like thread-engaging members** (wall-dowels **F16B 13/00**)

- CL M **39/00 Locking of screws, bolts, or nuts** (wall-dowels **F16B 13/00**; locking of bottle closures **B65D**; locking of rail-fastening bolts for permanent ways **E01B 9/12**; locking of fastening means for railway fishplates **E01B 11/38**; locking devices for valves or cocks **F16K**)
- 

**ANNEX 190E F16C [ Project-Rapporteur : M031/IB ] <CE40>**

- CL M Guidance **Bearings**  
heading  
17/00-  
32/00

- CL M **17/00 Sliding-contact bearings for exclusively rotary movement** (**F16C 32/06** takes precedence; adjustable bearings **F16C 23/00**, **F16C 25/00**)
- CL M **19/00 Bearings with rolling contact, for exclusively rotary movement** (adjustable bearings **F16C 23/00**, **F16C 25/00**)
- CL M **21/00 Combinations of sliding-contact bearings with ball or roller bearings, for exclusively rotary movement** (**F16C 17/24**, **F16C 19/52** take precedence)
- CL M **23/00 Bearings for exclusively rotary movement adjustable for aligning or positioning** (**F16C 27/00** takes precedence)
- CL M **25/00 Bearings for exclusively rotary movement adjustable for wear or play** (**F16C 27/00** takes precedence)
- CL M **27/00 Elastic or yielding bearings or bearing supports, for exclusively rotary movement** (shock-damping bearings for watches or clocks **G04B 31/02**)
- CL D Guidance < Deleted / Supprimé >  
heading /  
Rubrique  
d'orientation  
29/00-  
32/00
- CL M **41/00 Other accessories for bearings**
- 

**ANNEX 191E F16D [ Project-Rapporteur : M031/IB ] <CE40>**

- CL M Title **COUPLINGS FOR TRANSMITTING ROTATION** (gearing for conveying rotation **F16H**, e.g. fluid gearing **F16H 39/00-F16H 47/00**) ; **CLUTCHES** (dynamo-electric clutches **H02K 49/00**; clutches using electrostatic attraction **H02N 13/00**) ; **BRAKES** (electrodynamic brake systems for vehicles in general **B60L**; dynamo-electric brakes **H02K 49/00**)
- CL M Guidance **Couplings**  
heading  
1/00-  
9/00

- CL M 3/00 **Yielding couplings, i.e. with means permitting movement between the connected parts during the drive** (couplings disconnectable simply by axial movement **F16D 1/10**; slip couplings **F16D 7/00**; fluid couplings **F16D 31/00-F16D 39/00**)
- CL M 5/00 **Impulse couplings, i.e. couplings that alternately accelerate and decelerate the driven member** (fluid couplings **F16D 31/00-F16D 39/00**)
- CL M Guidance **Clutches with mechanically-actuated clutching members; Synchronisation**  
heading **arrangements for clutches**  
11/00-  
23/00
- CL M 11/00 **Clutches in which the members have interengaging parts** (arrangements for synchronisation **F16D 23/02**; automatic clutches **F16D 43/00-F16D 45/00**; external control **F16D 48/00**)
- CL M 13/00 **Friction clutches** (arrangements for synchronisation **F16D 23/02**; automatic clutches **F16D 43/00-F16D 45/00**; external control **F16D 48/00**)
- CL M 15/00 **Clutches with wedging balls or rollers or with other wedgeable separate clutching members** (freewheels, freewheel clutches **F16D 41/00**; automatic clutches **F16D 43/00-F16D 45/00**; external control **F16D 48/00**)
- CL M 17/00 **Clutches in which the drive is transmitted solely by virtue of the eccentricity of the contacting surfaces of clutch members which fit one around the other** (automatic clutches **F16D 43/00-F16D 45/00**; external control **F16D 48/00**)
- CL M 19/00 **Clutches with mechanically-actuated clutching members not otherwise provided for** (automatic clutches **F16D 43/00-F16D 45/00**; external control **F16D 48/00**)
- CL M 21/00 **Systems comprising a plurality of mechanically-actuated clutches** (for synchronisation **F16D 23/04**; automatic clutches **F16D 43/00-F16D 45/00**; external control **F16D 48/00**)
- CL M 23/00 **Details of mechanically-actuated clutches not specific for one distinct type; Synchronisation arrangements for clutches**
- CL M 23/02 · Arrangements for synchronisation (shape or mounting of interengaging parts of clutch members to facilitate engagement **F16D 11/08**)
- CL M Guidance **Clutches actuated non-mechanically**  
heading  
25/00-  
29/00
- CL M 25/00 **Fluid-actuated clutches** (arrangements for synchronisation **F16D 23/02**; fluid clutches **F16D 31/00-F16D 39/00**; automatic clutches **F16D 43/00-F16D 45/00**; external control **F16D 48/00**)
- CL M 27/00 **Magnetically-actuated clutches; Control or electric circuits therefor** (arrangements for synchronisation **F16D 23/02**; clutches with magnetisable particles **F16D 37/02**; automatic clutches **F16D 43/00-F16D 45/00**; circuits for external control **F16D 48/00**)
- CL M 28/00 **Electrically-actuated clutches** (arrangements for synchronisation **F16D 23/02**; clutches actuated directly by means of an electromagnet **F16D 27/00**; automatic clutches **F16D 43/00-F16D 45/00**; external control **F16D 48/00**)

CL M Guidance Couplings or clutches with a fluid or semifluid as power-transmitting means  
heading  
31/00-  
39/00

CL M Guidance Freewheels or freewheel clutches; Automatic clutches  
heading  
41/00-  
45/00

CL N *Note* Groups **F16D 31/00-F16D 39/00** take precedence over groups **F16D 41/00-F16D 45/00**. [new]

CL M Guidance Brakes  
heading  
49/00-  
66/00

CL M **65/00 Parts or details of brakes** (similar members for clutches **F16D 13/58**)

CL M **66/00 Arrangements for monitoring working conditions of brakes, e.g. wear or temperature**

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ANNEX 192E F16H [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Note  
F16H
1. *Combinations including mechanical gearings are classified in groups **F16H 37/00** or **F16H 47/00**, unless they are provided for in groups **F16H 1/00-F16H 35/00**. [new]*
  2. In this subclass, sets of rigidly-connected members are regarded as single members.
  3. In this subclass, the following terms or expressions are used with the meanings indicated:
    - "toothed gearing" includes worm gearing and other gearing involving at least one wheel or sector provided with teeth or the equivalent, except gearing with chains or toothed belts, which is treated as friction gearing;
    - "conveying motion" includes transmitting energy, and means that the applied and resultant motions are of the same kind, though they may differ in, e.g. speed, direction, extent;
    - "rotary" implies that the motion may continue indefinitely.
    - "oscillating" means moving about an axis to an extent which is limited by the construction of the gearing and which may exceed one revolution, the movement being alternately forwards and backwards during continued operation of the gearing;
    - "reciprocating" means moving substantially in a straight line, the movement being alternately forwards and backwards during continued operation of the gearing;
    - "reversing" or "reversal" means that an applied movement in one direction may produce a resultant movement in either of two opposed directions at will;
    - "central gears" includes any gears whose axis is the main axis of the gearing.

4. Attention is drawn to the following places:

<b>A01D 69/06</b>	Gearings in harvesters or mowers
<b>A63H 31/00</b>	Gearing for toys
<b>B21B 35/12</b>	Toothed-wheel gearing for metal-rolling mills
<b>B60K</b>	Arrangement of transmissions in vehicles
<b>B61C 9/00</b>	Transmissions for railway locomotives
<b>B62D 3/00</b>	Vehicle steering gears
<b>B62M</b>	Transmissions for cycles
<b>B63H 23/00</b>	Transmissions for marine propulsion
<b>B63H 25/00</b>	Marine steering gears
<b>F01-F04</b>	Machines, engines, pumps
<b>F15B 15/00</b>	Gearings associated with fluid-actuated devices
<b>G01D 5/04</b>	Gearing used in indicating or recording apparatus in connection with measuring devices
<b>H03J 1/00</b>	Driving arrangements for tuning resonant circuits
<b>H04L 13/04</b>	Driving mechanisms for apparatus for transmission of coded digital information. [5]

CL M Guidance **Gearing for conveying rotary motion by endless flexible members**  
heading  
7/00-  
9/00

CL M **7/00 Gearings for conveying rotary motion by endless flexible members** (specific for conveying rotary motion with variable gear ratio or for reversing rotary motion **F16H 9/00**; flexible members, e.g. belts or chains per se **F16G**)

CL M **9/00 Gearings for conveying rotary motion with variable gear ratio, or for reversing rotary motion, by endless flexible members** (control of change-speed or reversing-gearings conveying rotary motion **F16H 59/00-F16H 63/00**; flexible members, e.g. belts or chains per se **F16G**)

CL M Guidance **Gearing for conveying or converting motion by means of levers, links, cams or screw-and-nut mechanisms**  
heading  
21/00-  
25/00

CL M **37/00 Combinations of mechanical gearings, not provided for in groups **F16H 1/00-F16H 35/00**** (combinations of mechanical gearing with fluid clutches or fluid gearing **F16H 47/00**; applications of underdrives or overdrives in motor vehicles, combinations with differential gearings in motor vehicles **B60K**)

