TECHNICAL DELIVERY CONDITIONS FOR COLD ROLLED CARBON SHEET COILS

PREPARED BY

DEPARTMENT	NAME & DESIGNATION S/Shri	SIGNATURE
QA	Renjith K Manager, QA	27/04/2021

REVIEWED BY

DEPARTMENT	NAME & DESIGNATION S/Shri	SIGNATURE
ENGG (APH)	K. Thanikachalam SDGM/ APH	27/04/2021
MATERIAL PLANNING	P. Annamalai SM/ MPLG	27/4/2021
QC (Proc)	R. Kesavan DGM / QC- Proc	27/4/2021
QA	R. Aruchachalam DGM/ QA & QC-OLI	

APPROVED AND ISSUED BY

DEPARTMENT	NAME & DESIGNATION S/Shri	SIGNATURE
QC-Shop, QA & BE	K. Saketharaman AGM/ QC-Shop, QA & BE	27/4/2021

1.0 SCOPE

1.1 This TDC specifies the requirements for cold rolled sheets of deep drawing quality to specification IS 513 GR-CR3 / JIS G 3141 SPCD-SD.

2.0 CHEMICAL & MECHANICAL PROPERTIES

2.1 IS 513

1. Chemistry
2. Hardness } shall be as per specification
3. Bend Test
4. Erich son cupping value shall be as per Figure 1 of IS 513.

JIS G3141

1. Chemistry shall be as per Table 1 under informative reference of JIS G 3141
2. Hardness shall be 57 HRB MAX
3. Bendability shall be as per table 6 of JIS G 3141
4. Erich son cupping test shall be conducted and the value shall be as per Figure 1 of IS 513.

3.0 SUPPLY CONDITION

3.1 The coils shall be free from slit edges, visual scales and rust etc.

3.2 The tolerance thickness and width shall be as follows:

On width : Plus 0.00 to Minus 1.5 mm.

On thickness : Plus 0.07 mm to plus 0.00 mm

3.3 The camber, out of flatness, bend shall be permitted only to the extent specified in the applicable standard.

3.4 The ID of the coil shall be 500 mm ± 20 mm, OD of the coil shall be 1500 mm (max) and coil weight 5 to 10 MT.

3.5 **Surface condition**

3.5.1 Cold rolled with matt finish with an oil coat to protect rusting and when ordered as per the Japanese standard, it shall be SPCD-SD that is, skin rolled-dull finished by roll whose surface is made rough mechanically or chemically.

4.0 PACKING

4.1 Before packing, the coils shall be given a sufficient coat of rust preventive fluid on the outer part to prevent rusting.

4.2 Three binding strips through eye of the coil at equal spacing shall tightly be secured.

4.3 Polythene sheet (thickness more than 20 microns) shall be wrapped over the coil. Subsequently coil shall be wrapped with Hessian cloth.

4.4 ID rings shall be provided at both the sides of the coil to protect the coil edges.

4.5 Entire circumference of the coil shall be covered with GI sheet / painted sheet. Subsequently, both the faces shall be protected with metal sheets i.e full coil is to be covered.

4.6 Three cross strapping shall be tightly secured through the ID of the coil at equal spacing.

4.7 Two more strapping along the periphery shall be provided ensuring tight strapping. The outer label containing details as in 5.1 shall be pasted on the packed OD of the coil.

4.8 A metal label containing the detail as in 5.1 shall be secured at once of the outer cross strapping.

5.0 IDENTIFICATION

5.1 The following details shall be ensured in outer label pasted on the ID of the coil.

a. Vendors Name
b. Purchase Order Number
c. Coil Number
d. Specification & Grade
e. Net Weight

5.2 Two more labels containing all the details as in 5.1, shall be pasted, one on the eye and another on the outer surface of the packed coil.

6.0 TEST CERTIFICATE

6.1 The TC shall be in English and containing the following details

i. Purchase Order Number
ii. Specification and Grade
iii. Coil Number
iv. Nominal thickness and width
v. Chemical composition – melt wise.
vi. Bend test result
vii. Max. camber
viii. Gross and net weight
ix. Hardness and Erichson cupping values

6.2 BHEL reserves the right to carry out tests and reject the item wherever non-conforming to the requirement of Purchase Order and Technical Delivery Condition.

RECORD OF REVISIONS

Rev No	Date	Revision details
00	26.02.1996	TDC RTA 008 REV 04 revised and renumbered as TDC RTA 408/REV/00.
01	29.11.2002	Clause 4.0 and Clause 4.1 revised to change tolerance on thickness plus 0.00 to plus 0.015 mm.
02	10.05.2002	TDC totally reviewed and revised.
03	27.04.2021	IS 513 GR.DD terminology based on obsolete standard is revised as IS 513 GR-CR3 based on latest revision. MOM dated 24.04.2021 (Meeting with Engineering, M&S, Purchase, Material Planning, Marketing, QA and QC- Procurement) recommends the above.

QUALITY ASSURANCE
QWI NO: TDC:RTA:408 Rev.02 Dtd.10.05.2002
Amendment to Quality Work Instruction (QWI)
Amendment No: A1 **Date: 09.05.2017**
Title: ***TDC FOR Cold rolled carbon sheets coils.8***

Details of Amendment		
Clause No	**Amended As**	**Basis for Amendment**
Refer Clause no 3.4	OD of the Coil shall be 1300mm max and Coil wt. 5 to 9 MT max.	Shop feedback. Refer Email Dated:06.05.2017

Prepared By (QA)		Reviewed & Approved By
9.05.17		9/5/17