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Policy Letter No 31/2012
Directorate General Married
Accommodation Project (DG MAP)
Engineer-in-Chief's Branch,
Integrated HQ of MoD (Army)
Kashmir House, Rajaji Marg,
DHQ PO, New Delhi-110011

21379/Spec Ph-III/P&S/31/MAP

01 Aug 2012

(All PMs & DEPMCs)

SPECIFICATIONS: STEEL AND IRON WORK

1. Refer this Headquarters letter No 21378/Vendor PH-III/P&S/03/MAP dt 29 Jun 2012.
2. Given in the succeeding sub paragraphs are the specifications for Steel and Iron work for the future projects of MAP Phase-II & Phase-III:-
 - (a) Following types of steel shall be used in all works: -
 - (i) **Reinforcement steel.** High strength deformed steel bars produced by Thermo Mechanical Treatment Process (TMT) Steel bar of grades Fe 500D meeting all other requirements of IS: 1786:2008.
 - (ii) **Structural Steel.**
 - (i) Standard Quality – Conforming to IS: 2062.
 - (ii) Ordinary Quality – Conforming to IS: 1977.
 - (iii) **Galvanized Steel Sheets.** (Plain & Corrugated) confirming to IS: 277.
 - (iv) **Fabric Reinforcement for Concrete.** Conforming to IS: 1566.
 - (b) **Procurement.** All Steel shall be contractor's supply. Following checks shall be carried out by PM before the steel supplied by the contractor is accepted and is approved for incorporation in the works: -
 - (i) The structural steel supplied by the contractor shall be procured from primary producers who manufacture structural steel out of ISI marked billets and are having BIS certification of ISI marking on their products and are approved by DG MAP. The list of project distributors of Tata Steel Ltd (Brand Name-TATA TISCON) from where the Structural Steel can be procured is given in Appx 'A'. Any changes in the project distributors of Tata Steel Ltd (Brand Name-TATA TISCON) will be intimated from HQ DG MAP.
 - (ii) The steel sections for railing, gates, fencing, guards bars, grills, steel chowkhat, hold fasts etc, which do not constitute structural members, will be procured from primary producers.
 - (iii) The Galvanized Steel Sheets and fabric reinforcement for concrete to be supplied by the contractors shall be ISI marked and shall be procured from main producers.
 - (iv) The list of Tata Steel Ltd (Brand Name-TATA TISCON) Project Distributions in India is enclosed as Appx 'A'.

(c) **TMT Steel.**

(i) TMT steel supplied by the contractor will be procured from main producers (Primary producer) from the vendors given in the Vendors List. The documents in support of the purchase of steel shall be verified by the PM. The form given at Appendix 'C' will be used for this purpose.

(ii) The Contractor shall place their demand /requisition of steel with adequate lead time. The demand shall be placed to the main producers of steel by 20th of each month and in case of supply of steel is not done by 30th of the next month the same shall be brought to the notice of PM and DG MAP. The steel should be purchased 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) **Testing of Steel.** The manufacturer is to carry out inspection and testing of steel in accordance with the relevant BIS provisions. The contractor shall submit the manufacturer's test certificate in original alongwith the test sheet giving the results of each mechanical test as applicable and the chemical composition of the steel or authorized copy thereof, duly signed by the manufacturer with each consignment. The Engineer-in-Charge / PM shall record these details in Steel Acceptance Register, as given at Appendix 'C' after due verification. The PM shall also organize independent testing of random samples of steel drawn from various lots from a National Test House, or a NABL accredited laboratory as per the recommended minimum frequency shown in Table at Appendix 'B'. Independent testing of steel by Project Managers shall be mandatory as covered under Note 2 of Appendix 'B'. Samples from each lot should be tested for quality and elongation. The elongation shall not be less than 16%. In order to undertake Departmental testing, requisite facilities shall be organized by the contractor. Cost of samples, transportation and cost of testing shall be borne by the contractor.

(e) **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. All consignment received at the work site shall be inspected by the Project Manager alongwith the relevant documents before acceptance. The original vouchers and Test Certificates shall be defaced by the Engineer-in-Charge and kept on record in the site office of the PM duly authenticated and with cross reference to the control number record in the Steel Acceptance Register. The Steel Acceptance Register will be signed by RE, PM and contractor. The Station Commander / Accepting Officer may order a Board of Officers for random check of steel and verification of connected document. The entire quantity of all steel items shall also be suitably recorded in the Measurement Book for record purpose as not to be abstracted, before incorporation in the work and shall be signed by the Engineer-in-Charge and the Contractor.

