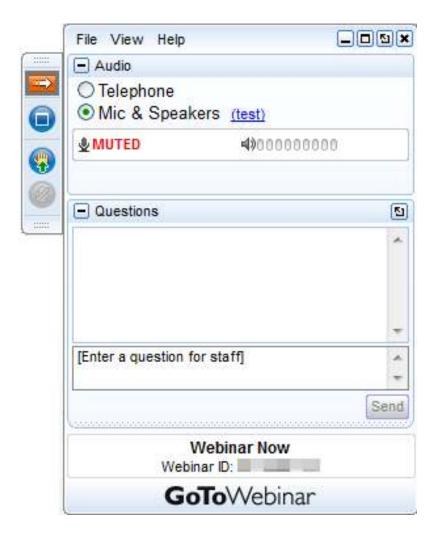


### **Patent Classification**

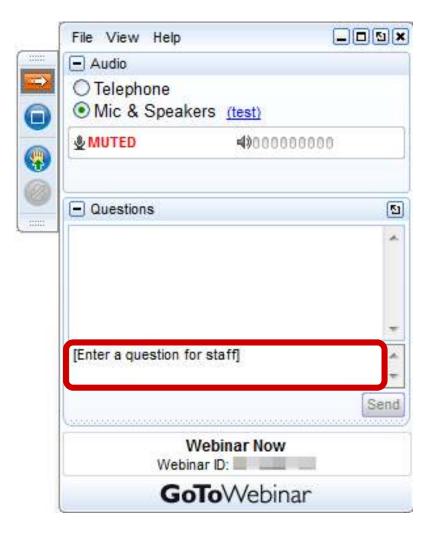
Structure and use

Webinar 12 September 2013

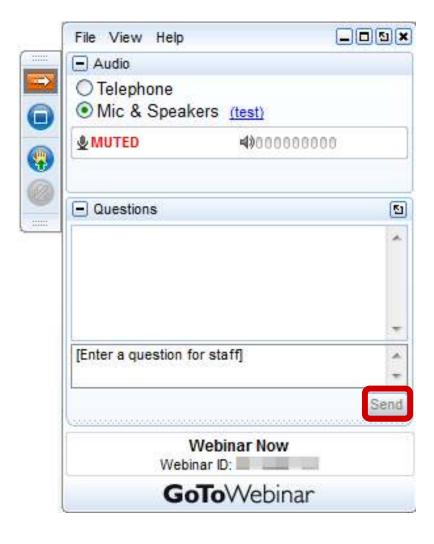
Andrew Czajkowski Head, Innovation and Technology Support Section



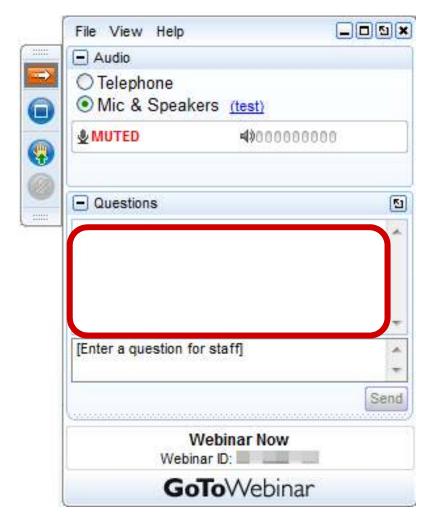
















### Overview

- Approaches for identifying appropriate patent classification
- Review of the structure of patent classification (IPC) and its publication



### Scenario



A construction material company has asked you to identify technologies related to thermal insulation for houses.

Photo source: Andrew Dunn (top), Radomil (Wikipedia PL) (bottom)



### Scenario

You decide to try using patent classification to identify relevant technologies.



### Advantages of patent classification

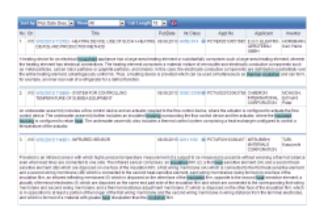
- Applied in a standardized manner
- Available for all (almost) patent documents
- Available for old patent documents for which little or no searchable text is available



### **Approaches**

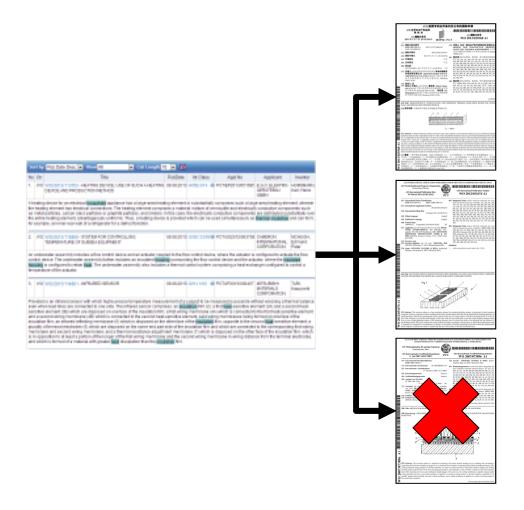
- Review individual documents
- Analyze document sets
- Refer to patent classification publication





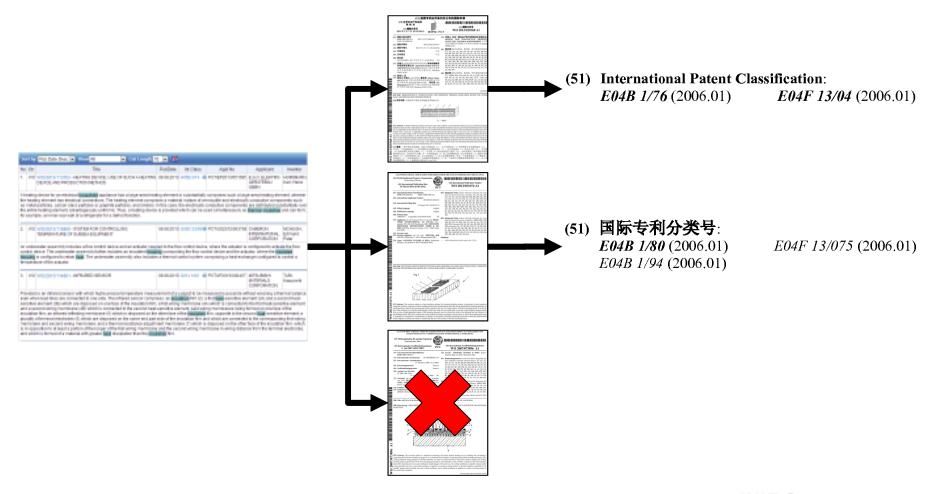
→ Retrieve documents (keyword search)





