

## Technical Specifications

SL. No	Description and Technical Specification of the item	QTY	UNIT	Delivery
1	E 347-16 SMAW ELECTRODE DIA 4.00 MM  Diameter- 4.0 MM Length - 350 MM. ASME.SEC.II.C.SFA-5.4, E347-16 SMAW ELECTRODE as per WCPI-221/10. The chemical composition of the undiluted weld metal shall confirm to ASME SECII.C SFA-5.4, E347-16 (except carbon: minimum 0.04% carbon content and maximum as per ASME SEC IIC)	75,000.00	NO	30 DAYS



BHARAT HEAVY ELECTRICALS LIMITED  
TRICHY-620 014  
WELDING TECHNOLOGY CENTRE

WCPI - 221  
Revision No.: 10  
Date: 13.09.2023

**WELDING CONSUMABLE PURCHASE INSTRUCTION (WCPI) FOR ASME SEC IIC, SFA-5.4 E347-16**

**1.0 SCOPE:**

1.1 The electrodes shall comply with requirements specified in the latest edition (applicable on the date of issue of purchase order) of ASME Sec IIC.SFA-5.4, E347-16. All tests, acceptance criteria shall be in accordance with this. Additional requirements specified in this document shall also be complied.

1.2 The electrodes shall be supplied in quantities as specified in the purchase order.

**2.0 CHEMICAL COMPOSITION:**

The chemical composition of the undiluted weld metal shall conform to ASME SECII.C SFA-5.4, E347-16 (except carbon: minimum 0.04% carbon content and maximum as per ASME SEC IIC) for each size of electrode supplied and the ferrite content of welds made using this electrode shall be controlled to be from 6FN to 10FN for each size of electrode supplied. (Ferrite content should be measured in accordance with procedure recommended in the latest edition of ASME Sec II C, SFA 5.4).

**3.0 MECHANICAL PROPERTIES:**

The mechanical properties of the weld metal deposited using this electrode shall meet the requirements of ASME SECII.C SFA-5.4, E347-16 for each size of electrode supplied for each size of electrode supplied.

**4.0 RADIOGRAPHIC SOUNDNESS:**

The radiographic test shall meet the requirements of ASME SECII.C SFA-5.4, E347-16 for each size of electrode supplied.

**5.0 FILLET WELD TEST:**

Fillet weld test done using this electrode shall meet the requirements specified in ASME SEC II C SFA 5.4, E347-16 for each size of electrode supplied. The electrodes shall exhibit smooth running characteristics with soft and stable arc with ease of striking. The spatter level shall be negligible. Weld bead appearance shall be smooth with fine ripples and slag shall be self-peeling.

**6.0 SIZE:**

The electrodes shall be supplied in diameters and lengths as specified in the purchase order. The tolerance on diameter and length shall meet the requirements of SFA-5.4 for each size of electrode supplied.

**7.0 CORE WIRE, COVERING, EXPOSED CORE, IDENTIFICATION, METHOD OF MANUFACTURE:**

The electrodes shall meet the requirements of clause 3.2, 3.3, 3.4 of SFA-5.02 and clause 14 of SFA 5.4 for each size of electrode supplied.

Prepared By:

Aditya Kumar,DM/WTC

Reviewed By:

R Arivazhagan, SM/WTC

Approved By :

T Balamurugan Murali , SDGM/WTC,OP&C



Welding Consumable Purchase Instruction for  
ASME SEC.II.C, SFA-5.4 E347-16

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**8.0 PACKAGING:**

8.1 Electrodes packed in standard quantity shall be wrapped tightly in a corrugated paper with moisture proof packing in polythene bags and sealed. These shall be further packed either in hermetically sealed containers or in cardboard packets and then packed with polythene bags and sealed. The number of electrodes per packet shall be such that the net weight of each packet does not exceed 5Kg. Packets shall be further packed in cardboard cartons each weighing not more than 25kg. The cartons shall be packed in waterproof boxes with crates so as to ensure no damage to electrodes during shipment and normal storage conditions.