(f) **STEEL IN COILS ETC.** Any bar of any diameter for reinforcement may be procured in round bundles or coils and the cost of straightening the same shall be borne by the contractor. When bars are procured in bundles, the length of each bundle shall be worked out on the basis of unit weight predetermined by the PM by getting suitable length (not less than 3 metres) out of each consignment received, getting it straightened, length measured and weighed in presence of contractor's accredited representative. The said length and the weight shall be recorded from which unit weight (weight per unit length) shall be calculated. The length of bars worked out on the basis of unit weight determined as above shall form the basis for the purpose of calculating quantity of steel used/to be used in work and making payment of materials lying at site. However, if the unit weight works out more than the unit weight given in SSR, then unit weight given in SSR shall be followed for computing weight of steel for the purpose of making payment of steel lying at site. Size, type and grade of steel shall be as shown on drawings.

However, if grade and type of steel are not shown on drawings, the same shall be high strength deformed bars Fe 500D for reinforcement and Fe-410 W / Fe-290 for structural purpose. Various types of steel are given as under:

- (i) Reinforcement Steel
 - aa) High strength deformed bars Grade TMT grade Fe 500D conforming to IS-1786:2008 as specified or indicated on drawings.
 - ab) Mild steel Grade I conforming to IS-432 (Pt I) 1982.
 - ac) Fabric reinforcement of concrete shall be conforming to IS-1566 of 1982.
- (ii) Structural Steel
 - aa) E-250 (Fe-410 W Quality B) for all types of steel structures including those subject to dynamic loading shall be used.
 - ab) E-165 (Fe-290) shall be used for doors, windows guard bars, grills, steel gates, handrails, fencing post etc.
- (iii) Galvanised steel sheets (Plain and corrugated) shall be conforming to IS: 277 of 2003 with medium coating of zinc.

(g) **STORAGE**

Steel of different sizes shall be stacked separately. For each classification of steel, separate areas shall be earmarked. Steel shall be marked with distinct painting marks for each identification. All steel shall be so stored that it is always at least 15cm above the GL. Steel shall be stored in a manner so as to prevent distortion and corrosion. Any section, that has deteriorated and corroded or if considered defective by Project Manager, shall not be used in the work and shall be removed by the contractor without any extra cost. It will be the responsibility of the contractor to make sure that all possible arrangements are made for the safe custody of the steel. In case of any loss of steel only contractor will be responsible and the loss will/shall be made good without any delay or claim whatsoever.

(h) **SCHEDULING AND SUPPLY**

Schedule of supply of steel shall be finalized by contractor with PM and shall be incorporated in CPM chart so that supply of steel is monitored in a way to avoid any delay in completion of the work. The complete requirement of steel of various sizes will be worked out before making any RAR payment and procurement of steel by the contractor will be completed sufficiently in advance of the date of completion.

(JS Sodhi)
Lt Col
SO 1 (P&S)
for DG MAP

Encls: as above
(four pages)

Internal

Team 'A'	-	for necessary action please
Team 'B'	-	-do-
Contract Section Team 'A'	-	-do-
Contract Section Team 'B'	-	-do-
Arch Section	-	-do-

