

BUREAU OF INDIAN STANDARDS

Draft Amendment No. 1
ToIS 4622:2003 RECOMMENDATIONS FOR STRUCTURAL DESIGN OF FIXED WHEEL GATES
(THIRD REVISION)

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Last date for receipt of comments is 30-09-2010
-----**[Page 2, Table 1, SI No. (i)] — Substitute the following for the existing:**

i) Wheel	Cast Steel	1030:1998
	Cast iron	210:1993
	Wrought steel	
	Carbon Cast Steel	2707:1996
	Forged steel	2004:1991

[Page 2, Table 1, SI No. (iii)] — Substitute the following for the existing:

iii) Wheel pins or axles	Chrome nickel steel or corrosion resistance steel,	2004:1991
	mild steel with Nickel or hard chromium plating	2062:2006
		1068: 1993
		1337:1993
	Corrosion resistance steel or forged steel with hard chromium plating	1570 (Part 5) :1985

[Page 2, Table 1] — Substitute 'IS 2062:2006' for 'IS 2062:1999' wherever occurring in the table**[Page 2, Table 1]** — Delete 'IS 8500:1991' wherever occurring in the table**[Page 6, Clause 5.7.5.1] — Substitute**

'5.7.5.1 The edge distance of the bearing flange of track base from the groove face shall be determined on the basis of the following criteria:

- The wider flange, in case of double flanged track base, shall be considered as bearing flange for the purpose of transferring load from the track base to the concrete.
- The minimum distance 'e' of the bearing plate flange shall not be less than 150mm. It can be further reduced if steel plate claddings (armored plating) are installed on the concrete surface and if these are sufficiently anchored by reinforcement bars which are provided in Y-direction.
- The load shall be assumed to be distributed at 45° dispersion as shown in Fig. 2.
- In case shear stress in second stage concrete is not within the permissible limit (with or without provision of shear bars), the width of loaded area at the interface of primary and secondary

concrete should fully lie in the primary concrete. Clear cover of the reinforcement is to be neglected as shown in Fig. 2.”

for

‘5.7.5.1 The edge distance of the bearing flange of track base from the groove face shall be determined on the basis of the following criteria:

- a) The wider flange, in case of double flanged track base, shall be considered as bearing flange for the purpose of transferring load from the track base to the concrete.
- b) The minimum edge distance ‘e’ of the bearing plate flange shall in no case be less than 150 mm.
- c) The load shall be assumed to be distributed at 45° dispersion as shown in Fig. 2.
- d) The width of loaded area at the interface of primary and secondary concrete shall fully lie in the primary concrete. Clear cover of the reinforcement is to be neglected as shown in Fig. 2.’

[Page 9, Annex A]— Substitute ‘IS 2062:2006’ for ‘IS 2062:1999’ and substitute the title as under: ‘Hot rolled low, medium and high tensile structural steel (*sixth revision*)’

[Page 9, Annex A]— Add the following standard in the list: ‘IS 2707 : 1996 Carbon Steel Castings for Surface Hardening - Specification (fourth revision)’

[Page 18, Annex F] — Substitute

	<i>Crest Gates and Low Head Sluice Gates</i>	<i>Medium and High Head Sluice Gates</i>
Line contact	1.6 x UTS	1.4 x UTS
Point contact	2.4 x UTS	2.1 x UTS

NOTE — UTS = ultimate tensile strength in N/mm².
* These values can be used for less frequently operated gates irrespective of water head.

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	<i>Crest Gates and Low Head Sluice Gates</i>	<i>Medium and High Head Sluice Gates</i>
Line contact	1.6 x UTS	1.4 x UTS
Point contact	2.4 x UTS	2.1 x UTS

NOTE — UTS = ultimate tensile strength in N/mm².