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JAPANESE INDUSTRIAL STANDARD

Seats for Passengers of Railway Rolling Stock

JIS E 7104-1986



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Translated

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Seats for Passengers of Railway Rolling Stock E 7104-1986

1. Scope

This Japanese Industrial Standard specifies seats generally used for passenger rolling stock, hereinafter referred to as the "seats".

Remark: In this Standard units and numerical values shown in { } are in accordance with the International System of Units (SI) and are appended for informative reference.

2. Definitions

For the purpose of this Standard following definitions apply:

- (1) longitudinal seat The seat fixed in longitudinal direction of car body.
- (2) lateral seat The seat fixed at right angles with the longitudinal direction of car body.
- (3) reclining seat The seat of which back-slip inclination angle can be varied.
- (4) reversible seat The seat capable of changing the direction of seat by reversing the back-slip in front and rear.
- (5) rotary seat The seat capable of rotating.
- (6) rotary reclining seat The seat capable of rotating and also changing the back-slip inclination angle.
- (7) seat load The load to be applied vertically to the cushion.
- (8) back load The load to be applied at right angles to the back slip surface of back-slip cushion.

3. Classification and Symbols

The classification and symbols of seats shall be in accordance with Table 1.

Applicable Standards: See pages 11 and 12.

Table 1. Classification and Symbols of Seats

Classification	Symbol
Longitudinal seat	LFF
Lateral seat	CFF
Reclining seat	CFR
Reversible seat	CWF
Rotary seat	CTF
Rotary reclining seat	CTR

4. Quality

The quality of seat shall comply with following each item:

4.1 Appearance The appearance of seat shall be as follows:

- (1) The surface of each part shall be good in finish and free from defects such as flaws, wrinkles, etc. harmful to use.
- (2) Stitching joints and seams of cushion and back-slip cushion shall be free from conspicuous sewing bend and seam of sewing thread.
- (3) The surface of painting, plating, etc. shall be smooth and the gloss and colour tone, uniform.
- (4) The weld shall be free from defects such as undercut, overlap, etc.

4.2 Seating Feeling The cushion and back-slip cushion shall be good in degree of deflection, softness, distribution of hardness, and feeling of surface base.

4.3 Operating Property The movable mechanism of seat shall be capable of operating smoothly and easily. Further, the function of movable mechanism shall be free from abnormalities.

4.4 Performance The performance of seat shall be as follows:

- (1) Strength Each part of seat, when subjected to 8.3.1 Strength Test, shall be free from harmful deformation and cracking.
- (2) Endurance Each part of seat, when subjected to 8.3.2 Endurance Test, shall be free from harmful deformation and cracking.

5. Structure

The structure of seat shall be as follows:

- (1) Fixed Seat The fixed seat consists of seat frame, cushion and back-slip cushion.

- (2) Movable Seat The movable seat consists of leg stand, cushion, back-slip cushion and movable mechanism of Table 2.

Table 2. Movable Mechanism

Classification	Movable mechanism
Reclining seat	Back-slip inclining mechanism
Reversible seat	Back-slip reversible mechanism
Rotary seat	Seat rotating mechanism
Rotary reclining seat	Back-slip inclining mechanism and seat rotating mechanism

6. Shape and Dimensions

The shape and dimensions of seat shall be as given in Attached Figs. 1 to 6 and Attached Table.

7. Materials

Materials to be used for main parts of seat shall be in accordance with Table 3.

Table 3. Materials

Name of main part(s)	Materials
Seat receiver, leg stand, cushion frame and other framework	SS 41 of JIS G 3101, SPHC of JIS G 3131, SPCC of JIS G 3141, STK 41 of JIS G 3444, SGP of JIS G 3452, SUS 304 of JIS G 4305, A 5052 P of JIS H 4000, A 5052 TE or A 5052 TD of JIS H 4080 or AC 2 A and AC 4 A of JIS H 5202
Heat preventive board	JIS R 3451, JIS R 3454
Riser	SPHC of JIS G 3131, SUS 304 of JIS G 4305, A 5052 P of JIS H 4000
Bolts and nuts	JIS B 1111, JIS B 1180, JIS B 1181, JIS B 1213, JIS B 1251, JIS B 1256 JIS B 1351
Hand rest	AC 7 A of JIS H 5202, ZDC 1, ZDC 2 of JIS H 5301
Shaft, bearing	SGD 41-D of JIS G 3123, FCMB 32 of JIS G 5702, YBSc 3 of JIS H 5101 or BC 2 of JIS H 5111
Spring, lock pin	SWC of JIS G 3521, SWP-A of JIS G 3522, or SK 5 of JIS G 4401
Surface base	Nonflammable pure-wool moquette, nonflammable nylon moquette or nonflammable polyvinylchloride coated fabric of JIS K 6772
Under lining member	Vynlon tarpaulin, nonflammable shirting or nonflammable hessian cloths of JIS L 3405
Filling	Nonflammable latex form rubber of JIS K 6382, nonflammable urethane foam of JIS K 6401, No. 2 or nonflammable hair lock filling of JIS A 9508
Sewing thread	Sewing thread specified in JIS L 2512
Decorative board	LD-MC of JIS K 6903