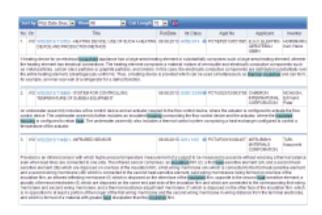
→ Select relevant documents





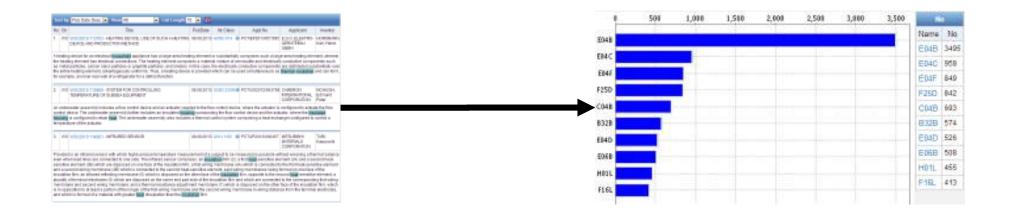
→ Note classification symbols of relevant documents





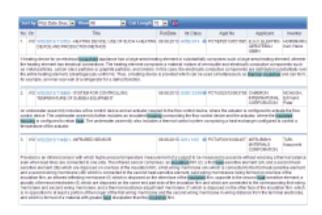
→ Retrieve documents (keyword search)





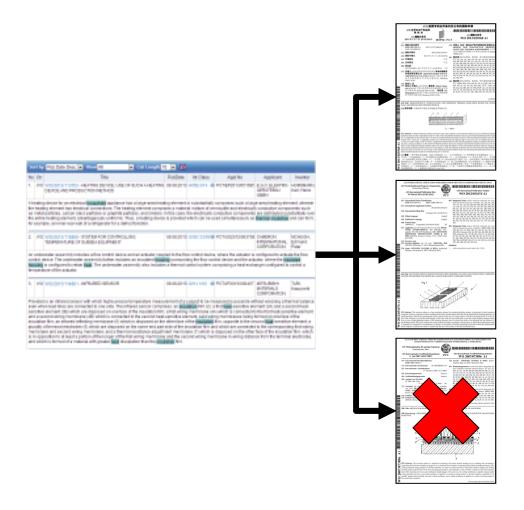
→ Statistically analyze all retrieved documents, or...





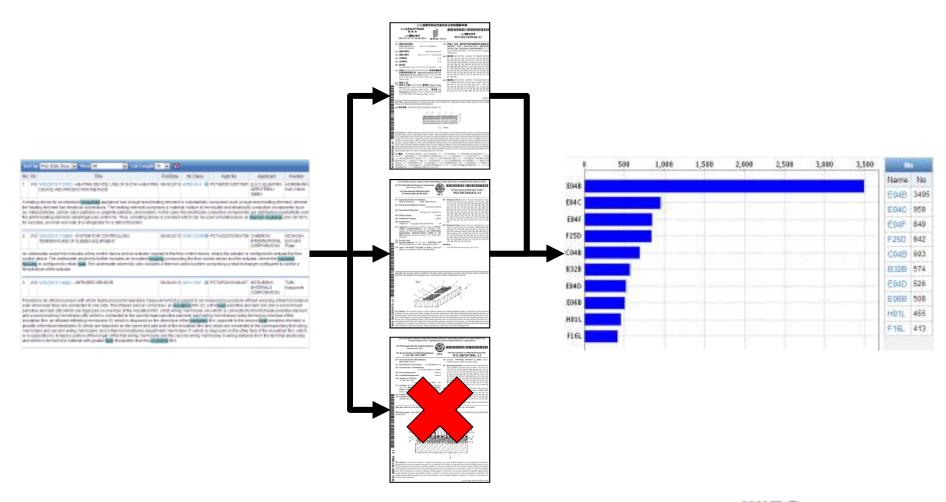
→ Retrieve documents (keyword search)





→ Select relevant documents



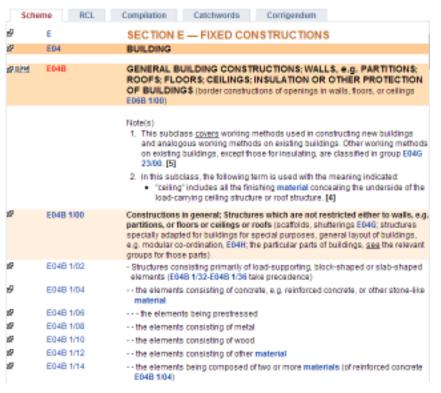


→ Statistically analyze relevant documents

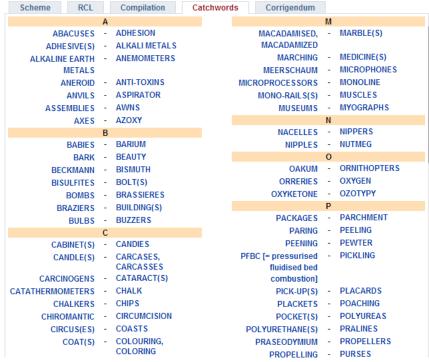


## Classification publication (IPC)

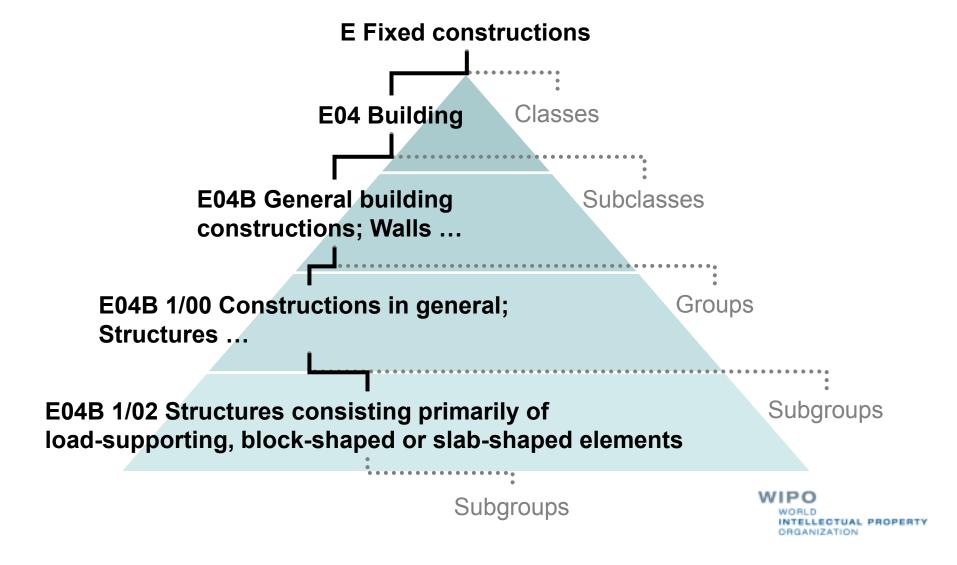
#### **Scheme**



#### **Catchwords**







```
SECTION A — HUMAN NECESSITIES

SECTION B — PERFORMING OPERATIONS; TRANSPORTING

SECTION C — CHEMISTRY; METALLURGY

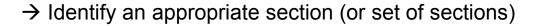
SECTION D — TEXTILES; PAPER

SECTION E — FIXED CONSTRUCTIONS

SECTION F — MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING

SECTION G — PHYSICS

SECTION H — ELECTRICITY
```

