

Technical Specifications

SL. No	Description and Technical Specification of the item	QTY	UNIT	Delivery
1	<p>SMAW ELECTRODE DIA 4.0 MM for T92/P92</p> <p>SMAW ELECTRODE FOR SA213T92 AND SA335P92 WELDING SIZE DIAMETER 4 MM AND LENGTH 350 TO 450 MM as per Technical Annexure 1.</p> <p>Creep data is required along with supply.</p>	26,300.00	KG	Staggered delivery

Delivery schedule:

Lot 1: 6000 KG – Within 60 Days from date of GEM Contract.
 Lot 2: 8000 KG - Within 120 Days from date of GEM Contract.
 Lot 3: 12300 KG – Within 180 Days from date of GEM Contract.

Technical Annexure 1

ALLOY 92 ELECTRODE FOR SHIELDED METAL ARC WELDING E9015-B92.

Mention the diameter and length of electrode, brand name of electrode in the technical offer.

1- CHEMICAL COMPOSITION

The Chemical composition of as deposited weld metal chemistry shall conform to the requirements of ASME SFA-5.5 and the additional restrictions as denoted below.

C(0.08-0.13%),
Mn(0.35-1.20%),
P(0.01% maximum),
S(0.01% maximum),
Si(0.15-0.30%),
Cr(8.5-10.0%),
Mo(0.30-0.60%),
W(1.50-2.00%),
Cu(0.25% maximum),
Ni(0.60% maximum),
V(0.15-0.30%),
Nb(0.02-0.05%),
N(0.04-0.07%),
Al(0.015% maximum),
B(0.002-0.006%),
Ti(0.01% maximum),
Zr(0.01% maximum).

Sn+Sb+As to be equal or less than 250 PPM and Single Element(Sn/Sb/As) value to be equal or less than 120 ppm.

Ni+Mn to be equal or less than 1.2%

When Nitrogen (N) is supplied below 0.04 the following equation shall be satisfied: $N \text{ to be equal or more than } (0.52 \cdot Al + 0.032)$

The test certificate shall contain the following results after actual tests done. Actual Chemical Composition of "As Deposited Weld Metal" meeting the chemical composition as above.

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Technical Annexure 1

2- Mechanical Test

Following Guaranteed Mechanical Properties for Weld Metal after PWHT 760°C ±10°C (degree Celsius) for 2 hours.

- a) Tensile Strength: 620MPa (minimum),
- b) Yield Strength: 530 MPa (minimum),
- c) % Elongation: 17%,
- d) Impact energy at +20 degree Celsius: 40J (minimum).
- e) Actual Hardness of weld metal (202 HV to 320 HV).

3- COVERING:

The core wire and covering shall be free of defects and shall ensure uniform deposition of weld metal. The flux coating shall be uniform and concentric around the core wire such that the performance of welding is not affected and no tapered burning of electrode is permitted. Covering shall not exhibit any cracking during welding at maximum current recommended by manufacturer. The electrode shall not become red hot upon continuous welding through the length of electrode.

4- CORE WIRE, COVERING, EXPOSED CORE, IDENTIFICATION.

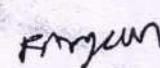
Electrodes shall meet the requirements of clause 3.2 ,3.3 and 3.4 of SFA-5.02.

5- PACKAGING:

- 5.1 A standard quantity of electrodes with the net weight of each package not exceeding 5Kg shall be packed in hermetically sealed containers or moisture proof cardboard with polythene encapsulated packets.
- 5.2 Electrode packets shall be shipped in wooden crates lined with waterproof material. Net weight of each crate shall not exceed 1000Kg.
- 5.3 Marking of packages shall be as per clause 3.6 of SFA-5.02
- 5.4 The package shall be marked clearly with brand name, classifications, lot number/batch number, Manufacturer Name, Size and Quantity of electrode with net weight, health and safety warnings


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Technical Annexure 1

6- Diffusible hydrogen

The diffusible hydrogen test shall be performed as prescribed by SFA-5.5/SFA-5.5M. The electrode shall be certified as meeting the requirement for the H4 diffusible hydrogen designator.

