

(1777)

No 83044/Steel/1777/E2 Des-3

E2 Wks (PPC) Sub Dte  
Engineer-in-Chief's Branch  
Integrated HQ of MoD (Army)  
Kashmir House, Rajaji Marg,  
New Delhi-110 011

83044  
No 80334/steel/1777/E2 Des-3

10 Jul 2012

E-in-C List 'A' & 'B'

**GUIDELINES FOR USE, FORMULATING SPECIFICATIONS AND  
SOURCING OF STEEL FOR MES WORKS**

1. Further to the policy issued vide this HQ Policy letter No 01/2006 under E2 (Des) letter No 83044/Steel/439/E2 Des-3 dated 28 Feb 2006 and 83044/Steel/797/E 2 Des-3 dt 05 Oct 2007.

2. After the issue of above Policy letter, suggestions received from various formations to improve the Guidelines on the subject. Deliberations were held at this HQ and it emerged that there is a need to revise above Policy letter in order to provide wider base for availability to the contractors. Accordingly, the revised Policy letter is hereby issued to include the procurement of TMT Steel, Structural Steel, Fabric reinforcement and GI Sheets. This Policy letter will supersede our Policy letter referred above and is to be read in conjunction with SSR Part-I and relevant BIS Codes. The guidelines for procurement of Steel are only for the purpose of guidance to the tendering authority.

3. Following types of steel are in use in MES works :-

(a) **Reinforcement steel.** High strength deformed steel bars produced by **Thermo Mechanical Treatment Process** (TMT steel bars of grades Fe 500/Fe 500D and Fe 550/Fe 550D) meeting all other requirements of IS : 1786.

(b) **Structural steel.**

(i) Standard Quality – Conforming to IS : 2062.

(ii) Ordinary Quality – Conforming to IS : 1977.

(c) **Galvanised Steel Sheets (Plain & Corrugated).** Conforming to IS : 277

(d) **Fabric Reinforcement for Concrete.** Conforming to IS : 1566

4. All steel in MES works shall be contractor's supply. In exceptional circumstances CEs Command may permit selective issue of steel under Schedule 'B'. Following checks shall be carried out before the steel supplied by the Contractor is accepted and is approved for incorporation in the works.

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5. Materials.

- (a) The Galvanised Iron Sheets & Fabric Reinforcement for Concrete to be supplied by the contractors shall be ISI marked and shall be procured from main manufacturers.
- (b) The Structural steel supplied by the Contractor will be procured from main producers like SAIL, Rashtriya Ispat Nigam Ltd, IISCO, TISCO or Secondary producers who manufacture structural steel out of ISI marked billets and are having BIS Certification of ISI marking on their products and approved by this HQ.
- (c) TMT steel supplied by the contractor will be procured from Main producers of steel as approved by this HQ.

6. Procurement.

- (a) The GE for every lot of steel shall obtain the particulars of the manufacturer/supplier of steel from the contractor separately. The form given at **Appendix 'A'** will be used for this purpose.
- (b) The site staff and GE shall verify the original documents in support of the purchase of steel and will retain certified true copy of the results in GE's office.
- (c) The CEs will ensure that contractors place their demand/requisition of steel with adequate lead-time. The steel will be procured from the storage depots of the main producers and not from their authorized agents/dealers as the authorized agents deal with the steel manufactured by more than one manufacturer.
- (d) However procurement of Reinforced steel, Structural steel, GI sheets, and Reinforcement Fabric may be permitted from authorized dealers of main producers in case of small contracts of value not exceeding Rs 7.5 lakhs.
- (e) **Thermex/Tempcore/EVCON Turbo/SIEMENS's HYQST/TMT.** Process of manufacturing TMT Steel is being installed by some more manufacturers. The cases for their approval will be progressed in due course as and when the installation of **Thermex, Tempcore, EVCON Turbo or SIEMENS's HYQST/TMT** process of manufacturing TMT steel is completely installed.

7. **Testing of steel.** The manufacturer is to carry out inspections and testing of steel in accordance with the relevant BIS provisions. The contractor shall submit the manufacturer's test Certificate in original along with the Test Sheet giving the results of each mechanical test as applicable and the chemical composition of the steel or authenticated copy thereof, fully signed by the manufacturer with each consignment. The Engineer-in-Charge shall record these details in Steel Acceptance Register, as given at Appendix 'A' after due verification and send a certified true copy of test sheet to GE for his records. The GE/CWE shall also organize independent testing of random samples of steel drawn from various lots from National Test House, SEMT Wing CME, Regional Research labs and NABL approved Labs, etc. as per the recommended minimum frequency shown in

Table at Appendix 'B'. Samples from each lot should be tested for quality and elongation. The elongation shall not be less than 18%. Cost of samples, transportation and testing shall be borne by the Contractor. The records of such checks would be maintained in the steel test register.

