EOI for ERW Casing Pipes (Size 9-5/8" & 13-3/8", Grades L-80 & P-110)

1 BACKGROUND

Oil and Natural Gas Corporation (ONGC) is India's Flagship E&P Company a global leader in the hydrocarbon sector. To support our expanding drilling and exploration activities across diverse terrains, ONGC intends to procure high-quality Electric Resistance Welded (ERW) Casing Pipes from reputed indigenous manufacturers.

2 OBJECTIVE OF THE EOI

(a) The primary objective of this EOI is to identify and engage technically competent and experienced vendors capable of supplying ERW Casing Pipes that adhere to ONGC's technical specifications and requirements. We are looking for partners who can demonstrate:

- Manufacturing and supplying Experience: Capability in producing and supplying 13-3/8" and 9-5/8" (L-80 & P-110) Grade ERW casings.
- Reliability: A track record of supplying orders of similar or equivalent grade ERW casing.
- Logistical Reach: The ability to deliver to various ONGC operational assets across India.

(b) Vendors who do not have manufacturing capability of ERW casings as on date but wish to develop the same for future supplies may also express their intent, through this EOI , to develop the product through ONGC Development Policy. Vendors may visit https://tenders.ongc.co.in/ for further details on development policy of ONGC and submit their proposal accordingly.

3 REQUIREMENT

The tentative annual requirement (size and grade wise) of abovementioned casings in ONGC is tabulated below:

S. No.	Casing Size (Inch)	Grade	PPF	Tentative annual requirement (meters)	Tentative annual requirement (MT)
1	13-3/8”	P-110	68	109026	11032
2	13-3/8’	L-80	68	219629	22223
3	9-5/8”	P-110	47	79403	5553
4	9-5/8”	L-80	47	100214	7009
			TOTAL	**508272 m**	**45817 MT**

4 TECHNICAL REQUIREMENT

The pipe rating considered for the different intermediate casing being used in ONGC with their burst, collapse and axial rating are as follows for L-80 and P-110 (as per API-5CT):

Table:1

Nominal Diameter	Grade	Body	Weight (ppf)	Drift ID (in)	Pressure Rating	Pressure Rating	Body Yield Strength (lbf)	Linear Capacity (bbl/ft)	Closed End Displacement (bbl/ft)
OD		ID (in)			Burst (psi)	Collapse (psi)			
9.625	P 110	8.681	47	8.625	9440	5296.42	1492959	0.0732	0.09
9.625	L80	8.681	47	8.625	6865.45	4754.04	1085789	0.0732	0.09

13.375	P110	12.415	68	12.259	6908.41	2335.39	2138972	0.1497	0.1738
13.375	L80	12.415	68	12.259	5024.3	2263.56	1555616	0.1497	0.1738

It is to be noted that above tabulated pipe ratings are compared with the anticipated drilling and production loads (multiplied by safety margins, burst – 1.1, Collapse - 1.125, Axial – 1.6 and Triaxial – 1.25) for designing development and exploratory wells.

Metallurgy and the testing guidelines for the pipe is specified in the API-5CT should be ensured by the supplier.

The detailed technical specification and predetermined QAP are placed at Annexure-A and Annexure-B respectively.

5 INFORMATION SOUGHT FROM INTERESTED PARTIES

- Interested vendors are invited to submit their proposal in PDF format within 21 calendar days from the date of EOI publication in newspapers/ ONGC website. Proposals must include:
- Executive Summary
- Detailed Technical Proposal and Methodology
- Relevant experience – Past supply of similar material.
- Case studies, performance reports from past supplies.
- Certifications- API 5CT, API 5B etc.
- Client references

- Details of company profile and relevant experience
- Limitations or boundary conditions of the technology, if any.
- Information may be submitted in the following Table.

