

(PREVIEW)  
*Indian Standard*

**MECHANICAL VIBRATION OF ROTATING ELECTRICAL  
MACHINES WITH SHAFT HEIGHTS 56 mm AND  
HIGHER- MEASUREMENT, EVALUATION AND  
LIMITS OF VIBRATION SEVERITY**

## 1 SCOPE

**1.1** This standard specifies test and measurement conditions and fixes the limits for the level of vibration severity of an electrical machine when measurements are made on the machine alone, at a testing department under properly controlled conditions.

**1.2** This standard is applicable to de machines and three phase or single-phase ac machines with shaft centre height 56 mm and higher and a rated power up to 50 MW, at nominal speeds from 500 rpm up to and including 3 000 rpm.

**NOTE** - The mechanical vibrations in rotating machines of speed lower than 500 rpm shall be subject to agreement between the purchaser and the manufacturer.

**1.3** For vertical and flange mounted machines vibrations are to be measured in a state of free suspension. However for vertical machines having shaft height greater than 400 mm the vibration may also be measured with rigid mounting. Under this condition the vibration limits as applicable to horizontal machines will be applicable (see 8.2).

**1.4** This standard is not applicable to machines mounted *in-situ*, three-phase commutator motors, single phase machines, three-phase machines operated on single-phase systems, vertical water power generators, permanent magnet generators or series wound de machines and motors for submersible pumps.

**NOTE** - The shaft height of a machine without feet, or a machine with raised feet, or any vertical machines, is to be taken as the shaft height of a machines in the same basic frame, but of the horizontal shaft mounted type IMB3 (see IS 2253: 1974 Designation for types of construction and mounting arrangement of rotating electrical machines).

## 2 REFERENCES

The following standards are necessary adjuncts to this standard:

<i>IS No.</i>	<i>Title</i>
2253 : 1974	Designation for types of construction and mounting arrangement of rotating electrical machines ( <i>first revision</i> )
4722 : 2001	Rotating electrical machines Specification ( <i>second revision</i> )

11726 : 1985

Requirements for instruments for measuring vibration severity of rotating and reciprocating machines