CL M Guidance **Fluid gearing**  
heading  
39/00-  
47/00

- CL M 39/00 **Rotary fluid gearing using pumps and motors of the volumetric type, i.e. passing a predetermined volume of fluid per revolution** (control of exclusively fluid gearing **F16H 61/38**; fluid couplings or clutches with pumping sets of volumetric type **F16D 31/00**; application to lifting or pushing equipment **B66F**)
- CL M 41/00 **Rotary fluid gearing of the hydrokinetic type** (control of exclusively fluid gearing **F16H 61/38**; rotary fluid couplings or clutches of the hydrokinetic type **F16D 33/00**)
- CL M Guidance **Details of gearing or mechanisms**  
heading  
51/00-  
57/00
- CL M 51/00 **Levers of gearing mechanisms** (shafts, Bowden mechanisms, cranks, eccentrics, bearings, pivotal connections, crossheads, connecting-rods **F16C**; manipulating levers **G05G**)
- CL M 53/00 **Cams or cam-followers, e.g. rollers for gearing mechanisms** (shafts, Bowden mechanisms, cranks, eccentrics, bearings, pivotal connections, crossheads, connecting-rods **F16C**; cams specially adapted for reciprocating-piston liquid engines **F03C 1/30**)
- CL M 55/00 **Elements with teeth or friction surfaces for conveying motion; Worms, pulleys or sheaves for gearing mechanisms** (of screw-and-nut gearing **F16H 25/00**; shafts, Bowden mechanisms, cranks, eccentrics, bearings, pivotal connections, crossheads, connecting-rods **F16C**; chains, belts **F16G**; pulley-blocks for lifting or hauling appliances **B66D 3/04**)
- CL M 57/00 **General details of gearing** (of fluid gearing **F16H 39/00-F16H 43/00**; of screw-and-nut gearing **F16H 25/00**; shafts, Bowden mechanisms, cranks, eccentrics, bearings, pivotal connections, crossheads, connecting-rods **F16C**)
- CL M Guidance **Control of gearing conveying rotary motion**  
heading  
59/00-  
63/00
- CL M 61/66 · specially adapted for continuously variable gearings (**F16H 61/38** takes precedence; orbital toothed gearings with a secondary drive in order to vary the speed continuously **F16H 3/72**)

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ANNEX 193E F16K

[ Project-Rapporteur : M031/IB ] <CE40>

- CL M Guidance **Constructional types**  
heading  
1/00-  
13/00
-

ANNEX 194E F16L [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance **Pipe joints; Hose nipples**  
heading  
13/00-  
49/00

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ANNEX 195E F16N [ Project-Rapporteur : M032/IB ] <CE40>

CL M **3/00 Devices for supplying lubricant by manual action**

CL M **7/00 Arrangements for supplying oil or unspecified lubricant from a stationary reservoir or the equivalent in or on the machine or member to be lubricated**

AL M 7/08 · · controlled by means of the temperature of the member to be lubricated

AL M 7/14 · the lubricant being conveyed from the reservoir by mechanical means (by pumping devices **F16N 7/36, F16N 7/38**)

AL M 7/16 · · the oil being carried up by a lifting device

AL M 7/26 · · Splash lubrication

AL M 7/30 · the oil being fed or carried along by another fluid

AL M 7/32 · · Mist lubrication

AL M 7/34 · · · Atomising devices for oil

AL M 11/08 · with mechanical drive, other than directly by springs or weights (lubricating-pumps **F16N 13/00**)

CL M **13/00 Lubricating-pumps** (oil cans with pump **F16N 3/08**)

AL M 13/22 · with distributing equipment

CL M **15/00 Lubrication with substances other than oil or grease; Lubrication characterised by the use of particular lubricants in particular apparatus or conditions** (**F16N 17/00** takes precedence; lubricating compositions, selection of particular substances as lubricants in general **C10M**; lubrication specially adapted to machines or apparatus provided for in a single other class, see the relevant class for the machine or apparatus)

AL M 15/04 · with water

AL M 17/02 · at high temperature

AL M 17/04 · at low temperature

AL M 17/06 · in vacuum or under reduced pressure (of rotary anodes of X-ray tubes **H01J 35/10**)

CL M **21/00 Conduits; Junctions; Fittings for lubrication apertures**

CL M **23/00 Special adaptations of check valves**

CL M **25/00 Distributing equipment** (combined with oil pump **F16N 13/22**)

AL M 25/04 · with rotary distributing member

CL M **27/00 Proportioning devices**

AL M 27/02 · Gating equipment

CL M **29/00 Special means in lubricating arrangements or systems providing for the indication or detection of undesired conditions; Use of devices responsive to conditions in lubricating arrangements or systems** (constructions of apparatus outside the lubricating arrangements or systems, see the relevant classes)

CL M **31/00 Means for collecting, retaining, or draining-off lubricant in or on machines or apparatus**

CL M **35/00 Storage of lubricants in engine-rooms or the like**

AL M 39/02 · by cooling

AL M 39/04 · by heating

AL M 39/06 · by filtration

AL M 39/08 · by diluting, e.g. by addition of fuel

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**ANNEX 196E F21** [ **Project-Rapporteur : C438/US** ] <CE40>

CL M Note Attention is drawn to Note III of Section H, and in particular that subclass **H05B** covers  
F21 electrical aspects of the same technical subjects that are covered by class **F21**.

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**ANNEX 197E F21H** [ **Project-Rapporteur : M099/IB** ] <CE40>

CL N **7/00 Other incandescent bodies**

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**ANNEX 198E F21L** [ **Project-Rapporteur : C438/US** ] <CE40>

CL M Title **LIGHTING DEVICES OR SYSTEMS THEREOF, BEING PORTABLE OR SPECIALLY ADAPTED FOR TRANSPORTATION** (burners **F23D**)

CL M Note 1. This subclass covers devices or systems designed or specially adapted to be carried,  
F21L e.g. by hand, or otherwise transported from place to place, e.g. on wheeled supports,

in order to provide illumination as and where required. [7]

2. This subclass does not cover devices or systems intended for fixed installation, e.g. vehicle lighting, or for use essentially at a permanent location, which are covered by subclass **F21S**. [7]
3. *Non-electric lighting devices are classified in groups **F21L 17/00-F21L 26/00** only if a special adaptation related to the use of a non-electric light source is of interest.* [new]

CL D Guidance < Deleted >  
heading  
2/00-  
14/00

CL M **2/00 Systems of electric lighting devices** (systems employing both electric and non-electric light sources or exchangeable light sources **F21L 27/00**)

CL M **4/00 Electric lighting devices with self-contained electric batteries or cells**

CL M **13/00 Electric lighting devices with built-in electric generators** (with solar cells **F21L 4/00**)

CL M **14/00 Electric lighting devices without a self-contained power source, e.g. for mains connection**

CL D Guidance < Deleted >  
heading  
17/00-  
26/00

CL M **17/00 Non-electric torches; Non-electric flares**

CL M **19/00 Non-electric lanterns, e.g. hurricane lamps, candle lamps** (candle holders **F21V 35/00**)

CL M **21/00 Non-electric pocket-lamps, e.g. lamps producing sparks**

CL M **23/00 Non-electric hand-lamps for miners**

CL U **26/00** < unchanged >

CL M **27/00 Lighting devices or systems, employing combinations of electric and non-electric light sources; Replacing or exchanging electric light sources with non-electric light sources or vice versa in lighting devices or systems**

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ANNEX 199E F21S [ Project-Rapporteur : M014/IB ] <CE40>

CL M Title **NON-PORTABLE LIGHTING DEVICES OR SYSTEMS THEREOF** (burners **F23D**)

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ANNEX 200E F21S [ Project-Rapporteur : C438/US ] <CE40>

- CL M Note F21S
1. This subclass covers devices or systems intended for fixed installation, e.g. vehicle lighting, or for use at a permanent location, e.g. free-standing floor- or table-lamps. [7]
  2. This subclass does not cover devices or systems specially adapted for transportation, which are covered by subclass **F21L**. [7]
  3. *Non-electric lighting devices or systems are classified in groups **F21S 11/00-F21S 15/00** only if a special adaptation related to the use of a non-electric light source is of interest. [new]*

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ANNEX 201E F21S [ Project-Rapporteur : M014/IB ] <CE40>

CL D Guidance < Deleted >  
heading  
2/00-  
10/00

CL M 2/00 **Systems of lighting devices, not provided for in main groups **F21S 4/00-F21S 10/00** or **F21S 19/00**, e.g. of modular construction**

CL M 4/00 **Lighting devices or systems using a string or strip of light sources**

CL M 6/00 **Lighting devices intended to be free-standing (**F21S 9/00**, **F21S 10/00** take precedence)**

CL M 8/00 **Lighting devices intended for fixed installation (**F21S 9/00**, **F21S 10/00** take precedence; using a string or strip of light sources **F21S 4/00**)**

CL M 9/00 **Lighting devices with a built-in power supply; Systems employing lighting devices with a built-in power supply**

CL M 10/00 **Lighting devices or systems producing a varying lighting effect**

CL D Guidance < Deleted >  
heading  
11/00-  
15/00

CL M 11/00 **Non-electric lighting devices or systems using daylight (windows or the like **E06B**)**

CL M 13/00 **Non-electric lighting devices or systems employing a point-like light source (candle holders **F21V 35/00**); Non-electric lighting devices or systems employing a light source of unspecified shape**