7- Testing and Certification:

7.1 Batch or Lot classification shall be Class C5 of SFA-5.01 Filler metal procurement guidelines of ASME Sec.II. Part C

7.2 The level of testing shall be Schedule K of SFA 5.01 Filler metal procurement guidelines of ASME Sec.II. Part -C.

7.3 Original certified material test report in English signed by the manufacturer giving details of test done in compliance with additional specific requirement as per Technical Annexure 1 and ASME Sec.II.C, SFA-5.5, E9015-B92 shall also be complied.

7.4 The testing authority(manufacturer) shall certify that supplies made against the Batch confirms to the requirements of the Latest Edition and Addenda (Applicable on the date of issue of purchase order) of ASME Sec II C, SFA-5.5, E9015-B92.

7.5 "A copy of valid IBR Approval Certificate for the brand being supplied to be submitted along with supply. It is mandatory that, Manufacturer should possess a valid IBR certificate (for the brand being supplied) during the manufacturing period".

OR

"Original test certificates in English countersigned by Inspecting Authority (latest) approved by IBR giving details of the tests done in compliance with additional specific requirement as per Technical Annexure 1 and ASME Sec.II.C, SFA-5.5, E9015-B92 shall be sent".

Special Note: Creep Stress Rupture Testing Details is required along with supply.

Creep (Creep Stress Rupture Testing) data shall be provided for the following condition

Testing Hours (Minimum) = 1000 Hours. ✓

Testing Temperature (°C) = 665 °C ✓

Minimum Rupture Stress (MPa) = 93 MPa ✓

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FOR INFORMATION PLEASE!!

PR 135912247

Ref: Technical Annexure 1 (for SHIELDED METAL ARC WELDING E9015-B92)

Special Note: Creep Stress Rupture Testing Details is required along with supply.

Creep (Creep Stress Rupture Testing) data shall be provided for the following condition

Testing Hours (Minimum) = 1000 Hours. ✓

Testing Temperature (°C) = 665 °C ✓

Minimum Rupture Stress (MPa) = 93 MPa ✓

ACCEPTANCE CRITERIA FOR CREEP STRESS RUPTURE TEST:

Sample tested shall not rupture and shall meet the creep requirements at 1000 hours of testing at indicated temperatures and stress.

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Sl. No.	Pre –Qualification Criteria - PR 136759683	Bidder remark
1	If Bidder is a manufacturer, Confirm “Yes or, No” in bidder remark.	
2	<p>Bidder shall be a manufacturer of the Quoted items or an authorized dealer of the same.</p> <p>If the offer is quoted by agent, letter of authorization or agreement duly signed by the manufacturer is required to consider the offer.</p> <p>Tender Enquiry details must available on Letter of authorization or agreement to consider the offer.</p>	
3	Quoted Welding Consumables Brand Name/Product Name	
4	Quoted Product Catalogue	
5	Manufacturing Plant Address / Mill Address	

Seal and Sign of Authorized Person

Sl. No.	Pre –Qualification Criteria – PR 136759683	Bidder remark
6	Manufacturer/Bidder shall submit manufacturing process flow chart (Raw material to finished product) along with offer for Quoted Item (SMAW Electrode)	
7	Manufacturer/Bidder shall submit a valid ISO 9001 certificate or Quality management system certificate or Written down procedure for ISO 9001 or A valid ISO 45001 certificate or Written down procedure for Quality inspection of SMAW Electrode.	
8	Manufacturing Plant capacity for SMAW Process.	
9	Any deviation from the Specification are to be mentioned in the “Bidder remark Space”. If There is no deviation vendor should indicate “No Deviation”.	
10	Quoted items - Diameter details	
11	Quoted items – Length details.	
12	Seal and sign on technical specification for acceptance.	
13	Valid IBR certificate status to be provided for Quoted material. Note- Creep data status for E9015-B92 SMAW Electrode (Creep data is required along with supply).	

Seal and Sign of Authorized Person

Sl. No.	Pre –Qualification Criteria – PR 136759683	Bidder remark
14	<p>Manufacturer/Bidder shall have successful experience for supplying of ER 70S-A1 or, ER 80S-B2 or, ER 80S-G or, ER 90S-B3 or, ER 90S-G or GMAW Spool or GTAW Spool or GTAW Rod or SMAW Electrode to any govt. Organizations/ PSUs/ Public Ltd./ Company/Reputed Industries etc.</p> <p>Purchase orders copies/ related documents to be submitted along with offer to consider the offer.</p> <p>Note: Successful experience means – supplied and accepted.</p>	

FOR INFORMATION PLEASE!!