8. **Documentation.** The contractor shall submit original purchase vouchers from the manufacturer for the total quantity of steel supplied under each consignment to be incorporated in the work. The GE along with the relevant documents before acceptance shall inspect all consignments received at the work site. The original vouchers and the Test Certificates shall be defaced by the Engineer-in-Charge and kept on record in the office of the GE duly authenticated and with cross reference to the control number recorded in the Steel Acceptance Register. The Steel Acceptance Register will be signed by JE, Engineer-in-Charge, GE and contractor. The entire quantity of all steel items shall be suitably recorded in the Measurement Book as not to be abstracted, before incorporation in the work and shall be signed by the Engineer-in-Charge and the Contractor.

9. **Contractor Specifications.** Particular Specifications for supply of steel by the Contractor shall be carefully framed so that no ambiguity is left with regard to its quality, testing and source of procurement. Specifications should cover all relevant requirements specific for the particular work and should not become general specification covering all types of works and grades of steel. For details on delivery, inspection, testing facilities, identification and marking of steel by the manufacturers, reference be made to the relevant BIS Codes.

10. Following points inter-alia shall suitably be covered in the Contract Specifications :-

- (a) **Type of Steel.** Refer Para 3 above.
- (b) **Source of Procurement.** Refer Para 5 above. Contractors can quote for steel produced by any producers (main or approved).
- (c) **Testing of Steel.** Refer Para 7 above.
- (d) Storage, accounting, preservation and maintenance of steel by the Contractor till consumed in the work.
- (e) Schedule of Supply.
- (f) Procedure for making payments for steel including measurements, conversion weight etc.

11. The steel directly procured by the department for issue under schedule 'B' required under exceptional circumstances will also be procured from main producers.

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12. This will supersede all previous instructions issued on the subject.
  13. This has the approval of DGW.

(Rajesh Tyagi)  
Brig  
DDGW (Des)  
For E-in-C

Copy to

Internal

TS to E-in-C, TS to DGW, TS to DG MAP,  
E2W (Army), E2W (Air), E2W (N & DP), E2W (PPC), E-4, E-6. ADG ESP

**E-8** : You are requested to carry out necessary amendment to clause 9.6.3 (iii) & (iv) of contract manual and other clauses as applicable and issue the suitable direction to all lower formations regarding contractual obligations/implications.

**STEEL SUPPLY & ACCEPTANCE REGISTER**

1. CA No & Name of work
2. Contract No
3. Name of Manufacturer's T.C. No
4. Manufacturer
5. Random Test Details (a) Physical test report from ----- vide their letter No  
(Name of NABL approved Lab/Govt Engg College)  
(b) Chemical test report from ----- vide their letter No  
(Name of NABL approved Lab/Govt Engg College)
6. Types of Steel, Dia & Qty (a) type : TMT/CRS (b) Dia- mm (c) Actual Wt -----MT (d) Conversion Wt ----- MT

	Chemical Test							Mechanical Test						
	Carbon %	Sulphur %	Phosphorus %	Sulphur + Phosphorus %	Manganese %	Silicon %	Corrosion Resistant element	Wt per meter	Yield Stress (N/mm <sup>2</sup> )	Tensile Strength (N/mm <sup>2</sup> )	Percent Elongation (Min 18%)	Bend test	Rebend Test	Remarks
As per IS 1786-2008														
As per manufacturer's test certificate														
As per independent test														

Remarks with Signature

Contractor

Junior Engineer

Engineer-in-charge

Accepted/Rejected

Garrison Engineer

Remarks of BOO/Inspecting Officer/CWE

(Refer to para 7 of E-in-C's Branch letter No 83044/Steel/1777/E2 Des-3 dt 10 Jul 2012)

**FREQUENCY FOR NORMAL MASS, TENSILE, BEND  
AND REBEND TEST OF STEEL**

<u>NORMAL SIZE</u>	<u>QUANTITY</u>
<b><u>STEEL FOR CONCRETE</u></b>	
1. Bars size less than 10 mm	1. Sample (3 specimens) for each test for every 25 tonnes or part thereof.
2. Bar size 10 mm to 16 mm	2. Sample (3 specimens) for each test for every 35 tonnes or part thereof.
3. Bar size over 16 mm	3. Sample (3 specimens) for each test for every 45 tonnes or part thereof.
<b><u>Structural Steel</u></b>	
4. Tensile Test	1. Test for every 25 tonnes of steel or part thereof.
5. Bend Test	2. Test for every 25 tonnes of steel or part thereof.
<b><u>Note:-</u></b>	For various tests, acceptance criteria, tolerance etc. refer to Appendix 'A' and relevant BIS code