CL M 15/00 **Non-electric lighting devices or systems employing light sources not covered by main groups **F21S 11/00**, **F21S 13/00** or **F21S 19/00****

CL M 19/00 **Lighting devices or systems employing combinations of electric and non-electric light sources; Replacing or exchanging electric light sources with non-electric light sources or vice versa**

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ANNEX 202E F21V [ Project-Rapporteur : C438/US ] <CE40>

- AL M Note  
F21V
1. Groups **F21V 1/00-F21V 14/00** cover details of those parts involved in light emission or distribution. Groups **F21V 15/00-F21V 31/00** cover details of those parts not so involved. [new]
  2. Details of non-electric lighting devices or systems are classified in groups **F21V 35/00-F21V 37/00** only if a special adaptation related to the use of a non-electric light source is of interest. [new]
  3. In this subclass, it is desirable to add the indexing codes of subclasses **F21W** and **F21Y**. [7]

- CL N Note  
only F21V
1. Groups **F21V 1/00-F21V 14/00** cover details of those parts involved in light emission or distribution. Groups **F21V 15/00-F21V 31/00** cover details of those parts not so involved. [new]
  2. Details of non-electric lighting devices or systems are classified in groups **F21V 35/00-F21V 37/00** only if a special adaptation related to the use of a non-electric light source is of interest. [new]

CL D Guidance < Deleted >  
heading  
1/00-  
14/00

CL M **1/00 Shades for light sources**

CL M **5/00 Refractors for light sources**

CL M **7/00 Reflectors for light sources**

CL M **11/00 Screens not covered by groups **F21V 1/00, F21V 3/00, F21V 7/00** or **F21V 9/00****

CL D Guidance < Deleted >  
heading  
15/00-  
37/00

CL M **29/00 Cooling or heating arrangements** (cooling of air-treatment systems with air-flow over only lighting fixtures **F24F 3/056**; lighting fixtures combined with outlets for air-treatment systems **F24F 13/078**; cooling of projectors **G03B 21/16**; cooling arrangements structurally associated with electric lamps **H01J 61/02, H01K 1/00**)

AL M **29/00 Cooling or heating arrangements** (cooling of air-treatment systems with air-flow over lighting fixtures **F24F 3/056**; lighting fixtures combined with outlets for air-treatment systems **F24F 13/078**; cooling of projectors **G03B 21/16**)

CL D Note < Deleted >  
33/00

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**ANNEX 203E F22B [ Project-Rapporteur : M014/IB ] <CE40>**

CL D Guidance < Deleted / Supprimé >  
heading /  
Rubrique  
d'orientation  
1/00

CL M **3/00 Other methods of steam generation; Steam boilers not provided for in other groups of this subclass**

CL D Guidance < Deleted / Supprimé >  
heading /  
Rubrique  
d'orientation  
5/00- 31/00

AL M 37/34 · · Adaptations of boilers for promoting water circulation (auxiliary devices for promoting water circulation **F22D 7/00**)

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**ANNEX 204E F22D [ Project-Rapporteur : M014/IB ] <CE40>**

CL M Title **PREHEATING, OR ACCUMULATING PREHEATED, FEED-WATER; FEED-WATER SUPPLY; CONTROLLING WATER LEVEL; AUXILIARY DEVICES FOR PROMOTING WATER CIRCULATION WITHIN BOILERS** (chemical treatment of water, e.g. purification, **C02F**; enclosed heat-exchange apparatus in general **F28D**; controlling in general **G05**)

CL M **7/00 Auxiliary devices for promoting water circulation** (adaptation of boilers for promoting water circulation **F22B 37/34**)

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**ANNEX 205E F23B [ Project-Rapporteur : M032/IB ] <CE40>**

CL M Title **METHODS OR APPARATUS FOR COMBUSTION USING ONLY SOLID FUEL** (for combustion of fuels that are solid at room temperatures, but burned in melted form, e.g. candle wax, **C11C 5/00, F23C, F23D**; using solid fuel suspended in air **F23C, F23D 1/00**; using solid fuel suspended in liquids **F23C, F23D 11/00**; using solid fuel and fluent fuel simultaneously or alternately **F23C, F23D 17/00**)

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**ANNEX 206E F23C [ Project-Rapporteur : M032/IB ] <CE40>**

CL M Title **METHODS OR APPARATUS FOR COMBUSTION USING FLUENT FUEL** (burners **F23D**)

AL M 6/04 · in series connection

AL M 7/02 · Disposition of air supply not passing through burner

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**ANNEX 207E F23G [ Project-Rapporteur : M032/IB ] <CE40>**

CL M 5/00 **Incineration of waste; Incinerator constructions; Details, accessories or control therefor**

CL M 5/027 · · pyrolysing or gasifying stage (pyrolysis of sludge [C02F 11/00](#))

CL M 7/00 **Incinerators or other apparatus specially adapted for consuming specific waste or low grade fuels, e.g. chemicals** ([F23G 1/00](#) takes precedence; incinerator closets [A47K 11/02](#); incinerating radioactive waste [G21F 9/00](#))

CL M 7/06 · of waste gases or noxious gases, e.g. exhaust gases (of uncombusted material from primary combustion within apparatus for combustion of solid or fluent fuel [F23B](#), [F23C](#))

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**ANNEX 208E F24F [ Project-Rapporteur : M031/IB ] <CE40>**

CL M 1/00 **Room units for air-conditioning, e.g. receiving primary air from a central station**

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**ANNEX 209E F25C [ Project-Rapporteur : M014/IB ] <CE40>**

CL M **Title PRODUCTION, WORKING, STORING OR DISTRIBUTION OF ICE** (frozen sweets, including ice-cream, their production [A23G 9/00](#); concentrating solutions by removing frozen solvents [B01D 9/04](#); purification of water by freezing [C02F 1/22](#); refrigeration machines, plants, or systems [F25B](#); solidification of gases or gaseous mixtures [F25J](#); freeze-drying [F26B](#))

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**ANNEX 210E F25C [ Project-Rapporteur : C439/SE ] <CE40>**

CL M 3/00 **Methods or apparatus specially adapted for the production of ice or snow for winter sports or similar recreational purposes, e.g. for sporting installations; Production of artificial snow** (foundations or pavings for artificial surfaces for outdoor or indoor practice of snow or ice sports [E01C 13/10](#); working on surfaces of snow or ice in order to make them suitable for traffic or sporting purposes [E01H 4/00](#))

AL M 3/02 · for ice rinks

AL M 3/04 · for sledging trails or ski trails; Production of artificial snow

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ANNEX 211E F25C [ Project-Rapporteur : M014/IB ] <CE40>

CL M 5/00 Working, storing or distribution of ice

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ANNEX 212E F25D [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Note  
F25D
1. *Devices associated with refrigerating machinery are classified in groups **F25D 11/00-F25D 16/00**. [new]*
  2. In this subclass, the following term is used with the meaning indicated:
    - "device" means an enclosed space to be cooled; such devices being associated either with refrigerating machinery, e.g. in a refrigerator, or with other cold sources, e.g. in an ice-box.
  3. Attention is drawn to Note (2) following the title of subclass **F24F**. [5]

CL M Subclass  
index

DEVICES NOT ASSOCIATED WITH  
REFRIGERATING MACHINERY

Using cold air or water; other cold materials or bodies **1/00; 3/00**

Using endothermic chemical reactions, or evaporation  
without recovery **5/00, 7/00**

Other devices, combinations **9/00**

DEVICES ASSOCIATED WITH REFRIGERATING  
MACHINERY: SELF-CONTAINED MOVABLE;  
STATIONARY; OTHER

**11/00; 13/00; 15/00**

In combination with a cooling mode not associated  
with refrigerating machinery **16/00**

STRUCTURAL PARTS OR ARRANGEMENTS, OF  
GENERAL APPLICATION: DEFROSTING;  
GENERAL FEATURES; HANDLING OF ARTICLES  
TO BE COOLED

**21/00; 23/00; 25/00**

CIRCULATING COOLING FLUID OR GAS;  
LIGHTING **17/00; 27/00**

ARRANGEMENT OR MOUNTING: OF  
REFRIGERATION UNITS; OF CONTROL OR  
SAFETY DEVICES **19/00; 29/00**

OTHER APPARATUS **31/00**

CL M 9/00 **Devices not associated with refrigerating machinery and not covered by groups **F25D 1/00-F25D 7/00**; Combinations of devices covered by two or more of the groups **F25D 1/00-F25D 7/00****

CL M 11/00 **Self-contained movable devices associated with refrigerating machinery, e.g. domestic refrigerators**

CL M 13/00 **Stationary devices associated with refrigerating machinery, e.g. cold rooms**

CL M 15/00 **Devices associated with refrigerating machinery not covered by group F25D 11/00 or F25D 13/00, e.g. non-self-contained movable devices**

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ANNEX 213E F27B [ Project-Rapporteur : M014/IB ] <CE40>

CL M 19/00 **Combinations of different kinds of furnace that are not all covered by any single one of main groups F27B 1/00-F27B 17/00**

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ANNEX 214E F41J [ Project-Rapporteur : C445/SE ] <CE40>

CL M Subclass  
index

TARGETS

Stationary or movable	1/00, 7/00, 9/00
Reflecting or active	2/00
Specially adapted for arrows or darts	3/00
TARGET-HIT INDICATORS OR RECORDERS	5/00
TARGET STANDS; TARGET RANGES	1/00; 11/00
BULLET CATCHERS	13/00

