NTPC Limited CC-OS, EOC Noida

Subject: Qualifying requirement & other details for vendor enlistment – supply of Boiler Straight Tubes (Alloy Steel other than SS).

A)	Details of MEG (Materia	Enlistment Group)
	MEG No	48MEG-02
	MEG Description	Boiler Straight Tubes (Alloy Steel other than SS)
	Responsibility Centre	NTPC ER-II Head Quarters, Bhubaneshwar

B) **Technical Criteria of QR:**

Option-I:

a) The applicant should be a manufacturer of Boilers (Steam Generator) and should have supplied Boiler (Steam Generator) to any 2 (Two) different Thermal power Plants each of Unit Capacity of 200 MW or, higher capacity and which are in commercial operation for at least two years prior to the date of application and are in satisfactory operation.

AND

b) Should have either In-house Tube manufacturing & testing facilities for Alloy steel tubes or, should have Sourcing tie-up agreement with well-known tube maker approved by Central Boiler Board, India for manufacturing of Cold Drawn Seamless Tubes of Alloy Steel material.

Option-II

a) The applicant should be an approved well known tube maker of Central Boiler Board, India for manufacturing of Cold Drawn Seamless Tubes of Alloy Steel material

AND

b) The applicant should have executed orders for supply of at least 2000 meters of Cold Drawn Seamless Straight Alloy steel Tubes in one order during last 5 years to any Thermal Power plant having unit capacity of 200 MW or, higher capacity or to any Boiler manufacturer manufacturing and supplying boilers for a power plant of 200 MW or higher unit capacity prior to the date of application for enlistment

AND

- c) The applicant must have the following in-house manufacturing & testing facilities:
- I. Manufacturing Facilities:
 - Draw bench
 - ii. Heat Treatment facilities
 - iii. Tube Straightening machine
- II. Testing Facilities:
 - Continuous feed ultrasonic flaw detector

- ii. Spectrometer for material composition testing
- iii. Portable XRF Alloy analyzer (PMI Machine)
- iv. Universal testing Machine for tensile & elongation test
- v. Rockwell and Vickers's Hardness Tester
- vi. Ultrasonic Flaw detector
- vii. Eddy Current Test facility for flaw detection
- viii. Hydraulic test arrangement for carrying out Hydraulic Test upto 450 KSC
- ix. Flattening Test
- x. Flaring Test

C) Documents to be submitted as proof of meeting the stipulated Qualifying Requirements:

For Option-I:

- i. Order Copy evidencing Manufacture & Supply of Boilers of 200 MW or higher capacity to two different Thermal Power Plants.
- ii. Evidence regarding Date of commissioning of the Boilers / Power Plant
- iii. Evidence regarding satisfactory operation of the Boilers / Unit from the Owner
- iv. Evidence of the details of in-house manufacturing and testing facilities for Cold Drawn Seamless Alloy steel Boiler Tubes as mentioned in Option-II c or, Evidence of the details of manufacturing and testing facilities for Cold Drawn Seamless Alloy steel Boiler Tubes as mentioned in Option-II c from the vendor with whom Tie-up agreement for supply is there. In case of multiple suppliers with whom agreement is there, credentials of all to be submitted.

For Option-II:

- i. Copy of Valid certificate (as on the date of application) from Central Boiler Board as well-known tube maker for Alloy Steel seamless Tubes
- ii. Copies of Purchase Orders for supply of Cold Drawn Seamless Straight Alloy Steel Tubes to any Thermal Power plant having unit capacity of 200 MW or, higher capacity during last 5 years prior to the date of application

or

Copies of Purchase Orders for supply of Cold Drawn Seamless Straight Alloy Steel Tubes to any Boiler manufacturer manufacturing and supplying boilers for a power plant of 200 MW or, higher unit capacity during last 5 years prior to the date of application

- iii. Proof of execution of the Purchase order as mentioned in (ii) above like excise invoice, GR details and invoice copy.
- iv. Evidence of the details of manufacturing facilities for Cold Drawn Seamless Alloy steel Boiler Tubes as mentioned above.
- v. Evidence of the details of testing facilities for Cold Drawn Seamless Alloy steel Boiler Tubes as mentioned above.

Applicant should mention in his letter pad under which Option they are applying for enlistment.

To be declared as qualified, an applicant has to meet all the requirements either of option-1 or those of option-2.

Other documents to be submitted: D) 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: 1. Acceptance of specification format (see page 4 of this document)or, any comment thereof 2. Three POs of the highest executed values of **similar** work during previous five years from the date of application. Copy of Invoice(s) / Completion certificate from the concerned buyer/s in support of successful execution of supply against the POs to be submitted. 3. 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 account may be submitted. In case, Applicant is not able to submit the certificate from practicing chartered Account certifying its financial parameters, 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 4. Any other documents in addition to the above which the applicant wants to submit. Definition of Similar work (Refer to Point 2 of Row D above):- Supply of Boiler Straight E) Note-1 **Tubes for Thermal Power plants** The executed value means Basic value of quantity of similar works / orders executed / Note-2

etc.