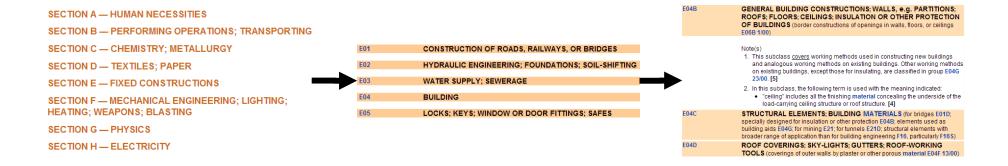






→ Identify an appropriate class (or set of classes)





→ Identify an appropriate subclass (or set of subclasses)





→ Continue as appropriate...



## Classification: Catchwords (IPC)

```
ADHESION
        ABACUSES
       ADHESIVE(S)
                        ALKALI METALS
                        ASPIRATOR
       ASSEMBLIES
                        AZOXY
            AXES
                        BARIUM
                        BISMUTH
        BISULFITES
                        BOLT(S)
                        BUILDING(S)
        CANDLE(S)
                        CARCASES, CARCASSES
                        CATARACT(S)
      CARCINOGENS
CATATHERMOMETERS
        CHALKERS
                        CIRCUMCISION
      CHIROMANTIC
          COAT(S)
                        CONDIMENTS
         COLTERS
      CONDITIONING
           COVERS
                        CVD [= chemical vapour deposition]
      CRUMB TRAYS
        CYANAMIDE - CYSTOSCOPES
```

→ Find the appropriate starting catchword



## Classification: Catchwords (IPC)

```
ABACUSES
                        ADHESION
       ADHESIVE(S)
                        ALKALI METALS
                        ANEMOMETERS
                        ASPIRATOR
           ANVII S
       ASSEMBLIES
                        AZOXY
            AXES
                        BARIUM
                        BISMUTH
        BECKMANN
        BISULFITES
                        BOLT(S)
                        BRASSIERES
         BRAZIERS
                        BUILDING(S)
                        BUZZERS
                        CANDIES
        CABINET(S)
        CANDLE(S)
                        CARCASES, CARCASSES
     CARCINOGENS
                        CATARACT(S)
CATATHERMOMETERS
        CHALKERS
                        CIRCUMCISION
      CHIROMANTIC
          COAT(S)
                        CONDIMENTS
         COLTERS
     CONDITIONING
                        COPROSTANES
            COPS
                        COVERLETS
          COVERS
     CRUMB TRAYS
                        CVD [= chemical vapour deposition]
        CYANAMIDE - CYSTOSCOPES
```

Scheme Compilation Catchwords Corrigendum BUILDING(S) E04 (1) kinds of BUILDING(S); features of BUILDING(S) air-conditioning or ventilation of BUILDING(S) F24F BUILDING(S) for particular purposes E04H devices for rescuing persons from BUILDING(S) A62B 1/00-A62B 5/00 floating BUILDING(S) B63B 35/44 foundations inserted underneath existing BUILDING(S) E02D 27/48 inflatable tent or canopy-like BUILDING(S) E04H 15/20 ladders attachable to BUILDING(S) E06C 1/34 ladders fixed permanently to BUILDING(S) E06C 9/00 lifts associated with BUILDING(S) B66B 9/00 structures of BUILDING(S) E04B subaqueous BUILDING(S) E02D 29/00, E21D (2) construction of BUILDING(S) BUILDING(S) implements E04G cranes for erecting BUILDING(S) B66C





### Tip!

Pay attention to references and notes!

Constructions in general; Structures which are not restricted either to walls, e.g. partitions, or floors or ceilings or roofs (scaffolds, shutterings E04G; structures specially adapted for buildings for special purposes, general layout of buildings, e.g. modular co-ordination, E04H; the particular parts of buildings, see the relevant groups for those parts)

- Structures consisting primarily of load-supporting, block-shaped or slab-shaped elements (E04B 1/32-E04B 1/36 take precedence)
- the elements consisting of concrete, e.g. reinforced concrete, or other stone-like material



### Tip!

Pay attention to references and notes!

Constructions in general; Structures which are not restricted either to walls, e.g. partitions, or floors or ceilings or roofs scaffolds, shutterings E04G structures specially adapted for buildings for special purposes, general layout of buildings, e.g. modular co-ordination, E04H; the particular parts of buildings, see the relevant groups for those parts)

- Structures consisting primarily of load-supporting, block-shaped or slab-shaped elements (E04B 1/32-E04B 1/36 take precedence)
- the elements consisting of concrete, e.g. reinforced concrete, or other stone-like material



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Constructions in general; Structures which are not restricted either to walls, e.g. partitions, or floors or ceilings or roofs (scaffolds, shutterings E04G; structures specially adapted for buildings for special purposes, general layout of buildings, e.g. modular co-ordination, E04H; the particular parts of buildings, see the relevant groups for those parts)

- Structures consisting primarily of load-supporting, block-shaped or slab-shaped elements E04B 1/32-E04B 1/36 take precedence
- the elements consisting of concrete, e.g. reinforced concrete, or other stone-like material



### Scenario

A construction material company has asked you to identify technologies related to thermal insulation for houses.



