## Technical Specifications

| SL. No | Description and Technical Specification of the item | QTY | UNIT | Delivery |
|---|---|---|---|---|
| 1 | E 7018-1 SMAW ELECTRODE DIA 2.5 MM<br><br>ASME.SEC.II.C, SFA-5.1 E7018-1 SMAW ELECTRODE AS PER WCPI-207/09,<br><br>Diameter - 2.50 mm X 350 mm LONG. | 50,000.00 | NO | Staggered delivery |
| 2 | E 7018-1 SMAW ELECTRODE DIA 3.15/3.2 MM<br><br>ASME.SEC.II.C, SFA-5.1 E7018-1 SMAW ELECTRODE AS PER WCPI-207/09,<br><br>Diameter -3.15/3.2 mm X 450 mm LONG. | 4,00,000.00 | NO | |
| 3 | E 7018-1 SMAW ELECTRODE DIA 4.00 MM<br><br>ASME.SEC.II.C, SFA-5.1 E7018-1 SMAW ELECTRODE AS PER WCPI-207/09,<br><br>Diameter-4.0 mm X 450 mm LONG. | 4,00,000.00 | NO | |
| 4 | E 7018-1 SMAW ELECTRODE DIA 5.00 MM<br><br>ASME.SEC.II.C, SFA-5.1 E7018-1 SMAW ELECTRODE AS PER WCPI-207/09,<br><br>Diameter 5.00 mm X 450 mm LONG. | 3,00,000.00 | NO | |
| 5 | E 8018-B2 SMAW DIA 2.50MM<br><br>ASME.SEC.II.C, SFA-5.5 E8018-B2 SMAW ELECTRODE AS PER WCPI-212/08,<br><br>Diameter-2.5 mm X 350 mm LONG. | 1,50,000.00 | NO | |
| 6 | E 8018-B2 SMAW DIA 3.15MM/3.2<br><br>ASME.SEC.II.C, SFA-5.5 E8018-B2 SMAW ELECTRODE AS PER WCPI-212/08,<br><br>Diameter-3.15/3.2 mm X 450 mm LONG. | 5,00,000.00 | NO | |

| | | | | |
|---|---|---|---|---|
| 7 | E 8018-B2 SMAW DIA 4.00MM<br><br>ASME.SEC.II.C, SFA-5.5 E8018-B2 SMAW ELECTRODE AS PER WCPI-212/08,<br><br>Diameter-4.0 mm X 450 mm LONG | 5,00,000.00 | NO | |
| 8 | E 9018-B3 SMAW DIA 2.50MM<br><br>ASME SEC.II.C.SFA-5.5 E9018-B3 SMAW ELECTRODE AS PER WCPI-214/08,<br><br>Diameter-2.50 mm X 350 mm LONG | 20,000.00 | NO | |
| 9 | E 9018-B3 SMAW DIA 4.00MM<br><br>ASME SEC.II.C.SFA-5.5 E9018-B3 SMAW ELECTRODE AS PER WCPI-214/08,<br><br>Diameter : 4.00 mm, Length : 450mm. | 2,50,000.00 | NO | |
| 10 | E 309-16 SMAW S.S. ELECTRODE DIA 2.5 MM<br><br>ASME SEC.II.C, SFA 5.4 CLASS E 309-16 AS PER WCPI-218/09,<br><br>Diameter - 2.5 mm x 350 mm LONG. | 25,000.00 | NO | Staggered delivery |
| 11 | E 309-16 SMAW S.S. ELECTRODE DIA 3.15/3.2<br><br>ASME SEC.II.C, SFA 5.4 CLASS E 309-16 AS PER WCPI-218/09,<br><br>Diameter-3.15/3.2 mm x 350 mm LONG | 1,00,000.00 | NO | |
| 12 | E 309-16 SMAW S.S. ELECTRODE DIA 4.00MM<br><br>ASME SEC.II.C, SFA 5.4 CLASS E 309-16 AS PER WCPI-218/09,<br><br>Diameter-4.00 mm x 350 mm LONG. | 50,000.00 | NO | |
| 13 | E 310-16 SMAW ELECTRODE DIA 4.00MM<br><br>ASME SEC.II.C SFA 5.4, CLASS E310-16 SMAW ELECTRODE AS PER THE WCPI-219/07,<br><br>Diameter 4.0 mm x 350 mm LONG. | 10,000.00 | NO | |

