The following classification changes will be effected by this Notice of Changes:

<table>
<thead>
<tr>
<th>Action</th>
<th>Subclass</th>
<th>Group(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCHEME: Notes Modified:</td>
<td>G01B</td>
<td>21/00</td>
</tr>
<tr>
<td>DEFINITIONS: Definitions Modified:</td>
<td>G01B</td>
<td>SUBCLASS</td>
</tr>
</tbody>
</table>

No other subclasses/groups are impacted by this Notice of Changes.

This Notice of Changes includes the following:

1. CLASSIFICATION SCHEME CHANGES
   - A. New, Modified or Deleted Group(s)
   - B. New, Modified or Deleted Warning(s)
   - ✗ C. New, Modified or Deleted Note(s)
   - D. New, Modified or Deleted Guidance Heading(s)

2. DEFINITIONS
   - ✗ A. New or Modified Definitions (Full definition template)
   - ✗ B. Modified or Deleted Definitions (Definitions Quick Fix)

3. □ REVISION CONCORDANCE LIST (RCL)
4. □ CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)
5. □ CHANGES TO THE CROSS-REFERENCE LIST (CRL)
### 1. CLASSIFICATION SCHEME CHANGES

**C. New, Modified or Deleted Note(s)**

**SUBCLASS G01B - MEASURING LENGTH, THICKNESS OR SIMILAR LINEAR DIMENSIONS; MEASURING ANGLES; MEASURING AREAS; MEASURING IRREGULARITIES OF SURFACES OR CONTOURS**

<table>
<thead>
<tr>
<th>Type*</th>
<th>Location</th>
<th>Old Note</th>
<th>New/Modified Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>G01B21/00</td>
<td>Measuring arrangements or details thereof covered by two or more of groups G01B 3/00 - G01B 17/00 are classified in this group if no single other group can be selected as being predominantly applicable.</td>
<td>{Measuring arrangements or details thereof covered by two or more of groups G01B 3/00 - G01B 17/00 are classified in this group if no single other group can be selected as being predominantly applicable.}</td>
</tr>
</tbody>
</table>

*N = new note, M = modified note, D = deleted note

**NOTE:** The “Location” column only requires the symbol PRIOR to the location of the note. No further directions such as “before” or “after” are required.
2. A. DEFINITIONS (Modified)

G01B

Definition statement

Replace: The existing Definition statement with the following content.

This place covers:

Instruments and methods for measuring:

- linear dimensions of objects such as length, thickness, width, height, depth, diameter, coordinates of points of objects, distance or clearance between spaced objects or spaced apertures;
- angles or tapers;
- alignment of axes;
- areas;
- contours, curvatures or profiles;
- roughness or irregularities of surfaces;
- deformation in a solid.

Methods of measuring geometrical parameters of objects (e.g. shape or surface configuration, measurement of volume, coordinates, height, length, width, thickness, contours, surface roughness or evenness, diameters, roundness, eccentricity, angles, alignment, deformation, displacement), devices for carrying out these methods and related calibration aspects.

Classification within G01B into the main groups is to a large extent based on the underlying measurement principle:

<table>
<thead>
<tr>
<th>Method</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optical</td>
<td>G01B 11/00</td>
</tr>
<tr>
<td>Using fluid</td>
<td>G01B 13/00</td>
</tr>
<tr>
<td>Use of radiation</td>
<td>G01B 15/00</td>
</tr>
<tr>
<td>Use of subsonic, sonic or ultrasonic vibrations</td>
<td>G01B 17/00</td>
</tr>
</tbody>
</table>
If no particular measurement principle prevails or if more than one of the above-mentioned underlying measurement principles equally apply

<table>
<thead>
<tr>
<th>Measurement Principle</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical</td>
<td>G01B 3/00, G01B 5/00</td>
</tr>
<tr>
<td>Electric or magnetic</td>
<td>G01B 7/00</td>
</tr>
</tbody>
</table>

An exception is G01B1/00, where documents should be classified which have aspects related to the material selected for the geometrical parameter measuring instrument.

Another exception is G01B9/00, which is a hardware group mainly containing interferometers. Only when a distance or displacement measurement is concerned (or a related measurement, such as an orientation measurement based on distance measurements to various locations on the object), then an interferometer should be classified in G01B9/00.