CL M 1/00 **Targets; Target stands; Target holders (F41J 2/00 to F41J 11/00 take precedence; targets combined with bullet catchers F41J 13/02)**

AL D 1/12 (transferred to F41J 13/00 )

AL D 1/14 (transferred to F41J 13/02 )

AL D 1/18 (transferred to F41J 11/00 )

AL D 1/20 (transferred to F41J 11/02 )

CL N 11/00 *Target ranges*

AL N 11/02 • *Safety means therefor*

CL N 13/00 *Bullet catchers*

AL N 13/02 • *combined with targets*

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ANNEX 215E F42D [ Project-Rapporteur : M099/IB ] <CE40>

CL D 7/00 (transferred to F42D 99/00 )

CL N 99/00 *Subject matter not provided for in other groups of this subclass*

ANNEX 216E G01 [ Project-Rapporteur : M032/IB ] <CE40>

CL M Title **MEASURING; TESTING**

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ANNEX 217E G01B [ Project-Rapporteur : M032/IB ] <CE40>

CL M Title **MEASURING LENGTH, THICKNESS OR SIMILAR LINEAR DIMENSIONS; MEASURING ANGLES; MEASURING AREAS; MEASURING IRREGULARITIES OF SURFACES OR CONTOURS**

CL M 9/04 · Measuring microscopes

CL M 9/06 · Measuring telescopes

CL M 11/14 · for measuring distance or clearance between spaced objects or spaced apertures (**G01B 11/26** takes precedence; rangefinders **G01C 3/00**)

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ANNEX 218E G01C [ Project-Rapporteur : M032/IB ] <CE40>

CL M Title **MEASURING DISTANCES, LEVELS OR BEARINGS; SURVEYING; NAVIGATION; GYROSCOPIC INSTRUMENTS; PHOTOGRAMMETRY OR VIDEOGRAMMETRY** (measuring liquid level **G01F**; radio navigation, determining distance or velocity by use of propagation effects, e.g. Doppler effect, propagation time, of radio waves, analogous arrangements using other waves **G01S**)

CL M **1/00** **Measuring angles**

AL M 1/10 · · including an artificial horizon (**G01C 1/14** takes precedence)

AL M 1/12 · · · with a stabilised mirror

AL M 1/14 · · Periscopic sextants

CL M **3/00** **Measuring distances in line of sight; Optical rangefinders** (tapes, chains, or wheels for measuring length **G01B 3/00**; active triangulation systems, i.e. using the transmission and reflection of electromagnetic waves other than radio waves, **G01S 17/48**)

AL M 3/04 · · Adaptation of rangefinders for combination with telescopes or binoculars

AL M 3/22 · using a parallactic triangle with variable angles and a base of fixed length at, near, or formed by, the object

AL M 3/24 · using a parallactic triangle with fixed angles and a base of variable length in the observation station, e.g. in the instrument

AL M 3/26 · using a parallactic triangle with fixed angles and a base of variable length at, near, or formed by, the object

- CL M **5/00 Measuring height; Measuring distances transverse to line of sight; Levelling between separated points; Surveyors' levels** (**G01C 3/20**, **G01C 3/30** take precedence)
- AL M 5/02 · · · · · involving automatic stabilisation of the line of sight
- AL M 5/06 · · · · · by using barometric means
- CL M **7/00 Tracing profiles** (by photogrammetry or videogrammetry **G01C 11/00**)
- CL M **11/00 Photogrammetry or videogrammetry, e.g. stereogrammetry; Photographic surveying**
- AL M 11/10 · · · · · using computers to control the position of the pictures
- AL M 11/26 · · · · · using computers to control the position of the pictures
- CL M **13/00 Surveying specially adapted to open water, e.g. sea, lake, river, canal** (liquid level metering **G01F**)
- CL M 15/14 · · · · · Artificial horizons
- CL M **17/00 Compasses; Devices for ascertaining true or magnetic north for navigation or surveying purposes** (using gyroscopic effect **G01C 19/00**)
- AL M 19/08 · · · · · electrically driven (**G01C 19/14** takes precedence)
- AL M 19/16 · · · · · Suspensions; Bearings
- AL M 19/26 · · · · · Caging, i.e. immobilising moving parts, e.g. for transport
- AL M 19/32 · · · · · Indicating or recording means specially adapted for rotary gyroscopes
- AL M 19/60 · · · · · Electronic or nuclear magnetic resonance gyrometers
- AL M 19/66 · · · · · Ring laser gyrometers
- CL M **21/00 Navigation; Navigational instruments not provided for in groups G01C 1/00-G01C 19/00** (measuring distance traversed on the ground by a vehicle **G01C 22/00**; control of position, course, altitude or attitude of vehicles **G05D 1/00**; traffic control systems for road vehicles involving transmission of navigation instructions to the vehicle **G08G 1/0968**)
- CL M 21/02 · · · · · by astronomical means (**G01C 21/24**, **G01C 21/26** take precedence)
- CL M 21/04 · · · · · by terrestrial means (**G01C 21/24**, **G01C 21/26** take precedence)
- CL M 21/20 · · · · · Instruments for performing navigational calculations (**G01C 21/24**, **G01C 21/26** take precedence)
- AL M 21/22 · · · · · Plotting boards
- CL M **22/00 Measuring distance traversed on the ground by vehicles, persons, animals, or other moving solid bodies, e.g. using odometers, using pedometers**
-

ANNEX 219E G01L [ Project-Rapporteur : M031/IB ] <CE40>

CL Guidance < Become(s) / Deviennent/Deviendra 7/00-21/00 >  
heading /  
Rubrique  
d'orientation  
7/00- 23/00

CL M 13/00 Devices or apparatus for measuring differences of two or more fluid pressure values

CL M 15/00 Devices or apparatus for measuring two or more fluid pressure values simultaneously

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ANNEX 220E G01S [ Project-Rapporteur : M032/IB ] <CE40>

CL M Title **RADIO DIRECTION-FINDING; RADIO NAVIGATION; DETERMINING DISTANCE OR VELOCITY BY USE OF RADIO WAVES; LOCATING OR PRESENCE-DETECTING BY USE OF THE REFLECTION OR RERADIATION OF RADIO WAVES; ANALOGOUS ARRANGEMENTS USING OTHER WAVES**

AL M 1/72 · using ultrasonic, sonic, or infrasonic waves

AL M 1/76 · · Systems for determining direction or position line

CL M 3/00 **Direction-finders for determining the direction from which infrasonic, sonic, ultrasonic, or electromagnetic waves, or particle emission, not having a directional significance, are being received** (position-fixing by co-ordinating a plurality of determinations of direction or position lines **G01S 5/00**)

AL M 3/06 · · · Means for increasing effective directivity, e.g. by combining signals having differently-oriented directivity characteristics, by sharpening the envelope waveform of the signal derived from a rotating or oscillating beam aerial (comparing amplitude of signals having differently-oriented directivity characteristics to determine direction **G01S 3/16, G01S 3/28**)

AL M 3/68 · · · · wherein the timing of the pulse-type envelope signal is indicated by cathode-ray tube

AL M 3/802 · · Systems for determining direction or deviation from predetermined direction

CL M 5/12 · · by co-ordinating position lines of different shape, e.g. hyperbolic, circular, elliptical, radial

AL M 5/28 · · by co-ordinating position lines of different shape, e.g. hyperbolic, circular, elliptical, radial

CL M 7/03 · · Details of HF subsystems specially adapted therefor, e.g. common to transmitter and receiver

CL M 7/292 · · · · Extracting wanted echo-signals

AL M 7/499 · · using polarisation effects

CL M 7/521 · · Constructional features

CL M **11/00 Systems for determining distance or velocity not using reflection or reradiation**  
(position-fixing by co-ordinating two or more distance determinations **G01S 5/00**)

AL M 11/08 · · using synchronised clocks

CL M **13/00 Systems using the reflection or reradiation of radio waves, e.g. radar systems;  
Analogous systems using reflection or reradiation of waves whose nature or  
wavelength is irrelevant or unspecified**

AL M 13/524 · · · · based upon the phase or frequency shift resulting from movement of objects, with  
reference to the transmitted signals, e.g. coherent MTi

AL M 13/88 · Radar or analogous systems, specially adapted for specific applications (electromagnetic  
prospecting or detecting of objects, e.g. near-field detection, **G01V 3/00**)

AL M 13/89 · · for mapping or imaging

AL M 13/90 < Add 1 dot(s) >

AL M 13/91 · · for traffic control (**G01S 13/93** takes precedence)

AL M 13/92 < Add 1 dot(s) >

AL M 13/93 · · for anti-collision purposes

AL M 13/94 · · for terrain-avoidance

AL M 13/95 · · for meteorological use

AL M 15/88 · Sonar systems, specially adapted for specific applications (seismic or acoustic prospecting  
or detecting **G01V 1/00**)

AL M 15/89 · · for mapping or imaging

AL M 15/93 · · for anti-collision purposes

AL M 15/96 · · for locating fish

CL M **17/00 Systems using the reflection or reradiation of electromagnetic waves other than radio  
waves, e.g. lidar systems**

AL M 17/08 · · · for measuring distance only (indirect measurement **G01S 17/46**; active triangulation  
systems **G01S 17/48**)