LIST OF TATA TISCON PROJECT DISTRIBUTORS IN INDIA

Ser No		Name	Contact No	E-Mail
1	BMW Enterprises, Patna	Bijay Kishorepuria	9234667111	<bmwenterprises@bmwventures.com>
	Bihar	Nitin Kishorepuria	9234667222	
2	Vikas Steel Traders, Jaipur	Atul Khandelwal	9829055455	dtcsales@rediffmail.com>
	Rajasthan		9828855555	
3	INDU Corporation Pvt. Ltd, Mumbai	Paresh Kapasi	9821155000	Paresh<pkapashi@inducorp.co.in>
	Mumbai			
4	SKM Constr, Mumbai	Kalpesh	9820883446	
5	SHRI RAM SALES, Dhanbad	Nandlal Agarwal	9234623914	Shriramsales.<shriramsales@si fy.com>
	Northern Jharkhan			
6	SAMRAT CORPORATION, Secunderabad	Raja Jain	9849911299	samratcorp@samratgroup.com
	Andra Pradesh	Rohit Jain	9849911288	Raja Jain<rajajain@samatgroup.com >
7	V.N.C Steel Distributors	Basker V N	9843056774	C.Basker<baskerc@vncgroup.c om>
	Tamilnadu			
8	GK STEEL, Bangalore	Gopal Agarwal	9845015997	lp@gksteels.com
	South Karnataka			
9	ABCOM Steels, Indore			
	Western Madhya Pradesh			
10	Krishna Business Associates, Chandigarh & Punjab	Arun Handa	9814116088	MRH Associates<mrhtatatiscon@gm ail.com>
	Chandigarh & Punjab			
11	Vikrant Ispat Udyog, Ghaziabad	Bhupender Bansal	9212287902	Bhupender Bansal<vikrantispat@rediffmail. com>
	Uttaranchal & Western UP			
12	North Eastern Mercantiles Limited	Sarat Jain	9706048008	skjain@smcorp.in,rishi@smgrp. net
	Assam, Manipur, Meghalaya, Arunachal Pradesh, Tripura, Nagaland & Mizoram	Vikas Jain	9706055555	
13	Techno Steel, Nagpur	Atul Khandelwal	9823038047	DHIRAJ KANDELWAL<avinashent@gm ail.com>
	Eastern Maharastra			

LIST OF TATA TISCON PROJECT DISTRIBUTORS IN INDIA

Ser No		Name	Contact No	E-Mail
14	Daga Trading Co. Pvt Ltd	Sanjay Daga	9810026055	Sanjay Daga<skdaga@sify.com>
	Delhi & Haryana			
15	B. ODHAV JI AND COMPANY, Pune	Pinak Oodavji	9822802200	B. Odhavji-Pune<sudighe@bodhavji.com>
	Pune			
16	PASA SALES & MARKETING	Sudhir Agarwal	9234668200	tataiscon@pasahouse.com
	Southern Jharkhand			skagarwal@pasahouse.com
17	SACHI AGENCY, Ahmedabad	Atul Shah	9825016193	Sachiagency.<sachiagency@sify.com>
	Gujarat			
18	Mridul Ispat, Ahmedabad	Raghav Bihani		mridul.ispat@gmail.com
	Gujarat			
19	Gaurishankar Bihani	Tarun Bihani	9831022362	Gaurishankar Bhiani <gsbsales@gmail.com>
	West Bengal			
20	THE INDIAN MINERAL CO.			bimal@indianmineral.com
	North Karnataka, Banglore for Cut and Bend			
21	KPJ Distributors, Kanpur	Ajai Jain	9839035609	Ajai Kumar Jain <kpjkanpurin@hotmail.com>
	Eastern & Central UP			
22	Sagar Business	Anil Kishorepuria	9831272929	anil@sagarbusiness.in
	Odhisia	Sunil Kishorepuria	9748752452	sunil@sagarbusiness.in

FREQUENCY FOR NORMAL MASS, TENSILE BEND AND REBEND TESTS OF STEEL

NORMAL SIZE	QUANTITY
<u>STEEL FOR CONCRETE</u>	
1 Bars size less than 10 mm	1 sample (3 Specimens) for each test for every 25 tonnes or part thereof
2 Bars size 10 mm to 16 mm	1 sample (3 Specimens) for each test for every 35 tonnes or part thereof
3 Bars size over 16 mm	1 sample (3 Specimens) for each test for every 45 tonnes or part thereof
<u>STRUCTURAL STEEL</u>	
4 Tensile Test	1 test for every 25 tonnes of steel or part thereof
5 Bend Test	1 test for every 10 tonnes of steel or part thereof

Note :-

1. For various tests, acceptance criteria, tolerance etc refer to IS :1786:2008.
2. Testing as per above frequency is mandatory before payment is released to the contractor or steel is incorporated in the work. However, tests shall not be insisted upon for the steel required for guard bars, hold fasts, grills and such allied items. Any items of steel not meeting the requirements shall be rejected and the particular consignment removed from the site by the contractor at his own cost. The contractor shall have no claim on this account. Cost of test and test samples as per above frequency shall be borne by the contractor irrespective of test result.
3. The PM may also increase frequency and number of samples/tests for his satisfaction and, cost of samples, transportation and other overheads shall be borne by the contractor irrespective of test result.