

**NTPC LTD**  
**Vendor Development Cell, CPG-1, Raipur**

**Sub: Qualifying requirement for Centralized Enlistment of Vendors for Seamless SS Boiler Tubes (without shot peened).**

A)	<b>MEG Details</b>		
	1.0	MEG No.	48MEG-05
	2.0	MEG Description	Enlistment of Vendors for Seamless SS Boiler Tubes (without shot peened)
	3.0	Responsibility Centre	CPG-1/ VDC
B)	<p><b>Technical Criteria of QR:</b></p> <p><b><u>Option-I</u></b></p> <p>The bidder should be a Boiler Manufacturer and should have supplied at least one (1) number of Boiler to any Thermal power plant of unit size 200 MW or higher, which should have been in successful operation for a period not less than one (1) year reckoned as on the date of submission of application.</p> <p style="text-align: center;">OR</p> <p><b><u>Option-II</u></b></p> <p>The bidder should have manufactured &amp; supplied IBR compliant Cold Drawn Seamless Tubes of Stainless-Steel to any thermal power plant of unit size 200 MW or higher during the last five (5) years reckoned as on the date of submission of application.</p>		
C)	<p><b>Documents to be submitted as proof of meeting the stipulated Qualifying Requirements:</b></p> <p><b><u>For Option-I:</u></b></p> <ol style="list-style-type: none"> <li>1. Order Copy evidencing Manufacturer &amp; Supplier of Boiler of unit size 200 MW or higher to at least one Thermal Power Plant + execution proof.</li> <li>2. Evidence regarding satisfactory operation of the Boilers / Unit from the Owner.</li> </ol> <p><b><u>For Option-II:</u></b></p> <ol style="list-style-type: none"> <li>1. Latest annual report or NSIC / SSI / MSME registration certificate / BIS license / ISO certificate / Certificate of registration from the concerned excise department / IBR certificate/MDCC or any other statutory document as a proof of being manufacturer as per QR.</li> <li>2. The PO (issued within last five years reckoned as on the date of submission of application.) in support of award and completion certificate/copies of invoice to establish successful execution as per QR.</li> <li>3. IBR certificate.</li> </ol>		

D)	<p><b>Other documents to be submitted:</b></p> <p>In addition to the documents required in support of meeting technical requirements as stated above, following documents are required to be submitted by the applicant for enlistment:</p> <ol style="list-style-type: none"> <li>1. Three POs of highest executed values of similar work during last five years from the date of application (PO date should not be more than 5 years old on the date of the application) along with copy of invoice / completion certificate from the concerned buyer/s in support of successful execution of supply against POs.</li> <li>2. Audited balance sheet including profit and loss statement for the previous three completed financial years reckoned from the date of application. In case the audited results for the preceding financial year is not available, certification of financial statements from a practicing chartered accountant may be submitted. In case, Applicant is not able to submit the certificate from practicing chartered Accountant certifying its financial parameters for the preceding financial year, the audited results of three consecutive financial years preceding the last financial year shall be considered for evaluating the financial parameters. Further a Certificate would be required from the CEO/CFO as per the format enclosed in the application format documents stating that the financial results of the company are under audit as on the date of Application and the Certificate from the practicing Chartered Accountant certifying the financial parameters is not available.</li> <li>3. Any other documents in addition to the above which the applicant wants to submit.</li> </ol>	
E	<b>Quality Plan:</b> Applicable, as per attachment	
	Note-1	Similar works means: Supply of Seamless SS Boiler Tubes to any Thermal Power plant.
	Note-2	The Executed value means Basic value of quantity of similar works executed/supplied against the reference PO (also applicable to partly executed POs as on date of application. Where PO value is composite (i.e. including taxes, etc) the applicant shall give item wise breakup of Composite PO value mentioning Basic value, Taxes, etc.

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A)	<b>MEG Details</b>		
	1.0	MEG NO.	48MEG-05
	2.0	MEG DESCRIPTION	Enlistment of Vendors for <b>Seamless SS Boiler Tubes (without shot peened)</b> .
	3.0	RESPONSIBILITY CENTRE	CPG-1/VDC
B)	<p><b>Technical specifications of Seamless Stainless-steel Boiler Tubes (without shot peened)</b> shall be as follows:</p> <p>1) Material Code: -</p> <p>2) Description of the Item: - Cold drawn seamless SS boiler tubes</p> <p>3) Size (OD X THK) in MM: -----MM X -----MM (tolerance as per IBR/ASME)</p> <p>4) Material: - SA213 TP347H / SA213 TP304H / SA-213UNSS30432 / SUPER 304H. (without shot peened)</p> <p>(Material composition to comply as per latest ASME code)</p> <p>5) Designed Pressure: -----KG/CM2 &amp; Designed Temperature: ----- Degree Centigrade</p> <p>6) Required Length: 4 to 7 meters.</p> <p>7) Certification Required -</p> <p>i) IBR certificate in Form III-B to be submitted by vendor.</p> <p>ii) All Test Certificates</p> <p><b>8) Test Required: - As per QP</b></p> <p>9) Identification Marking: -Each tube to be marked by punching / stencilling as follows:  NTPC P.O No. / Size (OD X THK) /Material / Heat No. / Vendor Name / NTPC Material Code  Punching / Stencilling at both ends and at equal intervals of 1 meter.</p> <p>10) End Capping: - All tubes to be cleaned and tube ends to be provided with push fit metallic / Plastic end caps.</p> <p>11) Colour Coding on each tube at every meter.</p> <p>12) Marking: - NTPC Inspection stamps on each tube and each seal to be encircled with white paint for quick identification at site.</p> <p>13) End condition of Tube: - Both end edge (V) preparation must be done as per IBR.</p> <p>14) Tubes to be suitably packed so that no damage during transportation occurs. However, if any damage is observed after receipt of tubes at NTPC Store, the same must be replaced by the vendor within 15 days of intimation without any additional cost to NTPC.</p> <p><b>15) Other technical details of tube as per specific site requirement shall be given in Tender documents.</b></p>		