Small, hand-held mechanical devices (such as those available in hardware stores) are classified in G01B3/00, whereas large mechanical set-ups (industrial machines, such as coordinate measuring machines) are classified in G01B5/00.

To further support the user in consulting the main groups of this subclass, the following table summarises the properties of the electromagnetic spectrum together with the potentially relevant main groups.

<table>
<thead>
<tr>
<th>Electromagnetic spectrum</th>
<th>Wavelength (m)</th>
<th>Frequency (Hz)</th>
<th>Energy (eV)</th>
<th>Main groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gamma rays</td>
<td>&lt; 0.01 nm</td>
<td>&gt; 30 EHz</td>
<td>&gt; 124 keV</td>
<td>G01B 15/00</td>
</tr>
<tr>
<td>X-rays</td>
<td>0.01 nm – 10 nm</td>
<td>30 EHz – 30 PHz</td>
<td>124 keV – 124 eV</td>
<td>G01B 15/00</td>
</tr>
<tr>
<td>Extreme Ultraviolet [EUV]</td>
<td>10 nm – 100 nm</td>
<td>30 PHz – 3 PHz</td>
<td>124 eV – 12.4 eV</td>
<td>G01B 9/00, G01B 11/00, G01B 15/00</td>
</tr>
<tr>
<td>Ultraviolet</td>
<td>100 nm – 390 nm</td>
<td>3 PHz – 770 THz</td>
<td>12.4 eV – 3.2 eV</td>
<td>G01B 9/00, G01B 11/00</td>
</tr>
</tbody>
</table>
Visible light | 390 nm – 750 nm | 770 THz – 400 THz | 3.2 eV – 1.7 eV | G01B 9/00, G01B 11/00
---|---|---|---|---
Infrared | 750 nm – 100 µm | 400 THz – 3 THz | 1.7 eV – 12.4 meV | G01B 9/00, G01B 11/00
Sub-millimetre wave (i.e. terahertz wave or waveband within Infrared) | 100 µm - 1 mm | 3 THz - 300 GHz | 12.4 meV – 1.24 meV | G01B 9/00, G01B 11/00, G01B 15/00
Microwave | 1 mm – 1 m | 300 GHz – 300 MHz | 1.24 meV – 1.24 µeV | G01B 15/00
Radio | 1 m – 100 km | 300 MHz – 3 kHz | 1.24 µeV – 12.4 peV | G01B 7/00, G01B 15/00

References

Application-oriented references

Insert: The following new Application-oriented references section.

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

<table>
<thead>
<tr>
<th>Measuring human body, see the relevant places, where such exist, e.g.</th>
<th>A41H 1/00, A43D 1/02, A61B 5/103</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring appliances combined with walking-sticks</td>
<td>A45B 3/08</td>
</tr>
<tr>
<td>Measuring methods or devices specially adapted for metal-rolling mills</td>
<td>B21B 38/00</td>
</tr>
<tr>
<td>Measuring, gauging or adjusting equipment for machines for working metal or other material</td>
<td>B23B 25/06</td>
</tr>
<tr>
<td>Measuring or gauging equipment specially adapted for grinding or polishing operations</td>
<td>B24B 33/06, B24B 49/00</td>
</tr>
<tr>
<td>Combinations of measuring devices with writing-implements</td>
<td>B43K 29/08</td>
</tr>
</tbody>
</table>
Devices for metering predetermined lengths of running material | B65H 61/00
---|---
Measuring devices for spinning or twisting machines | D01H 13/32
Measuring devices for determining the length of threads in sewing machines | D05B 45/00
Devices for checking, measuring, recording existing surfacing of roads or like structures, e.g. profilographs | E01C 23/01
Measuring diameter of boreholes or wells | E21B 47/08
Geodetical, nautical or aeronautical measuring, surveying, rangefinding | G01C
Photogrammetry or videogrammetry | G01C 11/00
Investigating or analysing particle size, investigating or analysing surface area of porous material | G01N 15/00
Radio direction-finding, determining distance or velocity by use of propagation effects, e.g. Doppler effect, propagation time, of radio waves, analogous arrangements using other waves | G01S
Measuring length or roll diameter of film in cameras or projectors | G03B 1/60
Methods or arrangements for converting the position of a manually-operated writing or tracing member into an electrical signal | G06K 11/00
Measuring elapsed travel of recording medium in recording or playback equipment, sensing diameter of record in autochange gramophones | G11B
Means structurally associated with electric rotary current collectors for indicating brush wear | H01R 39/58
Indicating consumption of electrodes in arc lamps | H05B 31/34

**Informative references**

Replace: The existing Informative references with the following content.