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|---|---|---|---|---|
| 14 | E 316L-16 SMAW ELECTRODE DIA 3.15/3.2MM<br><br>ASME.SEC.II.C.SFA-5.4, E316L-16 SMAW ELECTRODE TO WCPI-243/10,<br><br>Diameter 3.15/3.2 MM X 350 MM LONG. | 50,000.00 | NO | |
| 15 | SMAW ELECTRODE DIA.4.00 MM -E 6013(GP)<br><br>ASME SEC.II.C, SFA-5.1 E6013 SMAW ELECTRODE AS PER WCPI-201/06,<br><br>DIAMETER -4.0mm, LENGTH - 450mm . | 150,000.00 | NO | |

| Delivery schedule | | | |
|---|---|---|---|
| Sl. No. | Description | Quantity | Delivery period from date of purchase order |
| 1 | E 7018-1 SMAW ELECTRODE DIA 2.5 MM | 50,000 | 25000 numbers - 90 days.<br>25000 numbers - 180 days. |
| 2 | E 7018-1 SMAW ELECTRODE DIA 3.15/3.2 MM | 4,00,000 | 1,00,000 numbers - 60 days.<br>1,50,000 numbers - 120 days.<br>1,50,000 numbers - 180 days |
| 3 | E 7018-1 SMAW ELECTRODE DIA 4.00 MM | 4,00,000 | 1,00,000 numbers - 60 days.<br>1,50,000 numbers - 120 days.<br>1,50,000 numbers - 180 days |
| 4 | E 7018-1 SMAW ELECTRODE DIA 5.00 MM | 3,00,000 | 1,00,000 numbers - 60 days.<br>1,00,000 numbers - 120 days.<br>1,00,000 numbers - 180 days |
| 5 | E 8018-B2 SMAW DIA2.50MM | 1,50,000 | 70,000 numbers - 60 days.<br>80,000 numbers - 180 days |
| 6 | E 8018-B2 SMAW DIA3.15MM/3.2 | 5,00,000 | 2,00,000 numbers - 60 days.<br>1,00,000 numbers - 120 days.<br>2,00,000 numbers - 180 days. |
| 7 | E 8018-B2 SMAW DIA4.00MM | 5,00,000 | 2,00,000 numbers - 60 days.<br>1,00,000 numbers - 120 days.<br>2,00,000 numbers - 180 days. |
| 8 | E 9018-B3 SMAW DIA2.50MM | 20,000 | 20,000 numbers - 60 days. |
| 9 | E 9018-B3 SMAW DIA4.00MM | 2,50,000 | 75,000 numbers - 60 days.<br>75,000 numbers - 120 days.<br>1,00,000 numbers - 180 days. |
| 10 | E 309-16 SMAW S.S.ELECTRODE DIA 2.5 MM | 25,000 | 15,000 numbers - 60 days<br>10,000 number - 120 days |
| 11 | E 309-16 SMAW S.S.ELECTRODE DIA 3.15/3.2 | 1,00,000 | 50,000 numbers - 60 days<br>50,000 number - 120 days |
| 12 | E 309-16 SMAW S.S.ELECTRODE DIA 4.00MM | 50,000 | 25,000 numbers - 60 days<br>25,000 number - 120 days |
| 13 | E 310-16 SMAW ELECTRODE DIA 4.00MM | 10,000 | 10,000 number - 60 days |
| 14 | E 316L-16 SMAW ELECTRODE DIA 3.15/3.2MM | 50,000 | 25,000 numbers - 60 days<br>25,000 number - 120 days |
| 15 | SMAW ELECTRODE DIA.4.00 MM -E 6013(GP) | 1,50,000 | 50,000 numbers - 60 days<br>50,000 number - 120 days<br>50,000 number - 180 days |

| BHARAT HEAVY ELECTRICALS LIMITED<br>TRICHY-620 014<br>WELDING TECHNOLOGY CENTRE | WCPI - 207<br>Revision No.: 09<br>Date: 23.02.2016 |
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# WELDING CONSUMABLE PURCHASE INSTRUCTION (WCPI)
## FOR ASME SEC.II.C, SFA-5.1 E7018-1

**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.II.C.SFA-5.1, E7018-1. 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. The brand of SMAW Electrodes to be supplied shall be approved by the concerned IBR Authorities of the state. Every batch to be supplied should have been manufactured during the period when IBR approval for the brand was valid.

**2.0 CHEMICAL COMPOSITION:**

The chemical composition of the undiluted weld metal using this electrode shall conform to ASME SEC IIC SFA-5.1, E7018-1 for each size of electrode supplied.