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## INDICATIVE QUALITY PLAN

Name & Address of Manufacturer :		Item: Seamless Boiler Tubes					QP No	Project :						
							Rev No.	Package :						
							Date	Contract No :						
							Page	Main-Supplier :						
S.No	Component & Operation	Characteristics	classification	Type of Check	Quantum of Check		Reference Document	Acceptance Norm	Record			Agency		Remark
					M	C/N			Format	D	M	N		
1.0	Raw Material													
1.1		Chemical Composition	Major	Chemical Analysis	1 sample / heat	---	PO spec/approved TS	PO spec/approved TS	TC	Y	P	V		
1.2		Mechanical Properties	Major	Mechanical Tests	1 sample / heat	---	PO specification	PO specification	TC	Y	P	V		
2.0	In Process													
2.1	Tube Manufacturing	Dimension	Major	Measurement	100%	-	PO spec/approved TS	PO spec/approved TS	IR	Y	P	V		
22	Heat Treatment ,if applicable	Time Temp chart/HT Report	Major	Review	1 sample / HT Batch		PO specification	PO specification	HT Chart/Report	Y	P	V		
2.3	Non Destructive Testing	Internal Discontinuities	Major	Ultrasonic Testing/ECT	100%		ASTM E213/E309	ASTM E213/E309	IR	Y	P	V	ECT for thickness<3.6MM and UT for thickness>=3.6MM as per EN: 10246:7 or equivalent with longitudinal calibration notch of depth 5% of wall thickness (0.3 mm min. and 1.5mm max.) shall be adhered to	
3.0	Final Inspection													
3.1	Dimension	Dimension (Thickness, Dia & Size)	Critical	Measurement	100%	10%	PO specification	PO specification	IR	Y	P	W		
3.2	Material Chemistry	Grade Verification with PMI (XRF Analyser)	Critical	Chemical Test	100%	10%	PO specification	PO specification	IR	Y	P	W	To be checked with XRF Alloy Analyser (PMI machine) in presence of NTPC	

															Representative
3.3	Mechanical Properties(Tensile, Yield, Elongation ,Hardness, Flattening& Flaring)	Mechanical Properties	Critical	Mechanical Test	1 sample/Lot	1 sample/Lot	PO specification	PO specification	TC	Y	P	W			One Lot is equal to offered quantity
3.4	Non Destructive Testing	Internal Discontinuities	Critical	Ultrasonic Testing/ECT	5%	5%	ASTM E213/E309	ASTM E213/E309	IR	Y	P	W			ECT for thickness<3.6MM and UT for thickness>=3.6MM as per EN: 10246:7 or equivalent with longitudinal calibration notch of depth 5% of wall thickness (0.3 mm min. and 1.5mm max.) shall be adhered to
3.5	Hydraulic Test if envisaged by PO	Leak proofness/ Soundness ( If specified as per PO)	Critical	visual	100%	10%	PO specification	No leak	IR	Y	P	W			
3.6	Marking identification, colour coding, protective coating	Protection/Identification	Major	Visual	100%	Random	PO specification	PO specification	IR	Y	P	W			

**Remarks :** Material grade may also be cross-checked on receipt at site with PMI test.

D-Documents. Records identified with 'Y' mark shall be included by supplier in QA Documentation. M-Manufacturer / Sub-supplier, N-NTPC, P-Perform, V-Verify, W-Witness , ECT-Eddy current Testing ,PMI-Primary Material Identification

		CHP - Customer Hold Point, CHPs are to be witnessed and cleared by NTPC authorised representative, IR - Inspection report, TC-Test Certificate	<b>For NTPC Use</b>	NTPC Doc No.		
Manufacturer/ Sub-supplier	Main Supplier					
Signature & Seal				Reviewed by	Approved by	Approval Seal

A) Reference and Acceptance norms shall be derived from following in the same sequence-

- 1) NTPC Approved drawing / data sheet    2) NTPC tech specs    3) Purchase Order    4) Relevant national standard    5) Relevant International standard    6) Manufacturer's standard  
 7) Good Engineering practices M

B ) Type test certificate / reports 'shall be reviewed during final inspection by NTPC' OR 'shall be furnished with material by the vendor' as envisaged by PO specifications.