- thermal
- insulation
- house



**thermal**: heat, temperature

**insulation**: insulate

**house**: building



- (thermal OR heat OR temperature)
- (insulat\*)
- (house\* OR housing\* OR building\*)



(thermal OR heat OR temperature) NEAR (insulat\*)



(thermal OR heat OR temperature) NEAR (insulat\*) AND (house\* OR housing\* OR building\*)



((thermal OR heat OR temperature) NEAR (insulat\*))
AND (house\* OR housing\* OR building\*)



#### Query

((thermal OR heat OR temperature) NEAR (insulat\*)) AND (house\* OR housing\* OR building\*)



### Search (PATENTSCOPE)









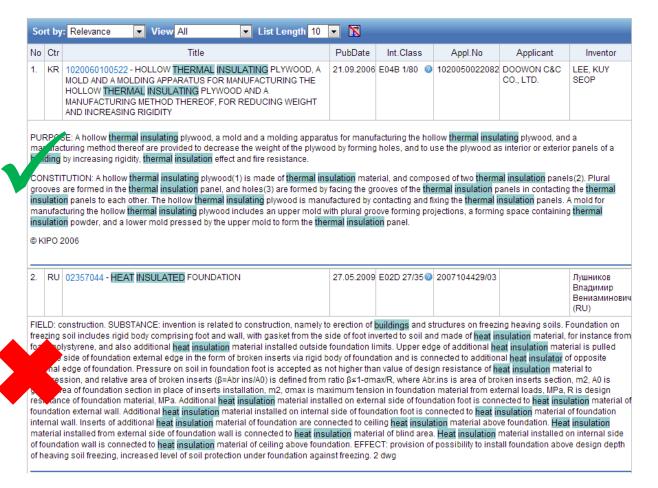




	rt by	: Relevance View All List Length	10 🔻 🔀				
No	Ctr	Title	PubDate	Int.Class	Appl.No	Applicant	Inventor
1.	KR	1020060100522 - HOLLOW THERMAL INSULATING PLYWOOD MOLD AND A MOLDING APPARATUS FOR MANUFACTURING THI HOLLOW THERMAL INSULATING PLYWOOD AND A MANUFACTURING METHOD THEREOF, FOR REDUCING WEIGH AND INCREASING RIGIDITY	Ē	E04B 1/80 🧿	1020050022082	DOOWON C&C CO., LTD.	LEE, KUY SEOP
mai buil COI gro- insi mai	nufac Iding NSTI oves ulatio nufac	SE: A hollow thermal insulating plywood, a mold and a molding app turing method thereof are provided to decrease the weight of the pl by increasing rigidity, thermal insulation effect and fire resistance. TUTION: A hollow thermal insulating plywood(1) is made of thermal are formed in the thermal insulation panel, and holes(3) are forme in panels to each other. The hollow thermal insulating plywood is not turing the hollow thermal insulating plywood includes an upper mount powder, and a lower mold pressed by the upper mold to form the	ywood by forming al insulation mate d by facing the gr nanufactured by c old with plural gro	rial, and compo ooves of the the contacting and fi ove forming pro	se the plywood as osed of two therms ermal insulation p ixing the thermal i	s interior or exterior al insulation panel anels in contacting nsulation panels.	s(2). Plural the thermal
ÐΚ	IPO 2	2006					
© K			27.05.2000	E02D 27/25 @	2007104429/03		Лушников

FIELD: construction. SUBSTANCE: invention is related to construction, namely to erection of buildings and structures on freezing heaving soils. Foundation on freezing soil includes rigid body comprising foot and wall, with gasket from the side of foot inverted to soil and made of heat insulation material, for instance from foam polystyrene, and also additional heat insulation material installed outside foundation limits. Upper edge of additional heat insulation material is pulled from the side of foundation external edge in the form of broken inserts via rigid body of foundation and is connected to additional heat insulation of opposite external edge of foundation. Pressure on soil in foundation foot is accepted as not higher than value of design resistance of heat insulation material to compression, and relative area of broken inserts (β=Abr ins/A0) is defined from ratio β≤1-omax/R, where Abr.ins is area of broken inserts section, m2, A0 is gross area of foundation section in place of inserts installation, m2, omax is maximum tension in foundation material from external loads, MPa, R is design resistance of foundation material, MPa. Additional heat insulation material installed on external side of foundation foot is connected to heat insulation material of foundation external wall. Additional heat insulation material installed on internal side of foundation foot is connected to heat insulation material of foundation material insulation material of foundation material insulation material of foundation material of blind area. Heat insulation material installed on internal side of foundation wall is connected to heat insulation material of blind area. Heat insulation material installed on internal side of foundation wall is connected to heat insulation material of possibility to install foundation above design depth of heaving soil freezing, increased level of soil protection under foundation against freezing. 2 dwg







#### National Biblio Data

Permanent Link/ Bookmark: 😂

Application Number: 1020050022082 Application Date: 17.03.2005 Publication Number: 1020060100522 Publication Date: 21.09.2006

Publication Kind: A KOREAN PATENT ABSTRACTS

IPC: E04B 1/80 (a)

Applicants: DOOWON C&C CO., LTD.

LEE. KUY SEOP Inventors:

Priority Data:

Title: (EN) HOLLOW THERMAL INSULATING PLYWOOD. A MOLD AND A MOLDING APPARATUS FOR MANUFACTURING THE

HOLLOW THERMAL INSULATING PLYWOOD AND A MANUFACTURING METHOD THEREOF. FOR REDUCING WEIGHT AND

INCREASING RIGIDITY

Abstract: (EN)

> PURPOSE: A hollow thermal insulating plywood, a mold and a molding apparatus for manufacturing the hollow thermal insulating plywood, and a manufacturing method thereof are provided to decrease the weight of the plywood by forming holes, and to use the plywood as interior or exterior panels of a building by increasing rigidity, thermal insulation effect and fire resistance.

CONSTITUTION: A hollow thermal insulating plywood(1) is made of thermal insulation material, and composed of two thermal insulation panels(2). Plural grooves are formed in the thermal insulation panel, and holes(3) are formed by facing the grooves of the thermal insulation panels in contacting the thermal insulation panels to each other. The hollow thermal insulating plywood is manufactured by contacting and fixing the thermal insulation panels. A mold for manufacturing the hollow thermal insulating plywood includes an upper mold with plural groove forming projections, a forming space containing thermal insulation powder, and a lower mold pressed by the upper mold to form the thermal insulation panel.

