

**CPC****COOPERATIVE PATENT CLASSIFICATION****G01H**

**MEASUREMENT OF MECHANICAL VIBRATIONS OR ULTRASONIC, SONIC OR INFRASONIC WAVES** (generation of mechanical vibrations without measurement [B06B](#), [G10K](#); measuring position, direction or velocity of an object [G01C](#), [G01S](#); measuring quasi-steady pressure of a fluid [G01L 7/00](#); determining unbalance [G01M 1/14](#); determining properties of material by sonic or ultrasonic waves transmitted therethrough [G01N](#); systems using the reflection or reradiation of acoustic waves, e.g. acoustic imaging, [G01S 15/00](#); seismology, seismic prospecting, acoustic prospecting [G01V 1/00](#); acousto-optical devices per se [G02F](#); obtaining records by techniques analogous to photography using ultrasonic, sonic or infrasonic waves [G03B 42/06](#); speech analysis or synthesis, speech recognition [G10L](#); information storage based on relative movement between record carrier and transducer [G11B](#); piezo-electric, electrostrictive or magnetostrictive elements in general [H01L](#); manufacture of electromechanical resonators by processes which include measurement of frequency with consequential modification of the resonator [H03H 3/00](#), {[H03H 3/007](#), [H03H 9/00](#)})

**NOTES**

1. This subclass covers the combination of generation and measurement of mechanical vibrations.
2. Attention is drawn to the Notes following the title of class [G01](#).

**G01H 1/00**

**Measuring {characteristics of} vibrations in solids by using direct conduction to the detector** ([G01H 9/00](#), [G01H 11/00](#) take precedence)

G01H 1/003

- {of rotating machines ([G01H 1/10](#) takes precedence)}

G01H 1/006

- • {of the rotor of turbo machines}

G01H 1/04

- of vibrations which are transverse to direction of propagation

G01H 1/06

- • Frequency

G01H 1/08

- • Amplitude

G01H 1/10

- of torsional vibrations

G01H 1/12

- of longitudinal or not specified vibrations

G01H 1/14

- • Frequency

G01H 1/16

- • Amplitude

**G01H 3/00**

**Measuring {characteristics of} vibrations by using a detector in a fluid** ([G01H 7/00](#), [G01H 9/00](#), [G01H 11/00](#) take precedence)

G01H 3/005

- {Testing or calibrating of detectors covered by the subgroups of [G01H 3/00](#) (calibrating geophysical instruments, e.g. seismic receivers [G01V 13/00](#))}

G01H 3/04

- Frequency

G01H 3/06

- • by electric means

G01H 3/08

- • Analysing frequencies present in complex vibrations, e.g. comparing harmonics present {(acoustic presence detection [G01V 1/001](#))}

G01H 3/10	<ul style="list-style-type: none"> <li>Amplitude; Power</li> </ul>
G01H 3/12	<ul style="list-style-type: none"> <li>by electric means (<a href="#">G01H 3/14</a> takes precedence)</li> </ul>
G01H 3/125	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>{for representing acoustic field distribution (using optical means <a href="#">G01H 9/002</a>; sonar systems for imaging <a href="#">G01S 7/56</a>, <a href="#">G01S 15/89</a>; acoustic holography <a href="#">G03H 3/00</a>)}</li> </ul> </li> </ul>
G01H 3/14	<ul style="list-style-type: none"> <li>Measuring mean amplitude; Measuring mean power; Measuring time integral of power</li> </ul>
<b>G01H 5/00</b>	<b>Measuring propagation velocity of ultrasonic, sonic or infrasonic waves, {e.g. of pressure waves}</b>
<b>G01H 7/00</b>	<b>Measuring reverberation time; {Room acoustic measurements}</b> (measuring absorption of vibrations in a material <a href="#">G01N</a> ; modifying acoustic properties to change reverberation time <a href="#">G10K</a> )
<b>G01H 9/00</b>	<b>Measuring mechanical vibrations or ultrasonic, sonic or infrasonic waves by using radiation-sensitive means, e.g. optical means</b>
G01H 9/002	<ul style="list-style-type: none"> <li>{for representing acoustic field distribution (sonar systems for imaging <a href="#">G01S 7/56</a>, <a href="#">G01S 15/89</a>; acoustic holography <a href="#">G03H 3/00</a>)}</li> </ul>
G01H 9/004	<ul style="list-style-type: none"> <li>{using fibre optic sensors (light guides per se <a href="#">G02B 6/00</a>, acousto-optical devices specially adapted for gating or modulating in optical wave guides <a href="#">G02F 1/125</a>)}</li> </ul>
G01H 9/006	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>{the vibrations causing a variation in the relative position of the end of a fibre and another element}</li> </ul> </li> </ul>
G01H 9/008	<ul style="list-style-type: none"> <li>{by using ultrasonic waves (measuring position using ultrasonic waves <a href="#">G01S 15/02</a>)}</li> </ul>
<b>G01H 11/00</b>	<b>Measuring mechanical vibrations or ultrasonic, sonic or infrasonic waves by detecting changes in electric or magnetic properties, {e.g. capacitance or reluctance}</b> (structural combination of musical instruments with microphones or other pick-up devices <a href="#">G10H 3/16</a> , <a href="#">G10H 3/18</a> , <a href="#">G10H 3/20</a> )
G01H 11/02	<ul style="list-style-type: none"> <li>by magnetic means e.g. reluctance</li> </ul>
G01H 11/04	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>using magnetostrictive devices</li> </ul> </li> </ul>
G01H 11/06	<ul style="list-style-type: none"> <li>by electric means</li> </ul>
G01H 11/08	<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>using piezo-electric devices</li> </ul> </li> </ul>
<b>G01H 13/00</b>	<b>Measuring resonant frequency</b>
<b>G01H 15/00</b>	<b>Measuring mechanical or acoustic impedance</b>
<b>G01H 17/00</b>	<b>Measuring mechanical vibrations or ultrasonic, sonic or infrasonic waves, not provided for in the preceding groups {(see provisionally also <a href="#">G01H 1/00</a>)}</b>