**3.0 MECHANICAL PROPERTIES:**

The mechanical properties of the weld metal deposited using this electrode after stress relieving the test plate assembly at 620±10°C for 300 minutes shall meet the requirements of impact test as per ASME SECII.C SFA-5.1, E7018-1 and other properties as below for each size of electrode supplied.

| | |
|---|---|
| Yield Strength at 0.2% Offset | 410 MPa Minimum |
| Tensile Strength | 540 MPa Minimum |
| Elongation in 50.8mm | 22% Minimum |

**4.0 RADIOGRAPHIC SOUNDNESS:**

The electrode shall be suitable for radiography quality butt joint welding of boiler pressure parts of SA299, SA106GrB, SA106GrC pipe material. The radiographic test shall meet the requirements of ASME SECII.C SFA-5.1, E7018-1 for each size of electrode supplied.

**5.0 FILLET WELD TEST:**

Fillet weld test done using this electrode shall meet requirements as per ASME SECII.C SFA-5.1, E7018-1 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 be as per SFA-5.1 for each size of electrode supplied.

| Prepared: | Reviewed and approved: |
|---|---|
| Suraj N<br>Engineer/WTC | S. Singaravelu<br>SDGM / WTC |

**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 19 of SFA 5.1 for each size of electrode supplied.

**8.0 MOISTURE CONTENT OF COVERING AND DIFFUSIBLE HYDROGEN CONTENT:**

Moisture content of the electrode covering shall not exceed the limit specified in ASME Sec II C, SFA 5.1 E7018-1 for each size of electrode supplied. Diffusible hydrogen content of weld metal deposited using the electrode shall be maximum 4ml/100g. Test to be done as per ASME Sec IIC, SFA 5.1 E7018-1 for each size of electrode supplied.

**9.0 PACKAGING:**

9.1 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.

9.2 Weight of each crate shall not exceed 1000kg.

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

**10.0 TESTING AND CERTIFICATION:**

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

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

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

10.4 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 II C, SFA-5.1, E7018-1 shall be sent.

10.5 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-5.1, E7018-1.

10.6 A copy of valid IBR approval certificate for the brand being supplied shall be sent along with every consignment.

10.7 Every packet supplied shall be exhibited with details in the below mentioned format through a seal or securely affixed label.

**"Certified by ----------**
**(Mention the concerned IBR authority of the state)**
**Under periodic check test dated: XX-XX-XXXX.**
**Brand approval valid till : XX-XX-XXXX."**

| BHARAT HEAVY ELECTRICALS LIMITED<br>TRICHY-620 014<br>WELDING TECHNOLOGY CENTRE | WCPI - 212<br>Revision No.: 08<br>Date: 23.02.2016 |
|---|---|

## WELDING CONSUMABLE PURCHASE INSTRUCTION (WCPI)
## FOR ASME SEC.IIC, SFA-5.5 E8018-B2

**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-5.5, E8018-B2. 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. The brand of SMAW electrodes to be supplied shall be approved by the concerned IBR Authorities of the state. Every batch to be supplied should have been manufactured during the period when IBR approval for the brand was valid.

**2.0 CHEMICAL COMPOSITION:**

The chemical composition of the undiluted weld metal shall conform to ASME SECII.C SFA-5.5, E8018-B2 for each size of electrode supplied.

**3.0 MECHANICAL PROPERTIES:**

The mechanical properties of the weld metal deposited using this electrode after stress relieving the test plate assembly at 690±15°C for 120 minutes shall meet the requirements of ASME SECII.C SFA-5.5, E8018-B2 for each size of electrode supplied.

**4.0 RADIOGRAPHIC SOUNDNESS:**

The electrode shall be suitable for radiography quality butt Joint welding of boiler pressure parts of SA387Gr11 and SA387Gr12, SA335P11, SA335P12, SA213T11, SA213T12 materials. The radiographic test shall meet the requirements of ASME SECII.C SFA-5.5, E8018-B2 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 5.5, E8018-B2 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-5.5 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 18 of SFA 5.5 for each size of electrode supplied.

| Prepared: | Reviewed and approved: |
|---|---|
| Suraj N<br>Engineer/WTC | S.Singaravelu<br>SDGM/WTC |

**8.0 MOISTURE CONTENT OF COVERING AND DIFFUSIBLE HYDROGEN CONTENT:**

Moisture content of the electrode covering shall not exceed the limit specified in ASME Sec II C, SFA 5.5 E8018-B2 for each size of electrode supplied. Diffusible hydrogen content of weld metal deposited using the electrode shall be maximum 4ml/100g. Test to be done as per ASME Sec IIC, SFA 5.5 E8018-B2 for each size of electrode supplied.