supplied against the reference PO (also applicable to partly executed PO, as on the date of application). Where PO value is composite (i.e. including taxes etc.), the applicant should submit item wise break up of composite PO value mentioning basic PO Value, Tax details

A) Details of MEG	AOMEO OO
MEG No	48MEG-02
MEG Description	Boiler Straight Tubes (Alloy Steel other than SS)
Responsibility Centre	
B) Technical Specificati The Intended Technical spec	cifications of Seamless Alloy Steel Boiler Tubes shall be as follows:
	I SEAMLESS ALLOY STEEL BOILER TUBES AS PER SA213 GR : MM X MM (tolerance as per IBR/ASME)
(Alloy Tube material compo	sition to comply as per latest ASME code)
5) Required Length :- 6) Certification Required -i	4-7 metre) Form III-B to be submitted by vendor ii) All Test Certificates
7) Test Required :-	
a) Dimension :- Yes	
	Spectrometer and PMI machine as per NTPC QP.
c) Hardness : -Yes, as pe	
d) Tensile Test & Elongation	: - Yes, as per SA 213
e) Ultrasonic Test :	
f) Hydraulic Test :	
g) Flattening Test :	- Yes, as per SA 213
h) Flaring Test :	- Yes, as per SA 213
	be carried out to comply properties as per SA 213 and IBR be submitted to NTPC Inspector for review.
9) Identification Marking:-Ea	ch tube to be marked by stenciling as follows:
NTPC P.O No. / Size (OD >	(THK) /Material / Heat No. / Vendor Name / NTPC Material Code
Stenciling at both ends and a	at equal intervals of 1 metre.
10) End Caps: - All tubes to caps.	be cleaned and tube ends to be provided with push fit metallic end
11) Colour Coding on each	tube at every meter.

12) Marking:- NTPC Inspection stamps on each tube and each seal to be encircled with white paint for quick identification at site.

13) Suitable bundle of tubes to be tied together with metallic strips and covered with HDPE

covers. The tube bundle to be placed in wooden crates.

Reference QP.

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STANDARD QUALITY PLAN OP NO : 0000 000 000 S.	S INCO DOOR DOOR ON DO
CONFORMING TO CODE. ASTM A 213	REV. NO: 00 DATE: 07/0.
APPLICATION: STEAM GENERATOR	PAGE 1 OF 1
	VALID UPTO: 06/03/2017

REVIEWED BY:	RAJIEV GARG	KK (TAM OPASSINA)
O.: 0006-999-QOM- S - 076	NO: 00 DATE: 07/03/2014	: 06/03/2017

NHHS SHARAD	
RAJIEV GARG	
KK CHAINSTONE COLOR	F 8

APPROVED BY:	See All		Y LGGWESSHANKAR	
REVIEWED BY:	RAJIEV GARG	(* Wh - 000)	K.K.CPATH OPADIANA	

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	Mechanical Properties	Major	Mech. Analysis	I / Heat	I / Heat	Relevant Material Code as per Approved Drg. / Datasheet / Specification		10 Mil	72	G.,	>	>
	UT/Eddy Current Testing	å T	ğ	100%	%001	EN 10246:7 1996 or equivalent with 5% notch (Min-0.3mm, Max-1.5mm)/ Approved Drg. / Datasheet	quivalent with 5% e-1.5mm// Approved	1	7	g.	>	V Refer Note
	Heat Treatment	Major	HT Chart Review 100%	100%	%00I	Relevant Material Code as per Approved Drg. / Datasheet / Specification	Approved	日基	7	۵.	>	A
	Hardness	Major	Hardness	100 %	%001	Relevant Material Code as per Approved Drg. / Datasheet / Specification		2.1	7	2	>	V Refer Note 2
Inspection at Store of MAIN CONTRACTOR/NTPC	CONTRACTORNITPE			***************************************	anne es						1	
Boller Tubes	Review of all tests reports	Magor	Verification of correlated Mill TC		%00%	Relevant Material Code as per Approved Drg. / Datasheet / Specification		2	>		>	
	PMI	Major	Spectral Check	#	10% Random	Relevant Material Code as per Approved Drg. / Datasheet / Specification	as per Approved fication	DP T	>		۵,	W for Alloy Steel only
	Visual, Dimensions, Surface Finish	N G	Visual and Measurement		10% Random	Relevant Material Code as per Approved Drg. / Datasheet / Specification	as per Approved fication	2	>		<u></u>	*

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Note 1: Eddy Current Testing shall be done for tube thickness<3.6 mm. For higher thickness, Ultrasonic Testing shall be conducted.

Note 2: Hardness test is compulsory for material grade above T22.

Note 3. Correlated Mill TC shall be provided by the manufacturer.

Note 4. This SQP is applicable for the material procured from the Boller Tube supplier as per attached list to this SQP.

Note 5: All relevant IBR certificates shall be submitted to NTPC.

** M: MANUFACTURER / SUB-SUPPLIER C: MAIN SUPPLIER, N: NTPC P: PERFORM W: WITNESS AND V: VERIFICATION.

** AS APPROPRIATE, CHP: NTPC SHALL IDENTIFY IN COLUMN "N" AS "W.

FORMAT NO.: QS-01-QAL-P-10/F3-R1