



TECHNICAL DELIVERY CONDITIONS (TDC)
For
Carbon Steel Plates

Doc Ref:	TDC:RTA:407
Rev. No.	02
Date:	18.01.2012
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1.0 SCOPE :

- 1.1 This TDC specifies the requirements for supply of Plates to material specification ASTM A515 GR.65./GR70 / ASTM A516 GR.70.

2.0 Chemical & Mechanical properties:

- 2.1 Shall be as per specification.

3.0 Supply Condition:

- 3.1 If the plates are supplied in gas cut condition, plate thickness above 50mm shall be Preheated to 100deg.C before gas cutting.
- 3.2 Repair by fusion welding is prohibited.
- 3.3 The out of flatness shall be within 5mm/meter.
- 3.4 The steel shall be fully killed.

PREPARED BY	REVIEWED BY	SIGNATURE	APPROVED BY
J. Chittappa	ENGG (APH)		 (HEAD / QA)
	PURCHASE	 12/03/2012	
	MPL	 09/03/12	
	QC/PROC		
	QA		
<i>Issued By Quality Assurance</i>			



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4.0 Non destructive Testing & Acceptance

4.1 All the plates shall be Ultrasonically tested and accepted as per ASTM A578 level C for ASTM A515 and ASTM A 516.

5.0 MARKING:

5.1 Each plate shall be hard stamped and bordered with white paint within the following Information:

- a. P O No.& Date
- b. Size & Quantity
- c. Specification
- d. Melt number
- e. Maker's identification

6.0 TEST CERTIFICATES:

6.1 TC shall be in English and it shall contain

- a) Purchase Order Number and Date
- b) TDC Number
- c) Material Specification and Grade
- d) Drawing No (if applicable)
- e) Number & weight
- f) Chemical Composition – Each Melt wise
- g) Mechanical Properties – Each Melt wise
- h) Ultrasonic Testing Report – HT batch wise

7.0 BHEL reserves the right to carry out tests and reject the items wherever non conformance to the contract is noticed.

Rev. No	Date	Changes made
00	26 02 02	TDC RTA 007 / REV 02 is revised and renumbered as TDC RTA 407 / REV 00
01	10 05 02	TDC totally reviewed and revised
02	18 01 12	As per engineering request email dtd 13/01/2012, in clause 1.1 ASTM A516 GR.70 included. In clause 4.1, The UT acceptance norm incorporated as per collaborator email dated 12.03.12

BHARAT HEAVY ELECTRICALS LIMITED
QUALITY ASSURANCE & CONTROL
RANIPET 632 406

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DATED:29-07-99

TECHNICAL DELIVERY CONDITIONS
FOR

CARBON STEEL
STRUCTURAL PLATES

APPLICABLE SPECIFICATION

ASTM A 36

DEPARTMENT

NAME

SIGNATURE

EDC/APH

P PONNUSAMY



PURCHASE

CYRIL FERNANDEZ



MATERIAL PLANNING

C BALASUBRAMANIAN



QUALITY CONTROL

V RAMAKRISHNAN



QUALITY ASSURANCE

V. JAYARAMAN



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RECORD OF REVISIONS

REV NO.	CLAUSES REVISED	DATE
00	Original Issue	14 12 88
01	Controlled copy No. and record of revision Pages added	22 07 93
02	CL 3.1 j & h modified.	29-07-99

1.0 SCOPE

1.1 This TDC specifies the requirements for the supply of Plates as per ASTM A 36.

1.2 The size and quantity shall be as per Purchase Order.

2.0 MATERIAL AND PROPERTIES

2.1 The steel shall be fully killed.

2.2 The chemical composition and Mechanical properties shall be as per the specification.

3.0 HEAT TREATMENT

3.1 All the plates shall be supplied in normalised condition.

4.0 NDT.

4.1 The plates shall be ultrasonically tested as per ASTM A 435.

4.2 ACCEPTANCE CRITERIA

4.2.1 Any discontinuity indication causing a loss of 95% or more of the reference back reflection which can not be contained within a circle, the diameter of which is 3 inch or one half of the plate thickness, whichever is greater, is unacceptable.

5.0 DIMENSION AND TOLERANCES

5.1 This TDC is applicable to thicknesses from 75mm to 200mm.

5.2 The dimensional tolerances shall be as per ASTM A6.

6.0 FREEDOM FROM DEFECTS

6.1 Repair of defects by fusion welding is prohibited.

6.2 The plates shall be free from Mill scale, cracks, laminations and any other defects.

6.3 Whenever defects are removed by Mechanical means, it shall be ground and smoothly merged. However, the dimension of the plates shall not be less than the requirement as given in Purchase order.

7.0 MARKING

7.1 Each plate shall be hard stamped with the following details alongwith the rolling direction.

- a) Purchase order number
- b) Size and specification
- c) Heat/Melt number
- d) Maker's emblem

8.0 TEST CERTIFICATE

8.1 The supplier shall furnish the test certificate in English. It shall contain the following information:

- a) Purchase order number and date
- b) TDC number
- c) Specification and grade
- d) Size, number and weight
- e) Chemical composition - Meltwise
- f) Mechanical properties - Meltwise/heat treatment
batchwise
- h) H T condition
- i) Dimensional report
- j) Ultrasonic Testing Results

8.2 BHEL may choose to inspect the manufacturing or testing.

8.3 BHEL reserves the right to carry out test and to reject the items wherever nonconformance to the Contrat is noticed.

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