*Attention is drawn to the following places, which may be of interest for search:*

<p>| Human body, dentistry | A61B, A61C |
| Ball games | A63B |
| Sorting according to dimensions | B07 |
| Gears | B23F |
| Machine tools | B23Q |</p>
<table>
<thead>
<tr>
<th>Topic</th>
<th>Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robotics</td>
<td>B25J</td>
</tr>
<tr>
<td>Writing, drawing</td>
<td>B43K, B43L</td>
</tr>
<tr>
<td>Vehicles</td>
<td>B60, B61</td>
</tr>
<tr>
<td>Micromechanical devices (MEMS)</td>
<td>B81B, B81C</td>
</tr>
<tr>
<td>Nanotechnology</td>
<td>B82B, B82Y</td>
</tr>
<tr>
<td>Yarns</td>
<td>D01H</td>
</tr>
<tr>
<td>Marking textile materials; Marking in combination with metering or inspection</td>
<td>D06H 1/00</td>
</tr>
<tr>
<td>Paper webs, currency</td>
<td>D21F, G07D7/00</td>
</tr>
<tr>
<td>Building</td>
<td>E04D, E04F, E04G</td>
</tr>
<tr>
<td>Measuring in boreholes or wells</td>
<td>E21B47/00</td>
</tr>
<tr>
<td>Turbines</td>
<td>F01D</td>
</tr>
<tr>
<td>Bearings</td>
<td>F16C</td>
</tr>
<tr>
<td>Pigs, moles</td>
<td>F16L55/00</td>
</tr>
<tr>
<td>Range finders, inclinometers, photogrammetry, surveying, gyroscopes</td>
<td>G01C3/00, G01C9/00, G01C11/00, G01C13/00, G01C15/00, G01C19/00</td>
</tr>
<tr>
<td>Transducers not specially adapted for a specific variable</td>
<td>G01D5/00</td>
</tr>
<tr>
<td>Measuring volume flow or level of fluids or fluent solid material</td>
<td>G01F</td>
</tr>
<tr>
<td>Methods or apparatus for determining the capacity of containers or cavities, or the volume of solid bodies</td>
<td>G01F 17/00</td>
</tr>
<tr>
<td>Spectroscopy</td>
<td>G01J</td>
</tr>
<tr>
<td>Measuring force, stress, torque, pressure</td>
<td>G01L</td>
</tr>
<tr>
<td>Measuring force or stress, in general</td>
<td>G01L 1/00</td>
</tr>
<tr>
<td>Testing static or dynamic balance of machines or structures; Testing structures or apparatus not otherwise provided for</td>
<td>G01M</td>
</tr>
<tr>
<td>Investigating/analysing</td>
<td>G01N</td>
</tr>
<tr>
<td>Optical coherence tomography (OCT)</td>
<td>G01N21/00, A61B3/00, A61B5/00</td>
</tr>
<tr>
<td>Speed, acceleration</td>
<td>G01P</td>
</tr>
<tr>
<td>Investigating or analysing surface structures in atomic ranges using scanning-probe techniques</td>
<td>G01Q</td>
</tr>
<tr>
<td>Measuring electric or magnetic variables</td>
<td>G01R</td>
</tr>
<tr>
<td>Trackers</td>
<td>G01S</td>
</tr>
</tbody>
</table>
### CPC NOTICE OF CHANGES 1592

