	Technical Delivery Condition (TDC) for Cold rolled corrosion resistant coils / sheets/ Plates	Doc Ref: TDC:RTA:404
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1. SCOPE

- 1.1. This TDC specifies the requirements of cold rolled coils, sheets of CORTEN A/ASTM A 242 and equivalent material specification & Plates of CORTEN B/ASTM A 588 GR A and equivalent material specification used in APH. Steel shall be in fully killed condition.

2. Chemical & Mechanical properties:

2.1. Chemical (melt wise)

Specn	C	Mn	Si	P	S	Cu	Cr	Ni	V
CORTEN A/ ASTM A 242 & EQUIVALENT	0.12 Max	0.20- 0.50	0.25- 0.75	0.07- 0.15	0.05 Max	0.25- 0.55	0.35- 1.25	0.65 Max	--
CORTENB/ ASTM A 588 GR A & EQUIVALENT	0.19 Max	0.80- 1.25	0.30- 0.65	0.04 Max	0.05 Max	0.25- 0.40	0.40- 0.65	0.40 Max	0.02- 0.10

2.2. Mechanical Properties


Specification	Yield point (Mpa) (Min)	T S (MPA) (Min)	% of Elonga (Min) 5.65 √ So
CORTEN A/ ASTM A 242 & EQUIVALENT	310	445	20
CORTEN B/ ASTM A 588 GR A & EQUIVALENT	≤ 16 thick 355 >16 thick 345	490 - 630	20

- 2.3. Bend test shall be conducted for coils as per JIS 3125 SPA -C.

3. Supply condition (Coils)

- 3.1. The coils shall be free from slit edges, 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 0.07mm to minus 0.00 mm
 3.3. The camber, out of flatness, bend shall be permitted only to the extent specified in the applicable standard.

Prepared by <i>J. Chitambar</i>	Reviewed by	Signature	Approved by <i>[Signature]</i> (Head / QA)
	Engg (APH)	<i>[Signature]</i>	
	Purchase	<i>[Signature]</i>	
	MPL	<i>[Signature]</i>	
	QC (Proc)	<i>[Signature]</i>	
	QA	<i>[Signature]</i>	
Issued by Quality Assurance			

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- 3.4. The ID of the coil shall be 500 mm \pm 20mm, OD of the coil shall be 1500 mm(max). **Coil weight:** 2 to 5 MT for coil width of \leq 503 mm and 5 to 10 MT for coil width > 503 mm.
- 3.5. Surface condition shall be cold rolled with matt finish with an oil coat to protect from rusting.

4. Supply conditions (Plates and sheets)


- 4.1. Tolerance for the plates is as per ASTM A6.
- 4.2. Tolerance for sheets on thickness is Plus 0.15 minus 0.00
- 4.3. The plates / sheets shall be free from scales and rust.
- 4.4. Plates thickness 12 mm and above shall be ultrasonically tested and accepted as per ASTM A 435.

5. Packing and preservation (for coils)

- 5.1. Before packing, the coils shall be given a sufficient coat of rust preventive fluid on the outer part to prevent rusting.
- 5.2. Three binding strips through eye of the coil at equal spacing shall tightly be secured.
- 5.3. Polythene sheet (thickness more than 20 microns) shall be wrapped over the coil.
- 5.4. Subsequently coil shall be wrapped with Hessian cloth.
- 5.5. ID rings shall be provided at both the sides of the coil to protect the coil edges.
- 5.6. 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.
- 5.7. Three cross strapping shall be tightly secured through the ID of the coil at equal spacing.
- 5.8. Two more strapping along the periphery shall be provided ensuring tight strapping. The outer label containing details as in 7.1 shall be pasted on the packed OD of the coil.
- 5.9. A metal label containing the detail as in 7.1 shall be secured at one of the outer cross strapping.

6. Packing and Preservation (for sheets / plates)

- 6.1. **The sheets** shall be coated with a coat of rust Preventive Fluid on both sides and polythene sheets (thickness more than 20 Microns) shall be wrapped over the sheet bundle, subsequently sheets shall be wrapped with Hessian cloth and suitable metal belt.
- 6.2. **The plates** shall be suitably bundled for withstanding the handlings during loading & unloading.

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7. Identification

7.1. **For coils** the following details shall be stenciled with paint / pasted with sticker on the ID of the coil and **for sheets** on the bundle.

- | | |
|-------------------------------------|---------------------------|
| a. Vendor's Name | b. P.O. No. |
| c. Coil No. / Sheet No. / Plate No. | d. Specification & Grade. |
| e. Net Weight | |

For Plates, the details a,c,d, in clause 7.1. are to be hard stamped and bordered with paint and b & e are to be painted.


7.2. For coils two more labels containing all the details as in 7.1. shall be pasted, one on the eye and another on the outer surface of the packed coil.

