

(PREVIEW)

Indian Standard**RAILWAY CARRIAGE FANS — SPECIFICATION****1 SCOPE**

1.1 This standard specifies the requirements and methods of tests for ac and dc fixed, swiveling and bracket type fans, including the associated speed regulators, for use in railway carriages.

It covers the following fans:

- a) 24 V dc fans for conventional 24 V coaching stock;
- b) 110 V dc fans for self generating 110 V coaching stock, and dc electrical multiple units;
- c) 110 V ac fans for coaching stock with end-on-generation and mid-on-generation coaches and also for 110 V self-generating coaches and dc EMU stock where invertors or motor alternator sets are provided for 110 V ac 50 cycles feed for working carriage fans; and
- d) 140 V ac fans for ac electrical multiple units.

REFERENCES

2.1 The Indian Standards listed in Annex A are necessary adjuncts to this standard.

ANNEX A**(Clause 2.1)****LIST OF REFERRED INDIAN STANDARDS**

<i>IS No.</i>	<i>Title</i>
5 : 1978	Colours for ready mixed paints and enamels (<i>third revision</i>)
151 : 1985	Ready mix paint, spraying, finishing, stoving, enamel for general purposes, colour as required (<i>first revision</i>)
210 : 1978	Grey iron castings (<i>third revision</i>)
226 : 1975	Structural steel (standard quality) (<i>fifth revision</i>)
280 : 1978	Mild steel wires for general engineering purposes (<i>third revision</i>)
302 : 1979	Safety of household and similar electrical appliances : Part 1 General requirements (<i>fifth revision</i>)

<i>IS No.</i>	<i>Title</i>
319 : 1989	Free cutting brass bars, rods and sections (<i>fourth revision</i>)
349 : 1981	Lacquer, cellulose nitrate, clear, finishing, glossing for metal (<i>first revision</i>)
549 : 1974	Split pins (<i>second revision</i>)
648 : 1980	Non-oriented electrical steel sheets and strips for magnetic circuits (<i>second revision</i>)
649 : 1963	Methods for testing steel for magnetic circuit of power electrical apparatus (<i>revised</i>)
694 : 1990	PVC insulated cables for working voltages up to and including 1 100 V (<i>third revision</i>)
713 : 1981	Zinc base alloy ingots for die casting (<i>second revision</i>)
1079 : 1988	Hot rolled carbon steel sheet and strip (<i>fourth revision</i>)
1137 : 1990	Thickness of sheet and diameters of wires (<i>first revision</i>)
1248	Direct acting indicating analogue electrical measuring instruments and their accessories
(Part 2) : 1983	Ammeters and voltmeters (<i>second revision</i>)
(Part 3) : 1983	Wattmeters and varmeters (<i>second revision</i>)
1271 : 1985	Thermal evaluation and classification of electrical insulation (<i>first revision</i>)
1300 : 1966	Phenolic moulding materials (<i>second revision</i>)
1365 : 1978	Slotted countersunk head screws (<i>third revision</i>)
1366 : 1982	Slotted cheese head screws (<i>second revision</i>)
1378 : 1987	Oxidized - copper finishes (<i>third revision</i>)
1401 : 1970	Accessibility test probes (<i>first revision</i>)
1573 : 1986	Electroplated coatings of zinc on iron and steel (<i>second revision</i>)
1772 : 1973	Electroplated coatings of copper (<i>first revision</i>)
1885 (Part 55) : 1981	Electrotechnical vocabulary : Part 55 Electric fans
2016 : 1967	Plain washers (<i>first revision</i>)
2102	General tolerances for dimensions and form and position : Part 1 General tolerances for linear and angular dimensions (<i>second revision</i>)
(Part 1) : 1980	Built-up mica for electrical Purposes
2464 : 1963	Electrical steel sheets (oriented)
3024 : 1965	Porous metal powder oil-impregnated bearings (<i>first revision</i>)
3980 : 1982	ISO metric screw threads :
4218	Basic and design profiles. (<i>first revision</i>)
(Part 1) : 1976	Diameter pitch combinations (<i>first revision</i>)
(Part 2) : 1976	Basic dimensions for design profiles (<i>first revision</i>)
(Part 3) : 1976	Tolerancing system (<i>first revision</i>)
(Part 4) : 1976	Tolerances (<i>first revision</i>)
(Part 5) : 1976	Limits of sizes for commercial bolts and nuts (diameter range 1 to 52 mm (<i>first revision</i>)
(Part 6) : 1979	
4454 (Part 1) : 1981	Steel wires for cold formed springs : Part 1 Patented and cold drawn steel wires Unalloyed (<i>second revision</i>)
5270 : 1969	Rubber grommets for general purpose
5692 : 1988	Tolerances for radial rolling bearings (<i>first revision</i>)
5885 : 1977	Copper commutator bar (<i>first revision</i>)
5935 : 1970	Radial internal clearances in unloaded radial rolling bearings
6455 : 1972	Single row radial ball Bearings
7283 : 1974	Hot rolled bars for production of bright bars