S. No.	Name of the Company	Supply Record of ERW Casing (9-5/8" & 13-3/8" Size, P-110 & L-80 Grade ERW Casing) Size & Grade wise				EOI Technical Specification Comment		EOI QAP	
		Size, Grade, PPF	Name of the Company	Supplied Qty. (Meters)	Date of Supply	agreed	Suggestions with technical justification, if not fully agreed	agreed	Suggestions with technical justification, if not fully agreed

6 SUBMISSION GUIDELINES

Contact Information: Interested parties/bidders are invited to submit their EOI, including any details/queries/clarifications required on the objectives and scope of the work in the subject EOI to:

Head MIND, ONGC
Deendayal Urja Bhawan,
5, Nelson Mandela Marg, Vasant Kunj
New delhi-110070,
Tel- (011) - 26752010 / 26752035
Email: sanghi_sanjiv@ongc.co.in / mishra_sb@ongc.co.in

7 CONFIDENTIALITY

All information received by ONGC as a part of this EOI, will be ONGC's property and will be kept strictly confidential and utilized for its internal purpose only.

8 DISCLAIMER

This EOI is intended for market exploration and does not constitute a commitment to award any contract. ONGC reserves the right to modify or cancel this EOI process at any stage without assigning any reason and without incurring any liability.

****

Annexure-A

S. No	**Technical Specification for ERW Regular Casing**
1.0	**TECHNICAL SPECIFICATION** New and Unused **ERW** Casing Pipes threaded and coupled with metallic thread protectors or elastomer-cum-metallic thread protectors on both ends. Casing Pipes should be according to API 5 CT latest edition in Range-III (up to maximum length of 45 feet), unless otherwise stated. Each pipe shall have API Monogram and coated on outside with rust preventive coating to withstand marine transportation. Mill's inspection and test certificates shall be provided at the time of shipment / dispatch along with the inspection certificate from third party inspection agency or any agency nominated by ONGC at ONGC's option. **High Frequency Welding process should be followed.**
2.0	NDT, Hydrotest and drift test should be carried out as per API-5CT (latest edition) for 100% quantity and frequency of other tests should be carried out as per API-5CT (latest edition where ever applicable). Hydrostatic pressure test duration shall be minimum 8 seconds.

3.0	NDT, Hydrotest and all tests of mechanical properties as per API - 5CT (latest edition) should be witnessed by TPI agency and other tests should be witnessed / reviewed.
4.0	For 13 3/8" casing, misalignment test should be carried out for couplings as per API-5B (latest edition) and should be witnessed by TPI agency.
5.0	Manufacturer should comply with impact value as per SR-16 of API 5CT (latest edition).
6.0	Pipe threads, gauging practice and thread inspection shall confirm to the requirements of API Spec 5B (latest edition). Pipe ends shall not be rounded out hammering to secure conformance with threading requirements.
7.0	Thread finish shall be as per API 5B Specifications (latest edition).
8.0	Casing pipe should have the continuous threads up to the vanish point (continuous threads in both perfect and imperfect thread area).
9.0	Buttress thread taper shall also be checked in the Imperfect Thread area as defined in API Specification 5B latest edition.
10.0	Bidder to ensure the tolerances of outside diameters required to cut the BTC threads as per Buttress casing thread dimensions as per API Specification 5B latest edition.
11.0	Manufacturer should use the Run-out gauge to check the run-out thread root and ensure that the external thread is sufficiently long and is a true run out thread as per API Specification 5B latest edition.

<table>
<tr><td>12.0</td><td>All test and inspection certificates including non-destructive test as per API recommendations (wherever applicable) will be required to be attached with the documents relating to each shipment/dispatch along with pipe tally in excel sheet. Mill test certificate shall also include Table C-3 of API 5CT specifications (latest edition).</td></tr>
<tr><td>13.0</td><td>i. Inclusion test to be carried out as per ASTM E45, Method “A” (Worst field severity level).
ii. Inclusion test shall be carried out for each heat and worst field severity levels are to be strictly maintained as per the limits as tabulated below.
<table>
<tr><th>Sl. No.</th><th>Inclusion types</th><th>Thin (Maximum)</th><th>Heavy (Maximum)</th></tr>
<tr><td>1.</td><td>Type A Sulphide</td><td>2.0</td><td>1.5</td></tr>
<tr><td>2.</td><td>Type B Alumina</td><td>2.0</td><td>1.5</td></tr>
<tr><td>3.</td><td>Type C Silicate</td><td>2.0</td><td>1.5</td></tr>
<tr><td>4.</td><td>Type D Globular Oxide</td><td>2.0</td><td>1.5</td></tr>
</table></td></tr>
<tr><td>14.0</td><td>The bidder should submit detailed inspection report (covering the various processes mentioned in the approved QAP) of casing pipes carried out by third party inspection agency or any agency nominated by ONGC at ONGC’s option.</td></tr>
<tr><td>15.0</td><td>The pipes and couplings should carry API Monogram and necessary test certificates from the test laboratory of manufacturing mill/coupling manufacturers should be supplied.</td></tr>
<tr><td>16.0</td><td>Delivery tolerance allowed is plus (+) nil, minus (-) 25 Mtrs or 0.5% whichever is more</td></tr>
</table>