8. Test certificate

8.1. The TC shall be in English and containing the following details.

- i. PO No.
- ii. Specification and grade
- iii. Coil no.
- iv. Nominal thickness and width
- v. Chemical composition – melt wise.
- vi. Mechanical properties – melt wise / HT batch wise
- vii. Gross and net weight

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

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Rev No	Date	Changes made
00	20 05 96	TDC RTA 004 / 00 is revised and re-numbered as RTA 404 Rev.00
01	18 07 96	i. Cl.2.3 table and sketch modified ii. Cl. 6.2, Cl.7.9, Cl.9.1 modified iii. Cl.9.5 deleted.
02	27 11 96	i. Cl. 8.0 deleted ii. Cl. 9.0 re-numbered as 8.0
03	28 03 98	i. Cl. 2.2 min yield strength changed to 310 MPa in line with corten coil specification.
04	22 06 98	Scope of sheets taken out of the purview of the TDC. Please see TDC:RTA:425/001 dt 22 06 98 for corten sheets.
05	10 05 02	TDC totally reviewed and revised. Requirements of TDC RTA 405 (corrosion resistant plate) TDC RTA 425 (Corrosion resistance sheets) are merged to form this TDC:RTA:405,425 deleted.
06	07 02 03	Class 2.1 chemistry details revised. And cl.3.2 modified Clause 2.2 gauge length specified for % of elongation. Cl. 3.4 revised based on supplied feedback. Cl.7.1 modified for better clarity.
07	26 11 11	Cl. 1.1, 2.1 and 2.2 : ASTM A 242 and ASTM A 588 GR A included.

(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT AND THE EXPIRY DATE OF BG MUST BE AFTER 2 MONTHS FROM THE DATE OF COMPLETION OF SUPPLIES)

CONTRACT EXECUTION BANK GUARANTEE

In accordance of M/s. Bharat Heavy Electricals Limited (A Government of India undertaking, a company incorporated under the Companies Act 1956 having its Registered Office at "BHEL House", SIRI Fort, New Delhi 110 049) through its Boiler Auxiliaries Plant located at Ranipet – 632 406, (hereinafter called 'the Company') having entered into a contract with M/s.....
..... hereinafter called 'the said contractor' which term includes 'suppliers' for the purpose of this Bond and under the terms and conditions of the Contract No.....Dt.....between BHEL, Ranipet and as per the Contract, the Contractor / Supplier is to furnish a Contract Execution Bank Guarantee for Rs.....in words.....
.....for the due performance of the contract and for the fulfillment of all the terms and conditions of the contract.

Sign and seal of issuing bank
Please affix Non Judicial Stamp
here, as per Stamp Act

Bank Guarantee No.....Date.....Banker Name.....
Bank Guarantee Value Rs.....

1. We.....
.....
.....(Bank's name, Branch, Place – address to be mentioned [herein after referred to as the Bank) at the request of.....
.....(Contractor(s)] do hereby undertake to pay the company an amount not exceeding Rs.....in words
.....
.....against any loss or damage caused to or suffered or would be caused to or suffered by the company by reason of any breach by the said Contractor(s) of any of the terms and conditions contained in the said agreement.

2. We.....
.....
.....(name of the bank with full address), do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Company stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Company by reason of breach by the said Contractor(s) of any of the terms and conditions contained in the said Agreement or by the reason of the Contractor(s) 'failure to perform' the said agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.....in words.....

Sign and seal of issuing bank

Bank Guarantee No.....Date.....Banker Name.....
Bank Guarantee Value Rs.....

3. We undertake to pay conditionally to the Company any money so demanded notwithstanding any dispute(s) raised by the Contractor in any suit, or proceedings pending before any Court or Tribunal or Arbitration or before any other authority relating thereto our liability under this present being absolute and unequivocal. The payment under this guarantee would not wait till the disputes have been decided by any Court or Tribunal or in the arbitration proceedings or by any other authority. The payment so made by us under this Bond shall be a valid discharge of liability for payment thereunder and the Contractor(s) shall have no claim against us for making such payment.

4. We.....(name of Bank), further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Company under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till Purchase Department of the Company certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.

5. (i) Unless a demand or claim under this guarantee is made on us in writing on or before(date) (After 2 months from the date of completion of supplies) we shall be discharged from all the liability under this guarantee thereafter. But where such claim or demand has been preferred by the Company with the Bank before the expiry of the said date, the claim shall be enforceable notwithstanding the fact that the said enforcement is effected after the said date. (ii) For the purpose of this clause, any letter making demand on the Bank by M/s. BHEL dispatched by Registered Post with Ack. Due or by Telegram or by any Electronic media addressed to the above mentioned address of the Bank shall be deemed to be the claim / demand in writing referred to above irrespective of the fact as to whether and when the said letter reaches the Bank, as also any letter containing the said demand or claim is lodged with the Bank personally.