PR _____ **136759683**

Ref: Technical Annexure 1 (for SHIELDED METAL ARC WELDING E9015-B92)

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Creep (Creep Stress Rupture Testing) data shall be provided for the following condition

Testing Hours (Minimum) = 1000 Hours. ✓

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ACCEPTANCE CRITERIA FOR CREEP STRESS RUPTURE TEST:

Sample tested shall not rupture and shall meet the creep requirements at 1000 hours of testing at indicated temperatures and stress.

Seal and Sign of Authorized Person

Annexure – A- Additional Terms and Conditions for GeM Enquiry

The terms and condition mentioned in this document are applicable in addition to the GeM General Terms and Conditions. Bidders shall furnish pointwise confirmation/details.

<u>To be filled by bidder</u>		
Description of the Equipment:		
GeM Tender No. & Date		
Name of the firm (Bidder)		:
Address		:
<u>Contact person 1</u> Name: Designation: Office Phone: Mobile: e-mail:		<u>Contact person 2</u> Name: Designation: Office Phone: Mobile: e-mail:
Offer/Quotation reference with date		:
Sl	Terms and conditions	Vendor's confirmation
1.	Inspection by BHEL/as per Technical specification(if any).	
2.	Payment terms: <ol style="list-style-type: none"> 1. Payment terms for Non MSME Suppliers: 90 days from the Vehicle entry date (Against submission of GST invoice, GeM invoice, LR copy, Last Movement e-Way Bill, UD). 2. Payment terms for Micro & Small Enterprises (MSEs): 45 days from the Vehicle entry date (Against submission of GST invoice, GeM invoice, LR copy, Last Movement e-Way Bill, UD). The supplier should upload UDYAM Registration Certificate in proof of MSE. 3. Payment terms for Medium Enterprises: 60 days from the Vehicle entry date (Against submission of GST invoice, GeM invoice, LR copy, Last Movement e-Way Bill, UD). The supplier should upload UDYAM Registration Certificate in proof of Medium Enterprises. Note: Deviation in above payment terms is not acceptable.	
3.	Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GST registration number which should clearly mentioned in the offer. Indicate the GST registration number. If any specific exemption is available, a declaration with due supporting documents need to be furnished for considering the offer.	GST Registration No. _____
4.	EMD / Performance Security:	Not Applicable
5.	Kindly Indicate the HSN Code for all items	HSN CODE : ____
6.	Rate quoted in GeM portal should be on FOR destination basis inclusive of all taxes, P&F, freight etc. Transit Insurance is under Supplier scope. Please indicate how much GST percentage is included in quoted price.	GST in %: ____

Vendor's Seal & Signature

/ On Bidder's office letter pad /

Self-Declaration

Enquiry No.	
Enquiry Date	

In line with Government public procurement order Number P-45021/2/2017-B.E-II dated 15.06.2017, and further modified order dt. 28.05.2018, 29.05.2019 & order 04.06.2020 issued by DPIIT

I / We hereby declare that I / We are a "Local Supplier" meeting the requirement of minimum local content (..... %) defined in the above government notification for the goods against above mentioned enquiry Number.

Details of location at which local value addition will be made is as follows:

Door No.	
Street / Address 1	
Street / Address 2	
District	
State	
Country	
PIN Code	

We also understand that the false declarations will be in breach of the code of Integrity under rule 175(1)(i)(h) of the General financial rules for which a bidder or its successors can be debarred for up to two years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.

For Company Name:

Seal:

Signature:

Date:

Place:

Note:

" Local Content "means the amount of value added in India which shall ,unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured(excluding net domestic indirect taxes) minus the value of imported content in the item(including all customs duties) as a proportion of the total value, in percent. "Local Supplier "means a supplier or service provider whose product or service offered for procurement meets the minimum local content.

The above declaration shall be submitted mandatorily along with the offer in company letter head with seal & signature.

(Please fill all the yellow color field)