	for each item consignee wise and lot-wise.
17.0	Casing Pipes according to API 5CT (latest edition) in Range-II (Minimum 30 feet) up to maximum 20% of ordered quantity is acceptable from Indigenous manufacturers only. However, casing pipes in Range-II shall not be acceptable for DS Mumbai.
18.0	The offer must conform to the specifications and qty. of the tender and should be supported with detailed technical literature.

Annexure-B

Quality Assurance Plan (QAP) for Inspection by ONGC / ONGC Nominated Third Party Inspection Agency (TPIA)

For ERW L-80/P-110 Casing pipe (BTC) (13-3/8" & 9-5/8"):

The specific scope of Inspection shall include the following but not limited to;

1. Vendor to Perform inspection/ quality surveillance at manufacturer's/ sub-vendor's works.
2. Vendor shall arrange for Inspection Agency to undertake inspection and witness such test (s) which are required to ensure that the procured Item (s) conform to specifications and relevant code (s)/ standard(s) as mentioned herein.
3. Inspection Agency shall stamp the items inspected for material identification, wherever required.
4. Inspection Agency shall issue final acceptance certificate along with release note on conformance to the technical specifications and other PO conditions.
5. The Inspection Agency shall deploy sufficient number of inspection engineers/ inspectors and vendor shall facilitate the same.
6. The Inspection Agency shall use calibrated measuring instruments and equipment at the manufacturer's/ sub vendor's works at the time of inspection. Vendor to facilitate and ensure availability of all such instruments.
7. The Inspection Agency shall verify:
   a) Material Test Certificate and traceability records to ensure the use of correct material.
   b) Manufacture's/ sub vendor's internal QC records
   c) Compliance with process parameters as per the relevant standards mentioned in the tender Technical specification and as mentioned herein.
   d) Qualification record of equipment, process and personnel for special process like Hydro testing, Welding, NDE, painting etc.
   e) Various type of Test certificate or any special certificate called for in the PO / Standards.
   f) The inspection agency shall endorse all verified certificates / documents with comments (Witnessed or Verified) as per applicable document. Vendor to facilitate and ensure availability of all such documents, resources required by the Inspection Agency for above mentioned verifications.

8. Inspection shall be treated as complete only when final inspection report '*for acceptance'* is issued after completing all stages of inspection.
9. The accepted items shall be identified with seal, wherever applicable and reference of seal shall be given in the Inspection Report (IR) by the Inspection Agency.
10. After completion of inspection, the inspection agency shall issue report to the bidder/ manufacturer on the format provided along with records of inspection duly signed within 48 hours.
11. Inspection Report (IR) shall essentially contain the following information:
    a) Purchase Order No.
    b) Inspection Report No.
    c) Name of bidder and/ or manufacturer
    d) Date(s) of inspection
    e) Date of completion of inspection
    f) Description of items.
    g) Purchase Order Sl. No. of items
    h) Reference of Quality Plan and other applicable documents referred for inspection
    i) Quantity offered, accepted, reworked, rejected, cumulative quantity accepted and consumed in testing, if any
    j) Inspection / Sampling plan followed
    k) Inspection checks / test carried out
    l) Deviation / Concession, if any
    m) Any other information

It shall be ensured that all records of verification and inspection are enclosed with IR. This QAP for inspection is only indicative and not exhaustive. Criteria for Inspection shall be conformance with specifications and test reports.