Sign and seal of issuing bank

Bank Guarantee No.....Date.....Banker Name.....
Bank Guarantee Value Rs.....

6. We.....(name of the Bank), further agree with the company that the Company shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Company against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by any reason of any such variation or extension being granted to the said Contractor(s) or for any forbearance, act or omission on the part of the company or any indulgence by the company to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating would, but for this provision, have effect of not so relieving us.

7. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).

8. The guarantee herein contained shall not be determined or affected by the liquidation or winding up or insolvency of or change in the constitution of the Contractor, but shall in all respects and for all purpose be binding and operative until all payments of all moneys due or that may hereafter become due to the said company or settled irrespective of any liability or obligation of the Contractor under the said Contract.

9. It shall not be necessary for the company to proceed against the Contractor before proceeding against the guarantor-bank and the guarantee herein contained shall be enforceable against them notwithstanding any security, which the company may have obtained from the Contractor shall, at the time when proceedings are taken against the Guarantor hereunder be outstanding or unrealized.

10. Any claim or dispute arising under the terms of this document shall only be enforced or settled in the Courts at Ranipet, Tamilnadu Jurisdiction.

11. The Bank declares that it has powers to issue this Guarantee under the Bank's Memorandum and Articles of Association and the undersigned has full powers to do so on its behalf under the power granted to him by the proper authorities of the Bank.

12. We(name of Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the company in writing.

In witness whereof we.....
(name of Bank) have hereunto setout Bank Seal the.....
day of.....month 2014.

Sign and seal of issuing bank.

Payment Mechanism at BHEL, Ranipet

(Effective for all tenders issued by BHEL Ranipet from 01 July 2011 onwards unless otherwise notified of change/s in writing given by an authorized official of BHEL, Ranipet)

BHEL, Ranipet's payment mechanism will be as follows: (All Bidders are requested to read this carefully and take note of it before submitting their offer)

All bills of Suppliers processed for payment by BHEL, Ranipet shall pass through the following milestones:

(1) Receipt of materials at BHEL, Ranipet Stores (evidenced by the Day-Book Number and Date generated at BHEL Stores, Ranipet) or Receipt of materials at Project Site / Destination specified in the Purchase Order (as evidenced by the acknowledgement given by the Consignee).

(2) Acceptance of the supplied materials at BHEL Stores, Ranipet. (Proof of evidence: Stores Receipt voucher - Short form "SRV", raised by BHEL Stores, Ranipet referenced by the SRV Number and Date)

(3) Receipt and Registration of the Bills / Invoices of the Supplier at BHEL, Ranipet Accounts Department. (evidenced by the ABS Number and Date)

(4) Receipt of clarifications, if any that may be required by BHEL, Ranipet Accounts or Purchase Department, from the Supplier. (As evidenced by the IOM Inward Date)

(5) Bill processing and passing.

(6) Payment release.

All these events are transparently available in the SCM web-site of BHEL, Ranipet,

{<http://bapscm.bhelrpt.co.in/purc>} which can be viewed by all registered supplier with a password.

Allowed Time frames:

A] From DB to SRV: 10 Days

B] From SRV to ABS: 15 Days

C] From ABS to Bill Pass: 07 Days (if Stage 4 above is not applicable)

OR

From IOM to Bill Pass: 07 Days (if Stage 4 above is applicable)

D] From Bill Pass to Payment Release: As per payment terms of the Purchase order.

All Suppliers payment/s would be released based on seniority of receipt of the processed bills at the payment section of BHEL, Ranipet Accounts Department.

The seniority would be based on the sequence of milestone events listed above.

In the sequence of the bill processing the preceding mile-stone seniority will be void, if the subsequent event occurs beyond the permitted time frame between two successive events.

Thus for example:

Start seniority would be with the DB date.

If the SRV date is greater than 10 days of the DB date, then the seniority of the DB date would be replaced by the SRV date.

If the ABS date is greater than 15 days of the SRV date, then the seniority would be reckoned by the ABS date.

If the Bill pass date is greater than 07 days of the ABS date then the seniority would be the date of inward receipt of the IOM.

The logics of these sequence is that SRV, ABS, IOM inward entry are dependent entirely on submission of correct documentation by Suppliers, as called for in the Purchase Order. If the documents are correctly submitted each of the milestone listed above will occur within BHEL, Ranipet within the timelines specified above.

Hence, in their own interest all Suppliers are requested to take note of this process and comply with the same.

Caution: Suppliers' payments would get delayed / affected if they fail to adhere to the submission of the documents specified in the Purchase Order / Contract, since the listed milestone events occurrence are contingent upon the availability of the requisite documents.