

SECTION G — PHYSICS

G01 MEASURING; TESTING

G01M TESTING STATIC OR DYNAMIC BALANCE OF MACHINES OR STRUCTURES; TESTING OF STRUCTURES OR APPARATUS, NOT OTHERWISE PROVIDED FOR

Note(s)

Attention is drawn to the Notes following the title of class G01.

Subclass index

TESTING STATIC OR DYNAMIC BALANCE OF MACHINES OR STRUCTURES.....	1/00
INVESTIGATING FLUID-TIGHTNESS; ELASTICITY.....	3/00, 5/00
VIBRATION- OR SHOCK-TESTING.....	7/00
SPECIAL APPLICATIONS	
Aerodynamic; hydrodynamic testing.....	9/00, 10/00
Optical testing.....	11/00
Mechanical or engine testing.....	13/00, 15/00, 17/00
SUBJECT MATTER NOT PROVIDED FOR IN OTHER GROUPS OF THIS SUBCLASS.....	99/00

1/00	Testing static or dynamic balance of machines or structures (balancing rotary bowls of centrifuges B04B 9/14; apparatus characterised by the means for holding wheels or parts thereof B60B 30/00; determining stability factors of ships B63B; stabilising of aircraft B64C 17/00; control systems for balancing automatically in operation G05; balancing rotors of dynamo-electric machines H02K 15/16)	1/28	• • • with special adaptations for determining unbalance of the body <u>in situ</u> , e.g. of vehicle wheels
1/02	• Details of balancing machines or devices	1/30	• Compensating unbalance (G01M 1/38 takes precedence; counterweights F16F 15/28)
1/04	• • Adaptation of bearing support assemblies for receiving the body to be tested	1/32	• • by adding material to the body to be tested, e.g. by correcting-weights (correcting-weights <u>per se</u> F16F 15/32)
1/06	• • Adaptation of drive assemblies for receiving the body to be tested	1/34	• • by removing material from the body to be tested, e.g. from the tread of tyres
1/08	• • Instruments for indicating directly the magnitude and phase of the unbalance (measuring electrical variables in general G01R)	1/36	• • by adjusting position of masses built-in the body to be tested
1/10	• Determining the moment of inertia	1/38	• Combined machines or devices for both determining and correcting unbalance
1/12	• Static balancing; Determining position of centre of gravity (by determining unbalance G01M 1/14)	3/00	Investigating fluid tightness of structures (investigating permeability of porous material, investigating the presence of flaws in general G01N)
1/14	• Determining unbalance (G01M 1/30, G01M 1/38 take precedence)	3/02	• by using fluid or vacuum
1/16	• • by oscillating or rotating the body to be tested	3/04	• • by detecting the presence of fluid at the leakage point
1/18	• • • and running the body down from a speed greater than normal	3/06	• • • by observing bubbles in a liquid pool
1/20	• • • and applying external forces compensating forces due to unbalance	3/08	• • • for pipes, cables, or tubes; for pipe joints or seals; for valves
1/22	• • • and converting vibrations due to unbalance into electric variables (measuring vibrations in general G01H; microphones or like acoustic electromechanical transducers H04R)	3/10	• • • for containers, e.g. radiators
1/24	• • • Performing balancing on elastic shafts, e.g. for crankshafts	3/12	• • • by observing elastic covers or coatings, e.g. soapy water
1/26	• • • with special adaptations for marking, e.g. by drilling	3/14	• • • for pipes, cables, or tubes; for pipe joints or seals; for valves
		3/16	• • • using electric detection means (G01M 3/06, G01M 3/12, G01M 3/20, G01M 3/24, G01M 3/26 take precedence)
		3/18	• • • for pipes, cables, or tubes; for pipe joints or seals; for valves
		3/20	• • • using special tracer materials, e.g. dye, fluorescent material, radioactive material