**DATE:** JANUARY 1, 2024  
**PROJECT MP12204**

<table>
<thead>
<tr>
<th>Description</th>
<th>Indexing Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radio-direction finding, determining distance or velocity and locating or detecting by use of radio waves</td>
<td>G01S</td>
</tr>
<tr>
<td>Geophysical measuring</td>
<td>G01V</td>
</tr>
<tr>
<td>Optical elements</td>
<td>G02B</td>
</tr>
<tr>
<td>Scales (e.g. Vernier)</td>
<td>G02B27/00, G06G1/00, G01D5/00, G01D13/00</td>
</tr>
<tr>
<td>Spectacle frames</td>
<td>G02C13/00</td>
</tr>
<tr>
<td>Cameras</td>
<td>G03B, H04N</td>
</tr>
<tr>
<td>Lithography (including interferometric stage position measurement)</td>
<td>G03F7/00</td>
</tr>
<tr>
<td>Holography</td>
<td>G03H</td>
</tr>
<tr>
<td>Combination of measuring devices with means for controlling or regulating</td>
<td>G05</td>
</tr>
<tr>
<td>Numerical control</td>
<td>G05B19/00</td>
</tr>
<tr>
<td>Joysticks</td>
<td>G05G9/00</td>
</tr>
<tr>
<td>Computer input devices (such as mice, touch pads)</td>
<td>G06F3/00</td>
</tr>
<tr>
<td>Hand-manipulated analogue computing devices</td>
<td>G06G 1/00</td>
</tr>
<tr>
<td>Commerce</td>
<td>G06Q</td>
</tr>
<tr>
<td>Image analysis</td>
<td>G06T7/00</td>
</tr>
<tr>
<td>Electron/ion microscopes</td>
<td>H01J37/00</td>
</tr>
<tr>
<td>Wafers and semiconductors</td>
<td>H01L21/00, H01L31/00</td>
</tr>
<tr>
<td>Interferometer aspects not relating to distance or displacement measurements (e.g. signal modulation)</td>
<td>H04B10/00, H04L27/00, G02F1/00</td>
</tr>
</tbody>
</table>

**Special rules of classification**

**Replace:** The existing Special rules of classification with the following content.

In this subclass, the groups are distinguished by the technique of measurement which is of major importance. Thus the mere application of other techniques or means for giving a final indication does not affect the classification.

Machines operated on similar principles to the hand-held devices specified in this subclass are classified with these devices.

One or more **G01B3/00** breakdown Indexing Codes should be given when information is concerned which is more detailed than the corresponding **G01B3/00** or when assigning
A G01B3/00 is not appropriate (i.e. in cases where the geometrical measurement information is only of additional nature).

At least one G01B2210/00 Indexing Code is compulsory for wheel alignment (G01B2210/10), calliper-like sensors (G01B2210/40) as well as in the following cases:

<table>
<thead>
<tr>
<th>Using chromatic effects to achieve wavelength-dependent depth resolution</th>
<th>G01B 2210/50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combining partially overlapping images to an overall image</td>
<td>G01B 2210/52</td>
</tr>
<tr>
<td>Measuring geometric parameters of semiconductor structures, such as for example profile, critical dimensions (CD) or trench depth</td>
<td>G01B 2210/56</td>
</tr>
<tr>
<td>Wireless transmission of information between a sensor or probe and a control or evaluation unit</td>
<td>G01B 2210/58</td>
</tr>
<tr>
<td>Unique sensor ID to enable sensors to be recognised and appropriate amplification or error compensation or calibration curves etc. to be used (e.g. by resistor value across connector terminals)</td>
<td>G01B 2210/60</td>
</tr>
</tbody>
</table>

**Glossary of terms**

*Replace:* The existing Glossary of terms table with the following updated table.

*In this place, the following terms or expressions are used with the meaning indicated:*

<p>| Propagation effects | are relevant if the outcome of a measurement depends on the actual value of a physical quantity characterising the propagation of the wave, i.e. its wavelength, frequency, velocity, or phase. The mere presence or direction of a wave are not considered a propagation effect or to contribute to a propagation effect. To put it in another way, propagation effects are irrelevant, if the radiation may be looked upon as a beam of radiation whose wave nature can be ignored. Examples of measurements where propagation effects are relevant include, e.g. measurements of propagation time, phase difference, phase delay, measurements using the Doppler effect or interference. |</p>
<table>
<thead>
<tr>
<th>Measuring areas</th>
<th>quantifying, by measurement, the size of areas (not: the act of measuring in certain spatial regions or the spatial regions where measurements are taken)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irregularities of surfaces</td>
<td>smaller-scale surface textures</td>
</tr>
<tr>
<td>Contour</td>
<td>envelope-like description of (part of) the shape of an object</td>
</tr>
</tbody>
</table>