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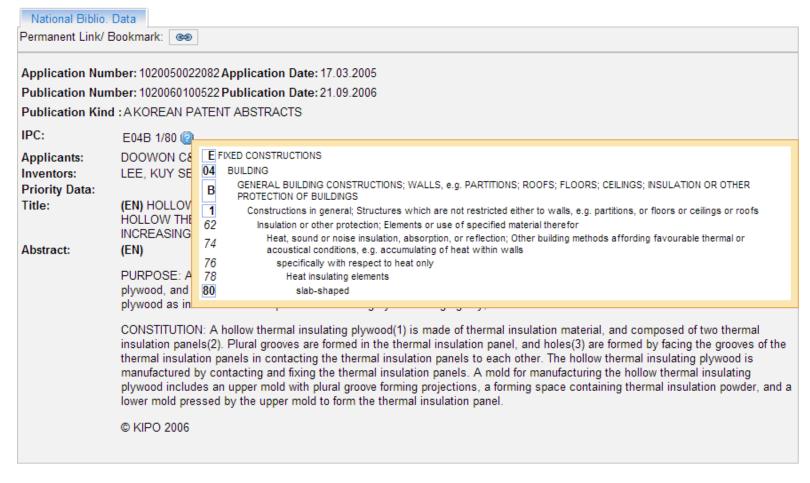
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#### National Biblio, Data

Permanent Link/ Bookmark: | 669

Application Number: 1020050042193 Application Date: 19.05.2005 Publication Number: 1020050054901 Publication Date: 10.06.2005

Publication Kind: A KOREAN PATENT ABSTRACTS

IPC: E04B 1/78 @

Applicants: KIM, GI TAE Inventors: KIM, GI TAE

Priority Data:

Title: (EN) EXTERNAL HEAT INSULATION CONSTRUCTION METHOD USING A THERMAL INSULATION BOARD FORMED BY

COMBINING AN EXTERIOR MATERIAL WITH A THERMAL INSULATION MATERIAL

Abstract: (EN)

> PURPOSE: An external heat insulation construction method using a thermal insulation board is provided to efficiently insulate heat in a building, and to improve the appearance and the durability by fastening the thermal insulation board to a structure firmly with an L-shaped supporting piece and an adhesive and restricting deformation or dewing.

> CONSTITUTION: A structure is cleaned in an external heat insulation construction method(S1). Plural L-shaped supporting pieces are fastened to the structure, and a thermal insulation board is attached and fixed to the structure(S2). A joint remaining bar is installed and mounted to an upper part of the thermal insulation board attached to the structure, and the L-shaped supporting piece is contacted and fastened to the upper part of the joint remaining bar and the structure(S3). The thermal insulation board is mounted to the structure repeatedly(S4), and a coating layer is formed in the front of the thermal insulation board mounted to the structure(S5). A joint is formed by charging caulking materials between the thermal insulation boards(S6).

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#### National Biblio, Data

Permanent Link/ Bookmark: | 669



Application Number: 1020050042193 Application Date: 19.05.2005 Publication Number: 1020050054901 Publication Date: 10.06.2005

Publication Kind: A KOREAN PATENT ABSTRACTS

IPC: E04B 1/78 @

KIM. GI TAE Applicants: Inventors: KIM, GI TAE

Priority Data:

Title: (EN) EXTERNAL HEAT INSULATION CONSTRUCTION METHOD USING A THERMAL INSULATION BOARD FORMED BY

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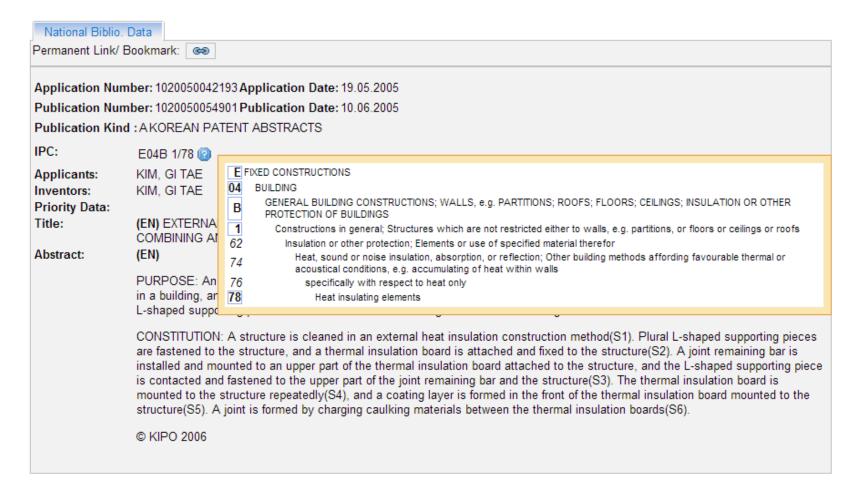
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© KIPO 2006















## Results analysis (PATENTSCOPE)

ptions 🍳 Table 🔍 Gra	iph <b>Opti</b>	ons O bar	o pie						
Countries		Main	IPC	Main Applicant		Main Invento	ÞΓ	Pub	Date
Name <b></b>	No ¢	Name ¢	No ¢	Name #	No ¢	Name	No ¢	Date ¢	No ¢
Japan	5426	E04B	3495	SEKISUI HOUSE LTD	181	TAN SEIKICHI	43	2003	736
РСТ	1868	E04C	958	MATSUSHITA ELECTRIC IND CO	171	KOTANI MIKI	35	2004	742
United States	1847	E04F	849	LTD		WADA	33	2005	739
Russian Federation	1542	F25D	842	SANYO ELECTRIC CO LTD	128	HIROTAKA	2007	2006	814
European Patent	1272	C04B	693	SEKISUI CHEM CO LTD	109	IMANISHI KOJI	30	2007	836
Office		B32B	574	DAIWA HOUSE IND CO LTD	109	MATSUMOTO	18	2008	736
Republic of Korea	1036	E04D	526	BSH BOSCH UND SIEMENS	92	SETSUYA		2009	690
Mexico	56	E06B	508	HAUSGERÄTE GMBH		Энтони Коста (RU)	17	2010	720
Spain	19	H01L	455	KANEGAFUCHI CHEM IND CO LTD	83	ISHIKAWA	15	2011	627
South Africa	17	F16L	413	BSH BOSCH SIEMENS 76 HAUSGERAETE	76	TAKASHI	RES	2012	478
Russian Federation	16	TIOL	313	PANASONIC CORP	75	TAZAKI KOJIRO	15	2012	218
(USSR data)				IG TECH RES INC	62	YOSHIDA	15	2013	210