**9.0 PACKAGING:**

9.1 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.

9.2 Weight of each crate shall not exceed 1000kg.

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

**10.0 TESTING AND CERTIFICATION:**

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

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

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

10.4 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 II C, SFA-5.5, E8018-B2 shall be sent.

10.5 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-5.5, E8018-B2.

10.6 A copy of valid IBR approval certificate for the brand being supplied shall be sent along with every consignment.

10.7 Every packet supplied shall be exhibited with details in the below mentioned format through a seal or securely affixed label.

**"Certified by ----------**
**(Mention the concerned IBR authority of the state)**
**Under periodic check test dated: XX-XX-XXXX.**
**Brand approval valid till : XX-XX-XXXX."**

| BHARAT HEAVY ELECTRICALS LIMITED<br>TRICHY-620 014<br>WELDING TECHNOLOGY CENTRE | WCPI - 214<br>Revision No.: 08<br>Date: 23.02.2016 |
|---|---|

# WELDING CONSUMABLE PURCHASE INSTRUCTION (WCPI)
# FOR ASME SEC II C, SFA-5.5 E9018-B3

## 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.II.C.SFA-5.5, E9018-B3. 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. The brand of SMAW electrodes to be supplied shall be approved by the concerned IBR Authorities of the state. Every batch to be supplied should have been manufactured during the period when IBR approval for the brand was valid.

## 2.0 CHEMICAL COMPOSITION:

The chemical composition of the undiluted weld metal shall conform to ASME SECII.C SFA-5.5, E9018-B3 for each size of electrode supplied.

## 3.0 MECHANICAL PROPERTIES AND FILLET WELD TEST:

The mechanical properties of the weld metal deposited using this electrode after stress relieving the test plate assembly at 690±15°C for 120 minutes and fillet weld test shall meet the requirements of ASME SECII.C SFA-5.5, E9018-B3 for each size of electrode supplied.

## 4.0 RADIOGRAPHIC SOUNDNESS:

The electrode shall be suitable for radiography quality butt Joint welding of boiler pressure parts of SA387Gr22, SA213T22 and SA335P22 materials. The radiographic test shall meet the requirements of ASME SECII.C SFA-5.5, E9018-B3 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 5.5, E9018-B3 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 diameter and length as specified in the purchase order. The tolerance on diameter and length shall meet the requirements of SFA-5.5 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 18 of SFA 5.5 for each size of electrode supplied for each size of electrode supplied.

| Prepared: | Reviewed and approved: |
|---|---|
| Suraj N<br>Engineer/WTC | S.Singaravelu<br>SDGM/WTC |

**8.0 MOISTURE CONTENT OF COVERING AND DIFFUSIBLE HYDROGEN CONTENT:**

Moisture content of the electrode covering shall not exceed the limit specified in ASME Sec II C, SFA 5.5 E9018-B3 for each size of electrode supplied. Diffusible hydrogen content of weld metal deposited using the electrode shall be maximum 4ml/100g. Test to be done as per ASME Sec IIC, SFA 5.5 E9018-B3 for each size of electrode supplied.

**9.0 PACKAGING:**

9.1 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.

9.2 Weight of each crate shall not exceed 1000kg.

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

**10.0 TESTING AND CERTIFICATION:**

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

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

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

10.4 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 II C, SFA-5.5, E9018-B3 shall be sent.

10.5 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-5.5, E9018-B3.

10.6 A copy of valid IBR approval certificate for the brand being supplied shall be sent along with every consignment.

10.7 Every packet supplied shall be exhibited with details in the below mentioned format through a seal or securely affixed label.

**"Certified by ----------**
**(Mention the concerned IBR authority of the state)**
**Under periodic check test dated: XX-XX-XXXX.**
**Brand approval valid till : XX-XX-XXXX."**

| BHARAT HEAVY ELECTRICALS LIMITED<br>TRICHY-620 014<br>WELDING TECHNOLOGY CENTRE | WCPI - 218<br>Revision No.: 09<br>Date: 23.02.2016 |
|---|---|

## WELDING CONSUMABLE PURCHASE INSTRUCTION (WCPI)
## FOR ASME SEC.II.C, SFA-5.4, E309-16

**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, E309-16. 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. The brand of SMAW electrodes to be supplied shall be approved by the concerned IBR Authorities of the state. Every batch to be supplied should have been manufactured during the period when IBR approval for the brand was valid.