AL M 17/48 · · · · Active triangulation systems, i.e. using the transmission and reflection of  
electromagnetic waves other than radio waves

AL M 17/89 · · for mapping or imaging

AL M 17/93 · · for anti-collision purposes

AL M 17/95 · · for meteorological use

ANNEX 221E G01T [ Project-Rapporteur : M032/IB ] <CE40>

- CL M Title **MEASUREMENT OF NUCLEAR OR X-RADIATION** (radiation analysis of materials, mass spectrometry **G01N 23/00**; electric discharge tubes for analysing radiation or particles **H01J 40/00**, **H01J 47/00**, **H01J 49/00**)
- CL M 1/02 · Dosimeters (**G01T 1/15** takes precedence)
- AL M 1/08 · · Photographic dosimeters
- CL M 1/15 · Instruments in which pulses generated by a radiation detector are integrated, e.g. by a diode pump circuit
- AL M 1/161 · · Applications in the field of nuclear medicine, e.g. in vivo counting
- AL M 1/164 · · · Scintigraphy
- AL M 1/169 · · Exploration, location of contaminated surface areas
- AL M 1/175 · · · Power supply circuits
- AL M 1/185 · · with ionisation-chamber arrangements
- AL M 1/24 · · with semiconductor detectors
- AL M 1/28 · · with secondary-emission detectors
- AL M 1/29 · Measurement performed on radiation beams, e.g. position or section of the beam; Measurement of spatial distribution of radiation
- AL M 3/08 · with semiconductor detectors
- CL M **5/00 Recording of movements or tracks of particles** (spark chambers **H01J 47/14**) ;  
**Processing or analysis of such tracks**
- AL M 5/08 · Scintillation chambers (discharge tubes **H01J 40/00**, **H01J 47/00**)
- 

ANNEX 222E G01V [ Project-Rapporteur : M032/IB ] <CE40>

- CL M Title **GEOPHYSICS; GRAVITATIONAL MEASUREMENTS; DETECTING MASSES OR OBJECTS; TAGS** (means for indicating the location of accidentally buried, e.g. snow-buried, persons **A63B 29/02**)
- CL M 1/02 · Generating seismic energy
- AL M 1/157 · · using spark discharges; using exploding wires
- CL M 1/16 · Receiving elements for seismic signals; Arrangements or adaptations of receiving elements

- CL M 1/22 · Transmitting seismic signals to recording or processing apparatus
- AL M 1/24 · Recording seismic data
- CL M **3/00 Electric or magnetic prospecting or detecting; Measuring magnetic field characteristics of the earth, e.g. declination, deviation**
- CL M 3/08 · operating with magnetic or electric fields produced or modified by objects or geological structures or by detecting devices (with electromagnetic waves [G01V 3/12](#))
- CL M 3/38 · Processing data, e.g. for analysis, for interpretation, for correction
- CL M **5/00 Prospecting or detecting by the use of nuclear radiation, e.g. of natural or induced radioactivity**
- AL M 7/08 · using balances
- CL M **8/00 Prospecting or detecting by optical means**
- CL M 8/10 · Detecting, e.g. by using light barriers (by reflection from the object [G01S 17/00](#))
- CL M **15/00 Tags attached to, or associated with, an object, in order to enable detection of the object** (record carriers for use with machines having a detectable tag or marker [G06K 19/00](#))

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ANNEX 223E G01V [ Project-Rapporteur : M099/IB ] <CE40>

- CL N *99/00 Subject matter not provided for in other groups of this subclass*

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ANNEX 224E G03B [ Project-Rapporteur : M031/IB ] <CE40>

- CL M Guidance Details common to at least two of the following types of apparatus: cameras, projectors, printers  
heading  
1/00-  
5/00
- CL M **1/00 Film-strip handling of general interest for cameras, projectors or printers**
- CL M **3/00 Focusing arrangements of general interest for cameras, projectors or printers**  
(focusing means, autofocus systems for cameras [G03B 13/00](#); means for automatic focusing of projectors [G03B 21/53](#); means for automatic focusing of projection-printing apparatus or copying cameras [G03B 27/34](#), [G03F](#))
- CL M **5/00 Adjustment of optical system relative to image or object surface other than for focusing of general interest for cameras, projectors or printers**
-

ANNEX 225E G04B [ Project-Rapporteur : M031/IB ] <CE40>

CL M 11/00 Click devices, stop clicks or clutches for winding

CL M 19/00 **Indicating the time by visual means** (by electric lamps G04C 17/02; display arrangements in general G09)

CL M 21/00 **Indicating the time by acoustic means** (at preselected times G04B 23/00; by electro-acoustic means G04C 21/04; sound-producing apparatus per se G10)

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ANNEX 226E G05G [ Project-Rapporteur : M099/IB ] <CE40>

CL M 25/00 **Other details, features or accessories of control mechanisms, e.g. supporting intermediate members elastically**

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ANNEX 227E G06G [ Project-Rapporteur : M099/IB ] <CE40>

CL N 99/00 *Subject matter not provided for in other groups of this subclass*

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ANNEX 228E G06M [ Project-Rapporteur : M031/IB ] <CE40>

CL M Guidance **Counting of objects**  
heading  
7/00-  
11/00

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ANNEX 229E G10L [ Project-Rapporteur : M099/IB ] <CE40>

CL N 23/00 *Speech analysis not provided for in other groups of this subclass*

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ANNEX 230E G11B [ Project-Rapporteur : M032/IB ] <CE40>

CL M Title **INFORMATION STORAGE BASED ON RELATIVE MOVEMENT BETWEEN RECORD CARRIER AND TRANSDUCER** (recording measured values in a way that does not require playback through a transducer G01D 9/00; recording or playback apparatus using mechanically marked tape, e.g. punched paper tape, or using unit records, e.g. punched or magnetically marked cards G06K; transferring data from one type of record carrier to another G06K 1/18; circuits for coupling output of reproducer to radio receiver H04B 1/20; gramophone pick-ups or like acoustic electromechanical transducers or circuits therefor H04R)

- CL M 3/00 **Recording by mechanical cutting, deforming or pressing, e.g. of grooves or pits; Reproducing by mechanical sensing; Record carriers therefor (G11B 11/00 takes precedence)**
- AL M 3/02 · Arrangements of heads
- AL M 3/54 · · Storing; Manipulating, e.g. feeding styli to and from heads
- AL M 3/58 · Cleaning record carriers or styli, e.g. removing shavings or dust
- AL M 3/60 · Turntables for record carriers
- AL M 3/70 · · characterised by the selection of material or structure; Processes or apparatus specially adapted for manufacturing record carriers
- CL M 5/02 · Recording, reproducing, or erasing methods; Read, write, or erase circuits therefor
- CL M 5/455 · Arrangements for functional testing of heads; Measuring arrangements for heads
- CL M 5/465 · Arrangements for demagnetisation of heads
- CL M 5/62 · Record carriers characterised by the selection of the material
- AL M 5/627 · · of leaders for magnetic tapes, e.g. non-magnetic strips on the tapes or for connection
- CL M 5/68 · · comprising one or more layers of magnetisable particles homogeneously mixed with a bonding agent
- CL M 5/70 · · · on a base layer
- CL M 5/84 · Processes or apparatus specially adapted for manufacturing record carriers
- CL M 7/085 · · with provision for moving the light beam into, or out of, its operative position (modulating by information signals **G11B 7/12**)
- CL M 7/125 · · Optical beam sources therefor; Modulators, e.g. means for controlling the size or intensity of the optical spot or of the optical trace
- CL M 7/13 · · Optical detectors therefor
- CL M 7/20 · · Dual-recording arrangements, i.e. in which the information is recorded in two different forms simultaneously on the same or related tracks, e.g. recording instantaneous and mean values (sound-recording combined with cinematography **G03C 5/14**)
- CL M 7/24 · Record carriers characterised by the selection of the material or by the structure or form (characterised by the arrangement of information on the carrier **G11B 7/007**)
- CL M 7/26 · · Apparatus or processes specially adapted for the manufacture of record carriers
- AL M 15/22 · · Stopping means (slowing-down preparatory to stopping by means which are different from the stopping means **G11B 15/48**; slowing-down preparatory to stopping by a mechanical linkage which is different from the stopping means **G11B 15/50**)
- AL M 15/54 · · · by stroboscope; by tachometer

- CL M 19/00 **Driving, starting, stopping record carriers not specifically of filamentary or web form, or of supports therefor; Control thereof; Control of operating function**
- CL M 19/22 · · Brakes other than speed-regulating brakes
- CL M 19/28 · · Speed controlling, regulating, or indicating (**G11B 19/24** takes precedence)
- CL M 20/06 · · Angle-modulation recording or reproducing
- CL M 20/08 · · Pulse-modulation recording or reproducing (pulse-code-modulation recording **G11B 20/10**)
- CL M 20/10 · Digital recording or reproducing
- CL M 23/02 · Containers; Storing means (cabinets, cases, stands, modified to store record carriers **G11B 33/04**)
- CL M 23/30 · with provision for auxiliary signals
- CL M 25/00 **Apparatus characterised by the shape of record carrier employed but not specific to the method of recording or reproducing**
- CL M 27/02 · Editing, e.g. varying the order of information signals recorded on, or reproduced from, record carriers
- AL M 27/24 · · · by sensing features on the record carrier other than the transducing track
- CL M 31/00 **Arrangements for the associated working of recording or reproducing apparatus with related apparatus** (with cameras or projectors **G03B 31/00**)
- CL M 33/00 **Constructional parts, details or accessories not provided for in the other groups of this subclass**
- CL M 33/02 · Cabinets; Cases; Stands; Disposition of apparatus therein or thereon