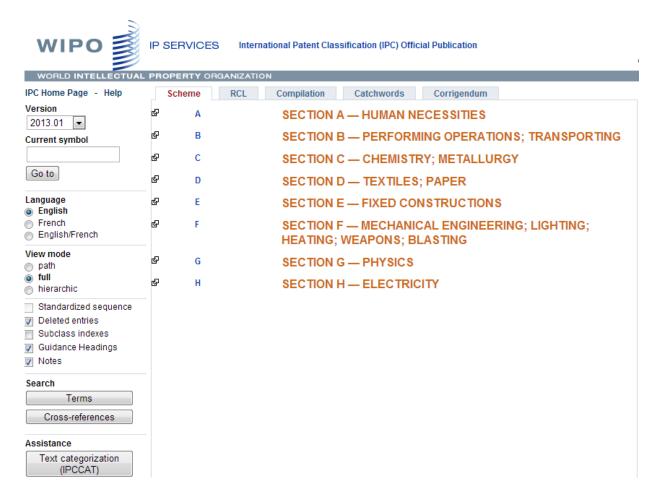


## Results analysis (PATENTSCOPE)

otions O Table O Gra	iph <b>Opti</b>	ons O bar	o pie						
Countries		Main	IPC	Main Applicant		Main Invento	or T	Pub	Date
Name <b></b>	No ¢	Name ¢	No ¢	Name <b></b>	No ¢	Name	No ¢	Date ¢	No ¢
Japan	5426	E04B	3495	SEKISUI HOUSE LTD	181	TAN SEIKICHI	43	2003	736
PCT	1868	E04C	958	MATSUSHITA ELECTRIC IND CO	171	KOTANI MIKI	35	2004	742
United States	1847	E04F	849	LTD	Linean	WADA	33	2005	739
Russian Federation	1542	F25D	842	SANYO ELECTRIC CO LTD	128	HIROTAKA		2006	814
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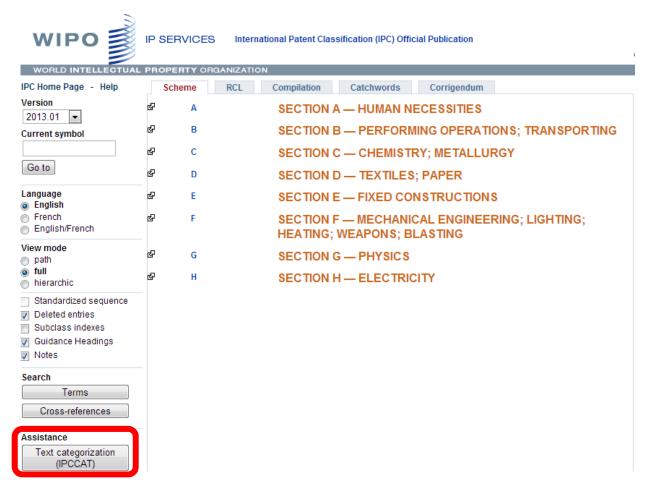


## Classification publication (IPC)





## Classification publication (IPC)







→ Remember to put a period (full stop) at the end of short queries!





→ Remember to put a period (full stop) at the end of short queries!











Confidence 14	IPC +	Description	Refine
***	E04B	٠	**
****	G08B	•	**
****	A63H	•	**







Confidence +	IPC ↑	Description	Refine
***	E04B	•	<b>&gt;&gt;</b>
****	G08B	•	**
****	A63H	•	<b>**</b>



Confidence 14	IPC <sup>†</sup> ↓	Description	Refine
***	E04B		44
****	E04B 1/00	•	
*	E04B 2/00	•	
_	E04B 7/00	•	
***	G08B	•	<b>&gt;&gt;</b>
***	A63H	•	<b>**</b>



Confidence 14	IPC ↑	Description	Refine
****	E04B	•	44
****	E04B 1/00	•	
*	E04B 2/00	•	
_	E04B 7/00	•	
***	G08B		<b>&gt;&gt;</b>
***	A63H	•	<b>*</b>

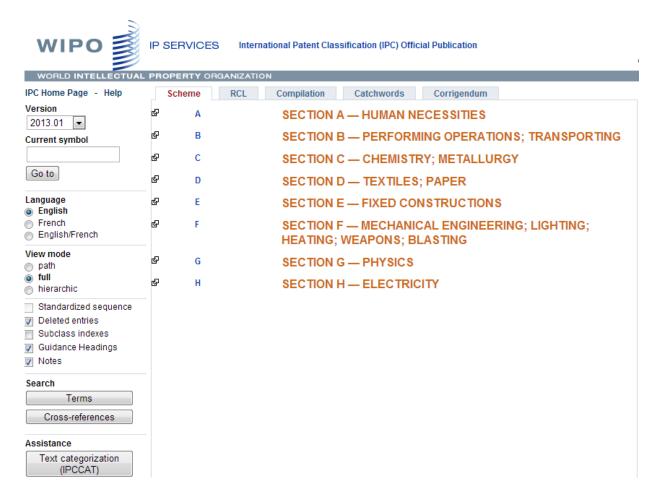


## Classification: Scheme (IPC)

	Scheme RCL	Compilation Catchwords
&	E04B 1/00	Constructions in general; Structures which are not restricted either to walls, e.g. partitions, or floors or ceilings or roofs (scaffolds, shutterings E04G; structures specially adapted for buildings for special purposes, general layout of buildings, e.g. modular co-ordination, E04H; the particular parts of buildings, see the relevant groups for those parts)
중	E04B 1/02	<ul> <li>Structures consisting primarily of load-supporting, block-shaped or slab-shaped elements (E04B 1/32-E04B 1/36 take precedence)</li> </ul>
&	E04B 1/04	<ul> <li>the elements consisting of concrete, e.g. reinforced concrete, or other stone-like material</li> </ul>
&	E04B 1/06	· · · the elements being prestressed
&	E04B 1/08	· · the elements consisting of metal

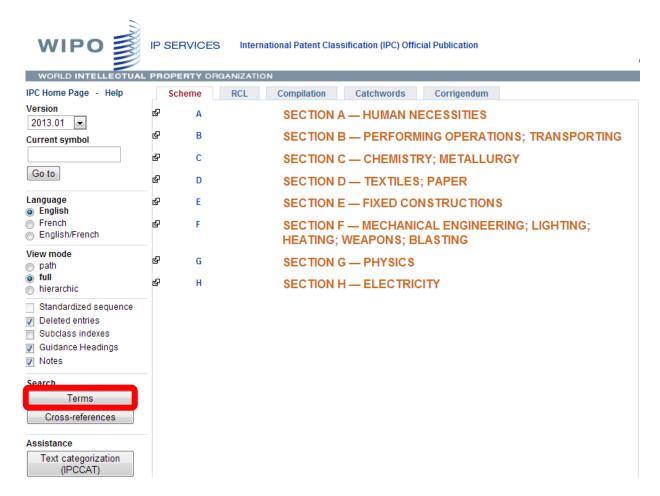


## Classification publication (IPC)



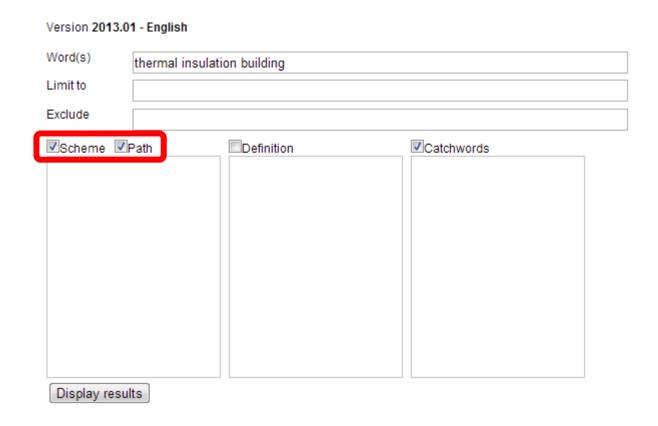


## Classification publication (IPC)





Version 2013.0 Word(s)	thermal insulati	on building		
Limit to	troma moduti	on ballang		
Exclude				
Scheme 🗸	Path	Definition	Catchwords	
Display resu	ılts			