S.No.	Proposed Activities of Inspection	Proposed Inspection Procedure	Scope of Work for TPIA
A)	**General**		
A.1	API Specification: Registration No., date & its validity (including that of the sub-vendor, if any)	API Specification – API 5CT, API- 5B (as applicable)	R
A.2	Certificate of Authority to use the official API Monogram: License No., date & its validity	As applicable as per ONGC technical specification	R
A.3	API Specification Q1P: Registration No., date & its validity (including that of the sub-vendor, if any)	As per API 5CT and ONGC Tender Technical specification	R
A.4	Calibration and verification frequency of measuring instrument / equipment	API Specification – API 5CT, API- 5B (as applicable)	R
A.5	Minimum facility requirements for various categories of manufacturer	API Specification – API 5CT, API- 5B (as applicable)	R

B)	**Incoming Material**		
B.1	Testing of Chemical Composition of each heat (Chemical composition is to be recorded in the relevant mill certificate)	As per API 5CT and ONGC Tender Technical specification (Specimen to be tested at NABL Accredited Labs)	W
B.2	Inclusion tests for each heat as per ASTM E45, Method "A" (Worst field severity level). (Inclusion type & limits refer ONGC specification)	As per ONGC Tender Technical specification (Specimen to be tested at NABL Accredited Labs)	W
C)	**In-Process Control**		
C.1	Heat Treatment (Indicate No. of lots under each heat) ***Full body heat treatment as well as seam annealing for L-80, P-110 as per API 5CT*** Mill test certificate shall also include Table C.3 of API 5CT specifications	As per API 5CT (latest edition) and ONGC Tender Technical specification.	R
C.2	Tensile Tests	As per API 5CT (latest edition) and ONGC Tender Technical specification (Specimen to be tested at NABL Accredited Labs)	W
C.3	Impact Test	As per API 5CT (latest edition) and ONGC Tender Technical specification (Specimen to be tested at NABL Accredited Labs)	W
C.4	Non-Destructive Testing (100% as per spec)	As per API 5CT (latest edition) and ONGC Tender Technical specification	WR (MIN. 10%) and R (100%)
C.5	Threading of pipe: Inspection of threading and gauging as per API Spec 5B	As per API 5B (latest edition) and ONGC Tender Technical specification	WR
C.6	Threading of coupling: Inspection of threading and gauging as per API Spec 5B	As per API 5B (latest edition) and ONGC Tender	WR

		Technical specification	
C.7	Thread finish (Cl. No. 4.7 of API Specification – API 5B) of Pipe and coupling	As per API 5B (latest edition) and ONGC Tender Technical specification	WR
C.8	Hydrostatic Tests (100% as per spec). Test conditions shall be held for not less than 8 seconds at full pressure	As per API 5CT (latest edition) and ONGC Tender Technical specification	WR (MIN. 10%) and R (100%)
C.9	**Non-destructive Examination of the Weld Seam of Welded Pipe**	As per API 5CT (latest edition) and ONGC Tender Technical specification	WR
C.10	**Flattening Test**	As per API-5CT	WR
C.11	**Non-destructive Examination of threaded area**	As per API 5CT	WR
C.12	Any other activity required as per API 5CT	As per API 5CT	
D)	**Final Inspection**		
D.1	Diameter Measurement	As per API 5CT (latest edition) and ONGC Tender Technical specification	WR
D.2	Wall Thickness Measurement	As per API 5CT (latest edition) and ONGC Tender Technical specification	WR
D.3	Drift Test (100% as per spec)	As per API 5CT (latest edition) and ONGC Tender Technical specification	WR (MIN. 10%) and R (100%)
D.4	Length Measurement	As per API 5CT (latest edition) and ONGC Tender Technical specification	WR
D.5	Mass (weight) determination	As per API 5CT (latest edition) and ONGC Tender Technical specification	WR
D.6	Straightness evaluation	As per API 5CT (latest edition) and ONGC Tender Technical specification	WR
D.7	Visual Inspection	As per API 5CT (latest edition) and ONGC Tender Technical specification	WR

D.8	Marking	As per API 5CT (latest edition) and ONGC Tender Technical specification	WR
D.9	Coating & Protection including Thread Protector	As per API 5CT (latest edition) and ONGC Tender Technical specification	WR
D.10	Packing	As per API 5CT (latest edition) and ONGC Tender Technical specification	WR
D.11	Any other activity, as required		WR
E)	**Documentation**		R