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ANNEX 231E G21G [ Project-Rapporteur : M099/IB ] <CE40>

- CL N 7/00 *Conversion of chemical elements not provided for in other groups of this subclass*

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ANNEX 232E H01H [ Project-Rapporteur : M032/IB ] <CE40>

- CL M Title **ELECTRIC SWITCHES; RELAYS; SELECTORS; EMERGENCY PROTECTIVE DEVICES** (contact cables **H01B 7/10**; electrolytic self-interrupters **H01G 9/18**; emergency protective circuit arrangements **H02H**; switching by electronic means without contact-making **H03K 17/00**)
- AL M 1/36 · · by sliding
- AL M 1/58 · Electric connections to or between contacts; Terminals

- AL M 1/64 · Protective enclosures, baffle plates, or screens for contacts
- CL M **3/00 Mechanisms for operating contacts** (thermal actuating or release means [H01H 37/02](#))
- AL M 7/06 · with thermal timing means
- CL M **9/00 Details of switching devices, not covered by groups [H01H 1/00-H01H 7/00](#)**
- AL M 9/10 · Adaptation for built-in fuses (mounting switch and fuse separately on, or in, common support [H02B 1/18](#))
- CL M 9/20 · Interlocking, locking, or latching mechanisms
- AL M 9/46 · · using arcing horns (using blow-out magnet [H01H 9/44](#))
- CL M **11/00 Apparatus or processes specially adapted for the manufacture of electric switches** (processes specially adapted for manufacture of rectilinearly movable switches having a plurality of operating members associated with different sets of contacts, e.g. keyboards, [H01H 13/88](#))
- CL M 13/02 · Details
- CL M 13/70 · having a plurality of operating members associated with different sets of contacts, e.g. keyboard (mounting together a plurality of independent switches [H02B](#))
- CL M **19/00 Switches operated by an operating part which is rotatable about a longitudinal axis thereof and which is acted upon directly by a solid body external to the switch, e.g. by a hand**
- CL M **27/00 Switches operated by a removable member, e.g. key, plug, plate; Switches operated by setting members according to a single predetermined combination out of several possible settings** (combined with plug-and-socket connectors [H01R 13/70](#); with current-carrying plug [H01R 31/08](#))
- AL M 29/20 · operated by tilting contact-liquid container
- AL M 29/32 · with contact made by a liquid jet, e.g. earthing switch with contact made by jet of water
- CL M **31/00 Air-break switches for high tension without arc-extinguishing or arc-preventing means** (in combination with high tension or heavy-current switches with arc-extinguishing or arc-preventing means [H01H 33/00](#))
- AL M 31/04 · · Interlocking mechanisms
- AL M 31/10 · · · for interlocking two or more switches
- CL M 33/04 · · Means for extinguishing or preventing arc between current-carrying parts
- AL M 33/20 · · · using arcing horns (using blow-out magnet [H01H 33/18](#))
- AL M 33/36 · · · using dynamo-electric motor
- AL M 33/38 · · · using electromagnet

- CL D 33/62 (transferred to **H01H 33/65**)
- AL M 33/64 · · wherein the break is in gas (vacuum switches **H01H 33/66**)
- CL N 33/65 · · · *wherein the break is in air at atmospheric pressure, e.g. in open air*
- CL M **35/00 Switches operated by change of a physical condition** (operated by change of magnetic or electric field **H01H 36/00**; thermally-actuated switches **H01H 37/00**)
- CL M 35/18 · Switches operated by change of liquid level or of liquid density, e.g. float switch (by magnet carried on a float **H01H 36/02**)
- CL M **37/00 Thermally-actuated switches**
- AL M 37/32 · · Thermally-sensitive members
- AL M 37/74 · Switches in which only the opening movement or only the closing movement of a contact is effected by heating or cooling
- AL M 37/76 · · Contact member actuated by melting of fusible material, actuated due to burning of combustible material or due to explosion of explosive material
- CL M **41/00 Switches providing a selected number of consecutive operations of the contacts by a single manual actuation of the operating part**
- CL M **43/00 Time or time-programme switches providing a choice of time-intervals for executing one or more switching actions and automatically terminating their operation after the programme is completed**
- CL M **47/00 Circuit arrangements not adapted to a particular application of the relay and designed to obtain desired operating characteristics or to provide energising current**
- CL M 50/16 · Magnetic circuit arrangements
- AL M 50/44 · Magnetic coils or windings
- CL M 50/54 · Contact arrangements
- CL M **59/00 Electrostatic relays; Electro-adhesion relays**
- CL M **63/00 Details of electrically-operated selector switches**
- CL M **67/00 Electrically-operated selector switches**
- CL M **69/00 Apparatus or processes for the manufacture of emergency protective devices**
- AL M 69/01 · for calibrating or setting of devices to function under predetermined conditions
- CL M 71/08 · Terminals; Connections
- AL M 73/20 · · Terminals; Connections

- CL M 85/00 **Protective devices in which the current flows through a part of fusible material and this current is interrupted by displacement of the fusible material when this current becomes excessive** (switches actuated by melting of fusible material [H01H 37/76](#); disposition or arrangement of fuses on boards [H02B 1/18](#))
- AL M 85/02 · Details
- AL M 85/165 · · · · Casings
- AL M 85/20 · · Bases for supporting the fuse; Separate parts thereof
- AL M 85/25 · · Safety arrangements preventing or inhibiting contact with live parts, including operation of isolation on removal of cover

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ANNEX 233E H01L [ Project-Rapporteur : M032/IB ] <CE40>

- CL M 21/00 **Processes or apparatus specially adapted for the manufacture or treatment of semiconductor or solid state devices or of parts thereof**
- AL M 21/26 · · · · Bombardment with wave or particle radiation
- AL M 21/265 · · · · · producing ion implantation
- AL M 21/31 · · · · · to form insulating layers thereon, e.g. for masking or by using photolithographic techniques (encapsulating layers [H01L 21/56](#)) ; After-treatment of these layers; Selection of materials for these layers
- AL M 21/3205 · · · · · Deposition of non-insulating-, e.g. conductive-, resistive-, layers, on insulating layers; After-treatment of these layers (manufacture of electrodes [H01L 21/28](#))
- AL M 21/425 · · · · · producing ion implantation
- AL M 21/469 · · · · · to form insulating layers thereon, e.g. for masking or by using photolithographic techniques (encapsulating layers [H01L 21/56](#)) ; After-treatment of these layers
- AL M 21/48 · · · Manufacture or treatment of parts, e.g. containers, prior to assembly of the devices, using processes not provided for in a single one of the groups [H01L 21/06-H01L 21/326](#)
- CL M 21/66 · Testing or measuring during manufacture or treatment
- AL M 21/68 · · for positioning, orientation or alignment
- AL M 21/683 · · for supporting or gripping (for positioning, orientation or alignment [H01L 21/68](#))
- AL M 21/98 · · Assembly of devices consisting of solid state components formed in or on a common substrate; Assembly of integrated circuit devices ([H01L 21/50](#) takes precedence)
- CL M 23/32 · Holders for supporting the complete device in operation, i.e. detachable fixtures ([H01L 23/40](#) takes precedence)

- AL M 23/42 · · · Fillings or auxiliary members in containers selected or arranged to facilitate heating or cooling
- CL M 23/48 · Arrangements for conducting electric current to or from the solid state body in operation, e.g. leads, terminal arrangements
- AL M 23/538 · · · the interconnection structure between a plurality of semiconductor chips being formed on, or in, insulating substrates
- AL M 23/60 · · · Protection against electrostatic charges or discharges, e.g. Faraday shields
- CL M 25/00 **Assemblies consisting of a plurality of individual semiconductor or other solid state devices** (devices consisting of a plurality of solid state components formed in or on a common substrate [H01L 27/00](#); assemblies of photoelectronic cells [H01L 31/042](#))
- CL M 27/00 **Devices consisting of a plurality of semiconductor or other solid-state components formed in or on a common substrate** (details thereof [H01L 23/00](#), [H01L 29/00-H01L 51/00](#); assemblies consisting of a plurality of individual solid state devices [H01L 25/00](#))
- CL M 29/00 **Semiconductor devices specially adapted for rectifying, amplifying, oscillating or switching and having at least one potential-jump barrier or surface barrier; Capacitors or resistors with at least one potential-jump barrier or surface barrier, e.g. PN-junction depletion layer or carrier concentration layer; Details of semiconductor bodies or of electrodes thereof** ([H01L 31/00-H01L 47/00](#), [H01L 51/05](#) take precedence; details other than of semiconductor bodies or of electrodes thereof [H01L 23/00](#); devices consisting of a plurality of solid state components formed in or on a common substrate [H01L 27/00](#))
- AL M 29/04 · · · characterised by their crystalline structure, e.g. polycrystalline, cubic, particular orientation of crystalline planes (characterized by physical imperfections [H01L 29/30](#))
- AL M 29/24 · · · including, apart from doping materials or other impurities, only inorganic semiconductor materials not provided for in groups [H01L 29/16](#), [H01L 29/18](#), [H01L 29/20](#), [H01L 29/22](#)
- CL M 31/00 **Semiconductor devices sensitive to infra-red radiation, light, electromagnetic radiation of shorter wavelength, or corpuscular radiation and specially adapted either for the conversion of the energy of such radiation into electrical energy or for the control of electrical energy by such radiation; Processes or apparatus specially adapted for the manufacture or treatment thereof or of parts thereof; Details thereof** ([H01L 51/42](#) takes precedence; devices consisting of a plurality of solid state components formed in, or on, a common substrate, other than combinations of radiation-sensitive components with one or more electric light sources, [H01L 27/00](#))
- CL M 31/058 · · · including means to utilise heat energy, e.g. hybrid systems, or a supplementary source of electric energy
- CL M 31/12 · structurally associated with, e.g. formed in or on a common substrate with, one or more electric light sources, e.g. electroluminescent light sources, and electrically or optically coupled thereto (electroluminescent light sources per se [H05B 33/00](#))
- CL M 31/18 · Processes or apparatus specially adapted for the manufacture or treatment of these devices or of parts thereof

