

# JIS

**JAPANESE INDUSTRIAL STANDARD**

**Rotating machines —  
Balance quality requirements  
of rigid rotors**

**JIS B 0905—1992**

**Translated and Published**

**by**

**Japanese Standards Association**

**In the event of any doubt arising,  
the original Standard in Japanese is to be final authority**

Errata for JIS (English edition) are printed in *Standardization Journal*, published monthly by the Japanese Standards Association.

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Errata are also provided to subscribers of JIS (English edition) in *Monthly Information*.

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Rotating machines - Balance quality  
requirements of rigid rotors

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1. Scope

This Japanese Industrial Standard specifies the methods of expressing balance qualities when rotors are balanced as rigid rotors (hereafter referred to as the "balance qualities of rotating machines") and the grades thereof, methods for determining corresponding permissible residual unbalances and allocating methods, as well as the treatments relating to the balancing of keys.

- Remarks 1. The rotors mean the rotating substances of which journals are being supported by bearings, and the rigid rotors mean the rotors of which axial loads do not exceed permissible values due to the deformations of the rotors, even though these are balanced in two planes selected arbitrarily and are rotated under the similar supporting conditions to the time of use at an arbitrary speed of not larger than the maximum speed of rotation (See JIS B 0153).
2. For rotors other than the rigid rotors, in the case where these are subjected to balancing as rigid rotors, this Standard may be applicable.
3. The equivalent International Standards to this Standard are as given in the following:
- |                 |   |
|-----------------|---|
| ISO 1940-1:1986 | Mechanical vibration - Balance quality requirements of rigid rotors - Part 1: Determination of permissible residual unbalance |
| ISO 8821: 1989  | Mechanical vibration - Balancing - Shaft and fitment key convention   |

2. Definitions

For the purpose of this Standard, the following definitions apply (See JIS B 0153).

- (1) unbalance The condition of mass distribution of a rotor which originates vibratory forces or motions in bearings as the results of centrifugal forces.