→ "Path" includes all definitions along the path to a given symbol



Version 2013.0	)1 - English		
Word(s)	thermal insulation	on building	
Limit to			
Exclude			
✓ Scheme  ✓	Path	Definition	
Display resu	lts		



Word(s) thermal insulation building					
imit to					
xclude					
ZScheme ☑Path	Definition				
E04B 1/74 E04B 1/76 E04B 1/78 E04B 1/88 F16B F16J F16J 15/00 F16L F16L 3/00 F16L 25/02 F16L 58/02 F16L 59/00 F16L 59/02		HEAT INSULATION			



Word(s)	hermal insulation buildi	ng	
Limit to			
Exclude			
Scheme P	ath Defin	ition	
E04B 1/74 E04B 1/76 E04B 1/78 E04B 1/88 F16B F16J 15/00 F16L 5/02 F16L 25/02 F16L 58/02 F16L 59/00 F16L 59/02		HEAT INSULATION	



## Classification: Scheme (IPC)

	Scheme RCL	Compilation Catchwords Corrigendum			
&	E	SECTION E — FIXED CONSTRUCTIONS			
&	E04	BUILDING			
g D∤	E04B	GENERAL BUILDING CONSTRUCTIONS; WALLS, e.g. PARTITIONS; ROOFS; FLOORS; CEILINGS; INSULATION OR OTHER PROTECTION OF BUILDINGS (border constructions of openings in walls, floors, or ceilings E06B 1/00)			
		Note(s)  1. This subclass <u>covers</u> working methods used in constructing new <u>buildings</u> and analogous working methods on existing <u>buildings</u> . Other working methods on existing <u>buildings</u> , except those for <u>insulating</u> , are classified in group E04G 23/00. [5]			
		<ul> <li>In this subclass, the following term is used with the meaning indicated:</li> <li>"ceiling" includes all the finishing material concealing the underside of the load-carrying ceiling structure or roof structure. [4]</li> </ul>			
&	E04B 1/00	Constructions in general; Structures which are not restricted either to walls, e.g. partitions, or floors or ceilings or roofs (scaffolds, shutterings E04G; structures specially adapted for buildings for special purposes, general layout of buildings, e.g. modular co-ordination, E04H; the particular parts of buildings, see the relevant groups for those parts)			
&	E04B 1/62	<ul> <li>Insulation or other protection; Elements or use of specified material therefor (chemical compositions C01-C11; implements for applying insulation or sealings E04F 21/00; buildin to withstand, or to provide protection against, external undesired influences E04H 9/00; sea pipes in walls or partitions F16L 5/02; shielding against dangerous radiation G21F; constructions of particular parts of buildings, see the relevant groups for those parts)</li> </ul>			
&	E04B 1/74	• Heat, sound or noise insulation, absorption, or reflection (forms of, or arrangements in, rooms for influencing or directing sound E04B 1/99); Other building methods affording favourable thermal or acoustical conditions, e.g. accumulating of heat within walls (fire protection E04B 1/94; elements chiefly adapted for structural purposes E04C 1/00-E04C 3/00; chiefly adapted for surface coverings E04F 13/00; as underlayers for floor coverings E04F 15/18; closures for wall or like openings E06B)			
<b>⊕</b> +	E04B 1/76	· · · specifically with respect to heat only (heat insulation in general F16L 59/00)			
<b>₽</b> +	E04B 1/82	<ul> <li>specifically with respect to sound only (noise damping in ducts or channels E04F 17/00; noise damping in general G10K 11/16)</li> </ul>			
<b>₽</b> +	E04B 1/88	· · · Insulating elements for both heat and sound			



Word(s) thermal insulation building			
imit to			
xclude			
☑Scheme ☑Path	Definition		
E04B 1/74 E04B 1/76 E04B 1/78 E04B 1/88 F16B F16J F16J 15/00 F16L 3/00 F16L 25/02 F16L 58/02 F16L 59/00 F16L 59/02		INSULATION	



#### Classification: Catchwords (IPC)

```
Scheme
                RCL
                           Compilation
                                             Catchwords
                                                                Corrigendum
INSULATION
   (1) electric INSULATION
        INSULATION of cables H01B
        INSULATION of wire by covering with plastics or substances in a plastic state B29C
        paper for electric INSULATION D21H 27/12
        slotting out INSULATION between commutator segments H01R 43/06
   (2) thermal F16L 59/00
   see also THERMAL
        domestic heat-insulated vessels A47J 41/00, B65D
        INSULATION for roof coverings E04D 13/16
        INSULATION in building wall construction E04B 2/00
        INSULATION in buildings in general E04B 1/62
        INSULATION measures in the flooring of buildings E04F 15/18
        INSULATION of tunnels E02D 29/00, E21D 9/00, E21D 11/00
        INSULATION of windows or doors E06B 3/263, E06B 3/66
       laboratory heat- INSULATION devices B01L 7/04
   (3) INSULATION against sound waves G10K 11/00
        INSULATION of ceilings or floors E04B 5/00, E04F 15/20
        INSULATION in building structures E04B 1/62
        INSULATION of tunnels E21D 11/00
        INSULATION of walls E04B 2/00
        materials for INSULATION C04B
```