8.2 Weight of each crate shall not exceed 1000kg.

8.3 Markings of packages shall be as per clause 3.6 of SFA-5.02.

**9.0 TESTING AND CERTIFICATION:**

9.1 Each consignment of electrodes supplied shall preferably be from one batch only.

9.2 Batch or lot classification shall be Class C1 as per SFA-5.01 filler metal procurement guidelines of ASME Sec IIC. (Latest edition)

9.3 The level of testing shall be Schedule K as per SFA-5.01 filler metal procurement guidelines of ASME Sec IIC. (Latest edition)

9.4 Three copies of original certified material test report in English signed by the manufacturer giving details of tests done in compliance with this WCPI and ASME Sec IIC, SFA-5.4, E347-16 shall be sent.

9.5 The manufacturer shall certify that supplies made against the batch conforms to the requirements of the latest edition (applicable on the date of issue of purchase order) of ASME Sec IIC SFA-5.4, E347-16.

9.6 A copy of valid IBR approval certificate for the brand being supplied shall be sent along with every consignment. It is mandatory that, Manufacturer should possess a valid IBR certificate (for the brand being supplied) during the manufacturing period.

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BHEL, Trichy - 620014.

Sl. No.	Pre –Qualification Criteria ; <del>XXXXXXXXXX</del> PR 136157475	Bidder remark
1	If Bidder is a manufacturer, Confirm "Yes or, No" in bidder remark.	
2	Bidder shall be a manufacturer of the Quoted items or an authorized dealer of the same. If the offer is quoted by agent, letter of authorization or agreement duly signed by the manufacturer is required to consider the offer. Tender Enquiry details must available on Letter of authorization or agreement to consider the offer.	
3	Quoted Welding Consumables Brand Name/Product Name	
4	Quoted Product Catalogue	
5	Manufacturing Plant Address / Mill Address	
6	Manufacturer/Bidder shall submit manufacturing process flow chart (Raw material to finished product) along with offer for Quoted Item.	
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.	
8	Manufacturing Plant capacity for SMAW electrode.	

Seal and Sign of Authorized Person

*adish 2*  
Deputy Manager  
Welding Technology Centre  
RHEL, Trichy - 621 014.

Sl. No.	Pre-Qualification Criteria ; <del>PR 136157475</del> PR 136157475	Bidder remark
9	Any deviation from the Specification (WCPI-221/10) are to be mentioned in the "Bidder remark Space". If There is no deviation vendor should indicate "No Deviation".	
10	Seal and sign on WCPI-221/10 for confirmation.	
11	Diameter details and Length details	
12	IBR certificate status to be provided	
13	Manufacturer Name (For quoted item)	
14	<p>Manufacturer shall have successful experience for supplying of E347-16 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>	
15	<p>Self-declaration from Manufacturer Supplier (As per PQC 13) is required against PQC Sl. No. 14 for "successfully supplied and accepted by customer".</p> <p>Self-declaration shall have following details.</p> <ol style="list-style-type: none"> <li>1- Supplied quantity.</li> <li>2- PO /related document Reference</li> <li>3- Brand Name.</li> </ol>	

Seal and Sign of Authorized Person

*Aditya Kumar*  
**ADITYA KUMAR**  
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 Welding Technology Centre  
 BHEL, Trishy - 520014.

**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.

<i>To be filled by bidder</i>		
<b>Description of the Equipment:</b>		
<b>GeM Tender No. &amp; Date</b>		
<b>Name of the firm (Bidder)</b>		:
<b>Address</b>		:
<b><u>Contact person 1</u></b>		<b><u>Contact person 2</u></b>
<b>Name:</b>		<b>Name:</b>
<b>Designation:</b>		<b>Designation:</b>
<b>Office Phone:</b>		<b>Office Phone:</b>
<b>Mobile:</b>		<b>Mobile:</b>
<b>e-mail:</b>		<b>e-mail:</b>
<b>Offer/Quotation reference with date</b>		:
SI	Terms and conditions	Vendor's confirmation
1.	Inspection by BHEL/as per Technical specification(if any).	
2.	<p><b>Payment terms:</b></p> <ol style="list-style-type: none"> <li>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).</li> <li>2. Payment terms for Micro &amp; 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.</li> <li>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.</li> </ol> <p><b>Note:</b> Deviation in above payment terms is not acceptable.</p>	
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.	<b>EMD / Performance Security:</b>	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)