- CL M 33/00 **Semiconductor devices with at least one potential-jump barrier or surface barrier specially adapted for light emission, e.g. infra-red; Processes or apparatus specially adapted for the manufacture or treatment thereof or of parts thereof; Details thereof** (**H01L 51/50** takes precedence; devices consisting of a plurality of components formed in or on a common substrate **H01L 27/15**; semiconductor lasers **H01S 5/00**)
- CL M 35/00 **Thermoelectric devices comprising a junction of dissimilar materials, i.e. exhibiting Seebeck or Peltier effect with or without other thermoelectric effects or thermomagnetic effects; Processes or apparatus specially adapted for the manufacture or treatment thereof or of parts thereof; Details thereof** (devices consisting of a plurality of solid state components formed in or on a common substrate **H01L 27/00**)
- AL M 35/34 · Processes or apparatus specially adapted for the manufacture or treatment of these devices or of parts thereof
- CL M 37/00 **Thermoelectric devices without a junction of dissimilar materials; Thermomagnetic devices, e.g. using Nernst-Ettinghausen effect; Processes or apparatus specially adapted for the manufacture or treatment thereof or of parts thereof** (devices consisting of a plurality of solid state components formed in or on a common substrate **H01L 27/00**)
- CL M 39/24 · Processes or apparatus specially adapted for the manufacture or treatment of devices provided for in group **H01L 39/00** or of parts thereof
- CL M 41/22 · Processes or apparatus specially adapted for the manufacture or treatment of these elements or of parts thereof
- CL M 43/00 **Devices using galvano-magnetic or similar magnetic effects; Processes or apparatus specially adapted for the manufacture or treatment thereof or of parts thereof** (devices consisting of a plurality of solid state components formed in or on a common substrate **H01L 27/00**)
- AL M 43/12 · Processes or apparatus specially adapted for the manufacture or treatment of these devices or of parts thereof
- CL M 49/00 **Solid state devices not provided for in groups **H01L 27/00-H01L 47/00** and **H01L 51/00** and not provided for in any other subclass; Processes or apparatus specially adapted for the manufacture or treatment thereof or of parts thereof**
- AL M 51/54 · · Selection of materials

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ANNEX 234E H01P [ Project-Rapporteur : M032/IB ] <CE40>

- CL M Title **WAVEGUIDES; RESONATORS, LINES, OR OTHER DEVICES OF THE WAVEGUIDE TYPE** (operating at optical frequencies **G02B**)
- CL M 1/04 · Fixed joints
- CL M 1/08 · Dielectric windows
- CL M 1/16 · for mode selection, e.g. mode suppression or mode promotion; for mode conversion

CL M 1/18 · Phase-shifters (**H01P 1/165** takes precedence)

CL M 1/20 · Frequency-selective devices, e.g. filters

AL M 1/28 · · Short-circuiting plungers

AL M 3/06 · · Coaxial lines

AL M 3/20 · Quasi-optical arrangements for guiding a wave, e.g. focusing by dielectric lenses

CL M **5/00 Coupling devices of the waveguide type**

CL M 5/08 · for linking lines or devices of different kinds (**H01P 1/16**, **H01P 5/04** take precedence; linking lines of the same kind but with different dimensions **H01P 5/02**)

CL M **7/00 Resonators of the waveguide type**

CL M **9/00 Delay lines of the waveguide type**

CL M **11/00 Apparatus or processes specially adapted for manufacturing waveguides or resonators, lines, or other devices of the waveguide type**

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ANNEX 235E H02B [ Project-Rapporteur : M099/IB ] <CE40>

CL N 99/00 *Subject matter not provided for in other groups of this subclass*

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ANNEX 236E H02H [ Project-Rapporteur : M099/IB ] <CE40>

CL N 99/00 *Subject matter not provided for in other groups of this subclass*

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ANNEX 237E H03F [ Project-Rapporteur : M099/IB ] <CE40>

CL M Title **AMPLIFIERS** (measuring, testing **G01R**; optical parametric amplifiers **G02F**; circuit arrangements with secondary emission tubes **H01J 43/30**; masers, lasers **H01S**; dynamo-electric amplifiers **H02K**; control of amplification **H03G**; coupling arrangements independent of the nature of the amplifier, voltage dividers **H03H**; amplifiers capable only of dealing with pulses **H03K**; repeater circuits in transmission lines **H04B 3/36**, **H04B 3/58**; application of speech amplifiers in telephonic communication **H04M 1/60**, **H04M 3/40**)

CL D 21/00 (transferred to **H03F 99/00** )

CL N 99/00 *Subject matter not provided for in other groups of this subclass*

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ANNEX 238E H04B [ Project-Rapporteur : C435/EP ] <CE40>

CL M Title TRANSMISSION (transmission systems for measured values, control or similar signals **G08C**; speech analysis or synthesis **G10L**; coding, decoding or code conversion, in general **H03M**; broadcast communication **H04H**; multiplex systems **H04J**; secret communication **H04K**; transmission of digital information **H04L**; wireless communication networks **H04W**)

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ANNEX 239E H04H [ Project-Rapporteur : C434/JP ] <CE40>

CL M Title BROADCAST COMMUNICATION (multiplex communication **H04J**; pictorial communication aspects of broadcast systems **H04N**)

- CL M Note  
H04H
1. In this subclass, the following terms or expressions are used with the meaning indicated:
    - “broadcast” is simultaneous distribution of identical signals to plural receiving stations. The term “broadcast” does not include distribution to receiving stations which is controlled by requests or responses from the receiving stations; **[new]**
    - “broadcast information” covers all kinds of information distributed by broadcast systems; **[new]**
    - “broadcast-related information” is information required by services provided via broadcast systems, other than broadcast information; **[new]**
    - “broadcast time” is a time when particular broadcast information exists and is available; **[new]**
    - “broadcast channel” is a channel via which broadcast information is distributed, e.g. carrier waves, time slots, cables or wireless broadcast service areas; **[new]**
    - “broadcast space” is either a set of broadcast channels in which particular broadcast information exists and is available or a geographical area determined by the set of broadcast channels; **[new]**
    - “broadcast space-time” is space-time determined by broadcast space and broadcast time in which particular broadcast information exists and is available; **[new]**
    - “broadcast system” is a system which consists of transmitter, transponder and receiver for broadcast; **[new]**
    - “broadcast-related system” is a system which is directly affected by generation, broadcast, reception or use of broadcast information; **[new]**
    - “broadcast service” is a service directly provided by a broadcast system, i.e. distribution service of broadcast information; **[new]**
    - “broadcast-related service” is a service provided by broadcast-related systems; **[new]**
    - “A with a direct linkage to B” means that A directly affects B or that A is directly affected by B. **[new]**
  2. In this subclass, multi-aspect classification is applied, so that subject matter characterised by aspects covered by more than one of its groups, which is considered to represent information of interest for search, may also be classified in

*each of those groups. [new]*

- CL D 1/00 (transferred to **H04H 20/00-H04H 60/00** )
- CL D 1/02 (transferred to **H04H 20/76** )
- CL D 1/04 (transferred to **H04H 20/77** )
- CL D 3/00 (transferred to **H04H 20/67** )
- CL D 5/00 (transferred to **H04H 20/00-H04H 60/00** )
- CL D 7/00 (transferred to **H04H 60/04** )
- CL D 9/00 (transferred to **H04H 20/00-H04H 60/00** )
- CL N **20/00** *Arrangements for broadcast or for distribution combined with broadcast*
- CL N 20/02 • *Arrangements for relaying broadcast information*
- CL N 20/10 • *Arrangements for replacing or switching information during the broadcast or during the distribution*
- CL N 20/12 • *Arrangements for monitoring, testing or troubleshooting*
- CL N 20/16 • *Arrangements for broadcast or distribution of identical information repeatedly*
- CL N 20/18 • *Arrangements for synchronising broadcast or distribution via plural systems*
- CL N 20/20 • *Arrangements for broadcast or distribution of identical information via plural systems*
- CL N 20/26 • *Arrangements for switching distribution systems*
- CL N 20/28 • *Arrangements for simultaneous broadcast of plural pieces of information*
- CL N 20/38 • *Arrangements for distribution where lower stations, e.g. receivers, interact with the broadcast*
- CL N 20/40 • *Arrangements for broadcast specially adapted for accumulation-type receivers*
- CL N 20/42 • *Arrangements for resource management*
- CL N 20/44 • *Arrangements characterised by circuits or components specially adapted for broadcast*
- CL N 20/53 • *Arrangements specially adapted for specific applications e.g. for traffic information or for mobile receivers*
- CL N 20/65 • *Arrangements characterised by transmission systems for broadcast*
- CL N 20/67 • • *Common-wave systems, i.e. using separate transmitters operating on substantially the same frequency*

