

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

**Sub: Qualifying requirement for Centralized Enlistment of Vendors for Economizer Coil.**

A)	<b>MEG Details</b>		
	1.0	MEG No.	47MEG-01
	2.0	MEG Description	Enlistment of Vendors for Economizer coil.
	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 Economizer coil 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: The bidder should have supplied of Economizer coil/ Reheater coil / Superheater Coil/Water Wall Panels to any thermal power plant of unit size 200 MW or higher.	
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.	47MEG-01
	2.0	MEG DESCRIPTION	Enlistment of Vendors for <b>Economizer coil.</b>
	3.0	RESPONSIBILITY CENTRE	CPG-1/VDC
B)	<p><b><u>Technical Specification of Economizer Coil</u></b></p> <p>1. Economizer Coil for Boiler as Per Drawing No: -</p> <p>2. The specification of coils are as below: -</p> <p>a) Tube Size: OD X Thickness</p> <p>b) Tube Material: <b>ASTM SA 210 Gr A1/C</b></p> <p>c) Design Pressure: ----KSC</p> <p>d) Design Temperature: ----- Deg. C</p> <p>e) Hydro Test Pressure: ----- KSC</p> <p>3. All dimensions given in the above enclosed drawings are for tender purpose only. Prospective vendor will make his own drawings for manufacture and obtain approval for the same.</p> <p>4. All the coils are to be manufactured as per drawing submitted by party after due approval of NTPC and IBR authorities of the state.</p> <p>5. Boiler cold drawn seamless tubes only should be used for fabrication of coils. The tubes are to be sourced from "<b>Well known tube maker</b>" approved by Central Boiler board only.</p> <p><b>6.Test Required: - As per QP</b></p> <p>7. Manufacture and inspection shall be per IBR and NTPC approved quality plan.</p> <p>8. All the coils are to be coated by anti-corrosive primer. Heat number, Batch no, manufacturer name should be marked on each coil / tube.</p> <p>9. Edge preparation to be done on all coil ends &amp; capping of each tube of the coils ends.</p> <p>10. Adequately strong fixtures and packing to be provided to enable lifting and handling of the coil – pairs without disturbing alignment.</p> <p>11) 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>12) Other technical details of Economizer coil as per specific site requirement shall be given in Tender documents.</b></p>		

**INDICATIVE QUALITY PLAN**

Name & Address of Manufacturer :		Item: Coils and Panels					QP No.						
							Rev No.						
							Date						
							Page	1 of 1					
S.No	Component & Operation	Characteristics	classification	Type of Check	Quantum of Check		Reference Document	Acceptance Norm	Format of record	Agency		Remarks	
					M	N				M	N		
1 Raw Material													
1.1	Seamless Tubes/Bends	Mechanical Properties	Major	Lab Test	one per Heat		NTPC Technical specification/Approved Drg	NTPC Technical Specification/ Approved Drg	TC	P	V		
		Chemical Properties	Major	Lab Test	one per Heat		NTPC Technical specification/Approved Drg	NTPC Technical Specification/ Approved Drg	TC	P	V		
		Dimension	Major	Measure	100%		NTPC Technical specification/Approved Drg	NTPC Technical Specification/ Approved Drg	IR	P	V		
		Heat Treatment	Major	Review of HT chart/Report	100%		NTPC Technical specification/Approved Drg	NTPC Technical Specification/ Approved Drg	HT report	P	V		
		Hardness	Major	Test	one per Heat		NTPC Technical specification/Approved Drg/ASTM A 450	NTPC Technical Specification/ Approved Drg	IR	P	V		
		UT/ECT/Hydro	Major	Test	100%		NTPC Technical specification/Approved Drg/relevant standard	NTPC Technical Specification/ Approved Drg/relevant std	TC	P	V	UT as per ASTM E213 and ECT as per E309	
1.2	Fittings/Attachments/connectors	Chemical properties& Mechanical properties	Major	Lab Test	one per Heat		NTPC Technical specification/Approved Drg	NTPC Technical specification/Approved Drg	TC	P	V		
		Dimension	Major	Measure	100%		NTPC Technical specification/Approved Drg	NTPC Technical specification/Approved Drg	IR	P	V		
2.0 In Process Control													
2.1	Bends first off inspection	Ovality,flow area,thinning, surface quality	Major	Measure	100%		NTPC Technical specification/Approved Drg	NTPC Technical specification/Approved Drg	IR	P	V		
		Other bends	Major	Measure	10%		NTPC Technical specification/Approved Drg	NTPC Technical specification/Approved Drg	IR	P	V		
2.3	Welder, welding operator	performance	Major	Review of Documents	100%		ASME Sec IX	ASME Sec IX	WPQ	P	V		
2.4	Welding Procedure	Welding parameters	Major	Review of Documents	100%		ASME Sec IX	ASME Sec IX	WPS/PQR	P	V		
2.5	Welding inspection	Size, shape, completeness	Major	Review of Documents	100%		Drawing/Mfr standard	Drawing/Mfr standard	IR	P	V		
2.5	Butt Joint on tubes	Weld soundness	Critical	UT/RT/RTR/PAUT	100%	10%	ASME Sec V	ASME Sec V	NDT report	P	V	Witness of 10% UT,Review of RT films,image review for RTR,scanned data review for PAUT	
2.6	Post weld Heat treatment(as applicable)	Time & Temperature control	Major	Review of HT chart/report	100%	100%	IBR/Drawing/specification	IBR/Drawing/specification	HT report/chart	P	V		
2.7	Attachment welds	Weld soundness	Critical	DPT/MPI	10%	10%	ASME Sec V	ASME Sec V	IR	P	W		
2.8	steel ball & sponge test	Free passage	Critical	visual	100%	10%	Approved drawing/Technical specification	Approved drawing/Technical specification	IR	P	W		
2.9	Coil alignment & Dimension	alignment	Critical	Measurement	100%	10%	Approved drawing/Technical specification	Approved drawing/Technical specification	IR	P	W		
3 Final Inspection													
3.1	Shielding (if applicable like SS Shield)	Grade verification	Critical	PMI	10%	10%	Approved drawing/Technical specification	Approved drawing/Technical specification	IR	P	W		
3.2	Hydro Test	strength & Leak Tightness	Critical	visual	100%	10%	NTPC Technical specification/Approved Drg/IBR	No leak	IR	P	W		
Manufacturer/ Sub-supplier	Main Supplier	M – Manufacturer/supplier,N-NTPC, critical checks are to be witnessed and cleared by NTPC authorised representative, IR - Inspection report, TC-Test Certificate, MTC-Material Test Certificate					<b>For NTPC Use</b>						
Signature & Seal									Approved by	Approval Seal			

- Note 1- All relevant IBR certificate to be submitted to NTPC  
 Note-2- All welding shall be performed as per approved WPS. Qualification tests for procedure & welder will be witnessed and approved by NTPC/LLOYDS/BV/TUV.  
 Note3- All tubes/coils to be preserved as per NTPC PO Specification.  
 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