#### Classification: Catchwords (IPC)

```
Scheme
                RCL
                           Compilation
                                             Catchwords
                                                                Corrigendum
INSULATION
   (1) electric INSULATION
        INSULATION of cables H01B
        INSULATION of wire by covering with plastics or substances in a plastic state B29C
        paper for electric INSULATION D21H 27/12
                  MCLILATION between commutator segments H01R 43/06
   (2) thermal F16L 59/00
   see also THERMAL
        domestic heat-insulated vessels A47J 41/00, B65D
        INSULATION for roof coverings E04D 13/16
        INSULATION in building wall construction E04B 2/00
        INSULATION in buildings in general E04B 1/62
        INSULATION measures in the flooring of buildings E04F 15/18
        INSULATION of tunnels E02D 29/00, E21D 9/00, E21D 11/00
        INSULATION of windows or doors E06B 3/263, E06B 3/66
       laboratory heat- INSULATION devices B01L 7/04
   (3) INSULATION against sound waves G10K 11/00
        INSULATION of ceilings or floors E04B 5/00, E04F 15/20
        INSULATION in building structures E04B 1/62
        INSULATION of tunnels E21D 11/00
        INSULATION of walls E04B 2/00
        materials for INSULATION C04B
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## Classification: Scheme (IPC)

<b>⊕</b> ±	F16L 57/00	Protection of pipes or objects of similar shape against external or internal damage or wear (supporting of pipes inside other pipes or sleeves F16L 7/00; used in connection with end fittings of hoses F16L 35/00; protection of pipes or pipe fittings against corrosion or incrustation F16L 58/00; protection thereof during transport B65D, e.g. B65D 59/00)
<b>₽</b> +	F16L 58/00	Protection of pipes or pipe fittings against corrosion or incrustation (supporting of pipes inside other pipes or sleeves F16L 7/00; compound tubes F16L 9/14; cleaning pipes or tubes B08B 9/02)
<b>⊕</b> ±	F16L 59/00	Thermal insulation in general (heat, sound insulation in buildings E04B; heat insulation of steam engines F01B 31/08; heat insulation in rotary piston machines or engines F01C 21/06; heat insulation of pumps F04C 29/04; thermal insulation of pressure vessels F17C 1/12; vessels not under pressure, with provision for insulation F17C 3/02)
<b>₽</b> Ⅱ+	F16L 101/00	Indexing scheme associated with groups F16L 55/26-F16L 55/48, relating to uses and applications of pigs or moles. [6]  Uses or applications of pigs or moles [6]



## Classification: Scheme (IPC)

<b>⊕</b> +	F16L 57/00	Protection of pipes or objects of similar shape against external or internal damage or wear (supporting of pipes inside other pipes or sleeves F16L 7/00; used in connection with end fittings of hoses F16L 35/00; protection of pipes or pipe fittings against corrosion or incrustation F16L 58/00; protection thereof during transport B65D, e.g. B65D 59/00)
	5401 50100	
<b>⊕±</b>	F16L 58/00	Protection of pipes or pipe fittings against corrosion or incrustation (supporting of pipes inside other pipes or sleeves F16L 7/00; compound tubes F16L 9/14; cleaning pipes or tubes B08B 9/02)
<b>&amp;</b> +	F16L 59/00	Thermal insulation in general (heat, sound insulation in buildings E04B) heat insulation of steam engines F01B 31/08; heat insulation in rotary piston machines or engines F01C 21/06; heat insulation of pumps F04C 29/04; thermal insulation of pressure vessels F17C 1/12; vessels not under pressure, with provision for insulation F17C 3/02)
		Indexing scheme associated with groups F16L 55/26-F16L 55/48, relating to uses and applications of pigs or moles. [6]
<b>구Ⅰ+</b>	F16L 101/00	Uses or applications of pigs or moles [6]



### Search (PATENTSCOPE)









So	rt by	: Pub Date Desc View All List Length 10		Machine trans	lation				
No	Ctr	Title	PubDate	Int.Class	Appl.No	Applicant	Inventor		
1.	WO	WO/2013/113455 - THERMAL INSULATION MATERIAL WITH IMPROVED FIRE RESISTANCE	08.08.2013	B32B 7/12 🔞	PCT/EP2012/076490	VALSEM INDUSTRIES SAS	DAVIET, Jean- François		
mat	A thermal insulation material (10) comprises an inner and outer layers (11, 12) of reflective material with a reflectivity over than 90%. The thermal insulation material (10) further comprises a non-combustible material (15) located between said inner and outer layers (11, 12) and bonded to said inner and outer layers (11, 12) by a polymeric primary bonding agent (16) containing a load of fire-retardant.								
2.	EP	2619377 - SELF-SUPPORTING MODULE FOR THE FACADE OF A BUILDING	31.07.2013	E04B 1/76 @	11797347	PRO ENERGY SYSTEMS S R L	FICCADENT MARCO		
A self-supporting module (1) for the facade (2) of a building provided with its own load-bearing structure (4); the module (1) is provided with: an external finishing assembly (5), which has a shaped structure and is suited to frontally close the module (1); a frame (18), which can be coupled with the load-bearing structure (4 and with further self-supporting modules (1) and functions as support for the external finishing assembly (5), there being defined within the frame (18) a gap (21) designed to enable passage of a flow of air for aerating the external finishing assembly (5); and an insulation packet (6), which is coupled to the frame (3) and, has a plurality of layers (33), which are set in contact with one another and are made of at least one first insulating material, each layer (33) being set staggered with respect to the adjacent layers (33) in a first direction.									
3.	EP	2620567 - Composite heat insulation system with a fire barrier, heat insulation element and use of the heat insulation element as a fire barrier	31.07.2013	E04B 1/76 @	13152566	STO AG	HITZLER MARTIN		

Die Erfindung betrifft ein Wärmedämmverbundsystem mit einer auf einer Außenseite einer Gebäudeaußenwand angebrachten ein- oder mehrlagigen Wärmedämmschicht und einer hierauf aufgebrachten ein- oder mehrlagigen Putzschicht, wobei die Wärmedämmschicht wenigstens eine Wärmedämmplatte aus einem Hartschaum, insbesondere aus einem Polystyrol-Hartschaum, sowie wenigstens ein platten- oder profilförmiges Wärmedämmelement zur Ausbildung einer Brandbarriere umfasst. Erfindungsgemäß umfasst das die Brandbarriere ausbildende, platten- oder profilförmige Wärmedämmelement einen Wärmedämmstoff, welcher Aerogel-Partikel und wenigstens ein wasserbasiertes organisches und/oder anorganisches Bindemittel enthält und eine Wärmeleitfähigkeit ‰ 0,028 W/(mK), vorzugsweise ‰ 0,025W/(mK), weiterhin vorzugsweise ‰ 0,022 W/(mK), besitzt. Ferner betrifft die Erfindung ein als Brandbarriere in einem Wärmedämmverbundsystem einsetzbares, platten- oder profilförmiges Wärmedämmelement sowie die Verwendung eines solchen platten- oder profilförmigen Wärmedämmelementes als Brandbarriere.



#### Review

- Review individual documents
- Analyze document sets
- Refer to patent classification publication
  - Scheme
  - Catchwords



## Thank you for your attention!

Any questions?

For more information, please contact:

tisc@wipo.int