- CL N 20/76 • • *Wired systems*
- CL N 20/77 • • • *using carrier waves*
- CL N 20/86 • *Arrangements characterised by special technical features of the broadcast information, e.g. signal form or information format*
- CL N 20/88 • • *Stereophonic broadcast systems*
- CL N **40/00** ***Arrangements specially adapted for receiving broadcast information***
- CL N 40/09 • *Arrangements for receiving desired information automatically according to timetables*
- CL N 40/18 • *Arrangements characterised by circuits or components specially adapted for receiving*
- CL N **60/00** ***Arrangements for broadcast applications with a direct linkage to broadcast information or to broadcast space-time; Broadcast-related systems***
- CL N 60/02 • *Arrangements for generating broadcast information; Arrangements for generating broadcast-related information with a direct linkage to broadcast information or to broadcast space-time; Arrangements for simultaneous generation of broadcast information and broadcast-related information*
- CL N 60/04 • • *Studio equipment; Interconnection of studios*
- CL N 60/09 • *Arrangements for device control with a direct linkage to broadcast information or to broadcast space-time; Arrangements for control of broadcast-related services*
- CL N 60/25 • *Arrangements for updating broadcast information or broadcast-related information*
- CL N 60/27 • *Arrangements for recording or accumulating broadcast information or broadcast-related information*
- CL N 60/29 • *Arrangements for monitoring broadcast services or broadcast-related services*
- CL N 60/31 • • *Arrangements for monitoring the use made of the broadcast services*
- CL N 60/35 • *Arrangements for identifying or recognising characteristics with a direct linkage to broadcast information or to broadcast space-time, e.g. for identifying broadcast stations or for identifying users*
- CL N 60/56 • *Arrangements characterised by components specially adapted for monitoring, identification or recognition covered by groups [H04H 60/29](#) or [H04H 60/35](#)*
- CL N 60/61 • *Arrangements for services using the result of monitoring, identification or recognition covered by groups [H04H 60/29](#) or [H04H 60/35](#)*
- CL N 60/68 • *Systems specially adapted for using specific information, e.g. geographical or meteorological information*
- CL N 60/76 • *Arrangements characterised by transmission systems other than for broadcast, e.g. the Internet*
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ANNEX 240E H04J [ Project-Rapporteur : M099/IB ] <CE40>

CL D 15/00 (transferred to H04J 99/00 )

CL N 99/00 *Subject matter not provided for in other groups of this subclass*

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ANNEX 241E H04L [ Project-Rapporteur : C435/EP ] <CE40>

CL M Title **TRANSMISSION OF DIGITAL INFORMATION, e.g. TELEGRAPHIC COMMUNICATION** (typewriters B41J; order telegraphs, fire or police telegraphs G08B; visual telegraphy G08B, G08C; teleautographic systems G08C; ciphering or deciphering apparatus *per se* G09C; coding, decoding or code conversion, in general H03M; arrangements common to telegraphic and telephonic communication H04M; selecting H04Q; wireless communication networks H04W)

CL M 9/32 • including means for verifying the identity or authority of a user of the system (security arrangements for protecting computers or computer systems against unauthorised activity G06F 21/00; dispensing apparatus actuated by coded identity card or credit card G07F 7/08; specially adapted for wireless communication networks H04W 12/00)

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ANNEX 242E H04M [ Project-Rapporteur : C435/EP ] <CE40>

CL M Title **TELEPHONIC COMMUNICATION** (counting mechanisms G06M; circuits for controlling other apparatus *via* a telephone cable and not involving telephone switching apparatus G08; reels or other take-up devices for cords H02G 11/00; multiplex transmission between switching centres H04J; selecting arrangements H04Q; loudspeakers, microphones, gramophone pick-ups or like electromechanical transducers H04R; wireless communication networks H04W)

CL M 3/42 • Systems providing special services or facilities to subscribers (specially adapted for wireless communication networks H04W 4/00)

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ANNEX 243E H04W [ Project-Rapporteur : C435/EP ] <CE40>

CL N Title **WIRELESS COMMUNICATION NETWORKS**

- CL N Note H04W
1. This subclass covers :
    - *communication networks for selectively establishing one or a plurality of wireless communication links between a desired number of users or between users and network equipment, for the purpose of transferring information via these wireless communication links; [new]*
    - *networks deploying an infrastructure for mobility management of wireless users connected thereto, e.g. cellular networks, WLAN [Wireless Local Area Network], wireless access networks, e.g. WLL [Wireless Local Loop] or self-organising wireless communication networks, e.g. ad hoc*

*networks; [new]*

- *planning or deployment specially adapted for the above-mentioned wireless networks; [new]*
- *services or facilities specially adapted for the above-mentioned wireless networks; [new]*
- *arrangements or techniques specially adapted for the operation of the above-mentioned wireless networks. [new]*

2. This subclass does not cover :

- *communication systems using wireless extensions, i.e. wireless links without selective communication, e.g. cordless telephones, which are covered by group **H04M 1/72**; [new]*
- *broadcast communication, which is covered by subclass **H04H**. [new]*

3. *In this subclass, at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place. [new]*

CL N **4/00** *Services or facilities specially adapted for wireless communication networks*

CL N 4/02 • *Services making use of the location of users or terminals*

CL N 4/06 • *Selective distribution of broadcast; Services to user groups; One-way selective calling services*

CL N 4/12 • *Messaging, e.g. SMS [Short Messaging Service]; Mailboxes; Announcements, e.g. informing users on the status or progress of a communication request*

CL N 4/16 • *Communication-related supplementary services, e.g. call-transfer or call-hold*

CL N 4/18 • *Information format or content conversion, e.g. adaptation by the network of the transmitted or received information for the purpose of wireless delivery to users or terminals*

CL N 4/20 • *Auxiliary data signalling, i.e. transmitting data via a non-traffic channel*

CL N 4/22 • *Emergency connection handling*

CL N 4/24 • *Accounting or billing*

CL N **8/00** *Network data management*

CL N 8/02 • *Processing of mobility data, e.g. registration information at HLR [Home Location Register] or VLR [Visitor Location Register]; Transfer of mobility data, e.g. between HLR, VLR or external networks*

CL N 8/18 • *Processing of user or subscriber data, e.g. subscribed services, user preferences or user profiles; Transfer of user or subscriber data*

CL N 8/22 • *Processing or transfer of terminal data, e.g. status or physical capabilities*

CL N **12/00** *Security arrangements, e.g. access security or fraud detection; Authentication, e.g. verifying user identity or authorisation; Protecting privacy or anonymity*

- CL N **16/00** *Network planning, e.g. coverage or traffic planning tools; Network deployment, e.g. resource partitioning or cell structures*
- CL N **24/00** *Supervisory, monitoring or testing arrangements*
- CL N **28/00** *Network traffic or resource management*
- CL N **28/02** • *Traffic management, e.g. flow control or congestion control*
- CL N **28/16** • *Central resource management; Negotiation of resources, e.g. negotiating bandwidth or QoS [Quality of Service]*
- CL N **36/00** *Handoff or reselecting arrangements*
- CL N **40/00** *Communication routing or communication path finding*
- CL N **40/02** • *Communication route or path selection, e.g. power-based or shortest path routing*
- CL N **40/24** • *Connectivity information management, e.g. connectivity discovery or connectivity update*
- CL N **48/00** *Access restriction; Network selection; Access point selection*
- CL N **52/00** *Power management, e.g. TPC [Transmission Power Control], power saving or power classes*
- CL N **56/00** *Synchronisation arrangements*
- CL N **60/00** *Registration, e.g. affiliation to network; De-registration, e.g. terminating affiliation*
- CL N **64/00** *Locating users or terminals for network management purposes, e.g. mobility management*
- CL N **68/00** *Notification of users, e.g. alerting for incoming communication or change of service*
- CL N **72/00** *Local resource management, e.g. selection or allocation of wireless resources, or wireless traffic scheduling*
- CL N **74/00** *Wireless channel access, e.g. scheduled or random access*
- CL N **76/00** *Connection management, e.g. connection set-up, manipulation or release*
- CL N **80/00** *Wireless network protocols or protocol adaptations to wireless operation, e.g. WAP [Wireless Application Protocol]*
- CL N **84/00** *Network topologies*
- CL N **84/02** • *Hierarchically pre-organized networks, e.g. paging networks, cellular networks, WLAN [Wireless Local Area Network] or WLL [Wireless Local Loop]*
- CL N **84/18** • *Self-organising networks, e.g. ad hoc networks or sensor networks*
- CL N **88/00** *Devices specially adapted for wireless communication networks, e.g. terminals, base stations or access point devices*

CL N *92/00 Interfaces specially adapted for wireless communication networks*

CL N *99/00 Subject matter not provided for in other groups of this subclass*

[End of Technical Annexes and of document]