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- 3/22 • • • • for pipes, cables, or tubes; for pipe joints or seals; for valves
- 3/24 • • • using infrasonic, sonic, or ultrasonic vibrations
- 3/26 • • by measuring rate of loss or gain of fluid, e.g. by pressure-responsive devices, by flow detectors [2]
- 3/28 • • • for pipes, cables, or tubes; for pipe joints or seals; for valves [2]
- 3/30 • • • • using progressive displacement of one fluid by another [2]
- 3/32 • • • for containers, e.g. radiators [2]
- 3/34 • • • • by testing the possibility of maintaining the vacuum in containers, e.g. in can-testing machines [2]
- 3/36 • • by detecting change in dimensions of the structure being tested
- 3/38 • by using light (G01M 3/02 takes precedence)
- 3/40 • by using electric means, e.g. by observing electric discharges
- 5/00 Investigating the elasticity of structures, e.g. deflection of bridges, aircraft wings** (G01M 9/00 takes precedence; strain gauges G01B)
- 7/00 Vibration-testing of structures; Shock-testing of structures** (G01M 9/00 takes precedence)
 - 7/02 • Vibration-testing [5]
 - 7/04 • • Monodirectional test stands [5]
 - 7/06 • • Multidirectional test stands [5]
 - 7/08 • Shock-testing [5]
- 9/00 Aerodynamic testing; Arrangements in or on wind tunnels** (building aspects section E; investigating properties of materials in general G01N)
 - 9/02 • Wind tunnels [5]
 - 9/04 • • Details [5]
 - 9/06 • Measuring arrangements specially adapted for aerodynamic testing [5]
 - 9/08 • Aerodynamic models [5]
- 10/00 Hydrodynamic testing; Arrangements in or on ship-testing tanks or water tunnels** (building aspects section E; investigating properties of materials in general G01N)
- 11/00 Testing of optical apparatus; Testing structures by optical methods not otherwise provided for**
 - 11/02 • Testing of optical properties
 - 11/04 • • Optical benches
 - 11/06 • • Testing of alignment of vehicle head-light devices

- 11/08 • Testing of mechanical properties
- 13/00 Testing of machine parts** (investigating the cutting power of tools G01N, e.g. G01N 3/58)
 - 13/02 • Testing of gearing or of transmission mechanisms (measuring efficiency G01L)
 - 13/04 • Testing of bearings
- 15/00 Testing of engines [4]**
 - 15/02 • Details or accessories of testing apparatus [2006.01]
 - 15/04 • Testing of internal-combustion engines, e.g. diagnostic testing of piston engines [2006.01]
 - 15/05 • • by combined monitoring of two or more different engine parameters [2006.01]
- Note(s) [2006.01]**
Group G01M 15/05 takes precedence over groups G01M 15/06-G01M 15/12.
- 15/06 • • by monitoring positions of pistons or cranks [2006.01]
- 15/08 • • by monitoring pressure in cylinders [2006.01]
- 15/09 • • by monitoring pressure in fluid ducts, e.g. in lubrication or cooling parts [2006.01]
- 15/10 • • by monitoring exhaust gases [2006.01]
- 15/11 • • by detecting misfire [2006.01]
- 15/12 • • by monitoring vibrations [2006.01]
- 15/14 • Testing of gas-turbine plants or jet-propulsion plants [2006.01]
- 17/00 Testing of vehicles** (G01M 15/00 takes precedence; testing fluid tightness G01M 3/00; testing elastic properties of bodies or chassis, e.g. torsion-testing, G01M 5/00; testing alignment of vehicle head-lighting devices G01M 11/06)
 - 17/007 • of wheeled or endless-tracked vehicles (G01M 17/08 takes precedence) [6]
 - 17/013 • • of wheels [6]
 - 17/02 • • of tyres [6]
 - 17/03 • • of endless-tracks [6]
 - 17/04 • • of suspension or of damping [6]
 - 17/06 • • of steering behaviour; of rolling behaviour (measuring steering angles G01B; measuring steering forces G01L) [6]
 - 17/08 • of railway vehicles [6]
 - 17/10 • • of suspensions, axles or wheels [6]
- 99/00 Subject matter not provided for in other groups of this subclass [2011.01]**