**2.0 CHEMICAL COMPOSITION:**

The chemical composition of the undiluted weld metal shall conform to ASME SEC IIC SFA-5.4, E309-16 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 IIC, 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, E309-16 for each size of electrode supplied.

**4.0 RADIOGRAPHIC SOUNDNESS:**

The radiographic test shall meet the requirements of ASME SECII.C SFA-5.4, E309-16 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, E309-16 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 per 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: | Reviewed and approved: |
|---|---|
| Suraj N<br>Engineer/WTC | S.Singaravelu<br>SDGM/WTC |

**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, E309-16 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, E309-16.

9.6 A copy of valid IBR approval certificate for the brand being supplied shall be sent along with every consignment.

9.7 Every packet supplied shall be exhibited with details in the below mentioned format through a seal or securely affixed label.

**"Certified by ----------**
**(Mention the concerned IBR authority of the state)**
**Under periodic check test dated: XX-XX-XXXX.**
**Brand approval valid till : XX-XX-XXXX."**

| BHARAT HEAVY ELECTRICALS LIMITED<br>TRICHY-620 014<br>WELDING TECHNOLOGY CENTRE | WCPI - 219<br>Revision No.: 07<br>Date: 23.02.2016 |
|---|---|

## WELDING CONSUMABLE PURCHASE INSTRUCTION (WCPI)
## FOR ASME SEC IIC, SFA-5.4 E310-16

**1.0 SCOPE:**

1.1 The electrodes shall comply with requirements specified in the latest edition and addenda (applicable on the date of issue of purchase order) of ASME Sec IIC.SFA-5.4, E310-16. 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. The brand of SMAW Electrodes to be supplied shall be approved by the concerned IBR Authorities of the state. Every batch to be supplied should have been manufactured during the period when IBR approval for the brand was valid.

**2.0 CHEMICAL COMPOSITION:**

The chemical composition of the undiluted weld metal shall conform to ASME SECII.C SFA-5.4, E310-16 for each size of electrode supplied.

**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, E310-16 for each size of electrode supplied.

**4.0 RADIOGRAPHIC SOUNDNESS:**

The radiographic test shall meet the requirements of ASME SECII.C SFA-5.4, E310-16 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, E310-16 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: | Reviewed and approved: |
|---|---|
| Suraj N<br>Engineer/WTC | S.Singaravelu<br>SDGM/WTC |

**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, E310-16 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, E310-16.

9.6 A copy of valid IBR approval certificate for the brand being supplied shall be sent along with every consignment.

9.7 Every packet supplied shall be exhibited with details in the below mentioned format through a seal or securely affixed label.

**"Certified by ----------**
**(Mention the concerned IBR authority of the state)**
**Under periodic check test dated: XX-XX-XXXX.**
**Brand approval valid till : XX-XX-XXXX"**

| BHARAT HEAVY ELECTRICALS LIMITED<br>TRICHY-620 014<br>WELDING TECHNOLOGY CENTRE | WCPI - 243<br>Revision No.: 10<br>Date: 09.03.2024 |
|---|---|

# WELDING CONSUMABLE PURCHASE INSTRUCTION (WCPI)
# FOR ASME SEC.II.C, SFA-5.4 E316L-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.II.C.SFA-5.4, E316L-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. The brand of SMAW electrodes to be supplied shall be approved by the concerned IBR Authorities of the state.

## 2.0 CHEMICAL COMPOSITION:

The chemical composition of the undiluted weld metal shall conform to ASME SECII.C SFA-5.4, E316L-16 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, E316L-16 for each size of electrode supplied.

## 4.0 RADIOGRAPHIC SOUNDNESS:

The radiographic test shall meet the requirements of ASME SECII.C SFA-5.4, E316L-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, E316L-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: | Reviewed and approved: |
|---|---|
| Aditya Kumar<br>DM/WTC | R Arivazhagan<br>SM/WTC |

**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 as per clause SFA-5.02.

**9.0 TESTING AND CERTIFICATION:**

9.1 Each consignment of electrodes supplied (preferably)- from one batch.

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, E316L-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, E316L-16.

9.6 "Original test certificates in English countersigned by Inspecting Authority (latest) approved by IBR for country of origin giving details of the tests done in compliance with this purchase instruction and ASME Sec.II.C, SFA-5.4, E316L-16 shall be sent".

(OR)

"A copy of valid IBR Approval Certificate for the brand being supplied. Original test certificates in English countersigned by manufacturer giving details of the tests done in compliance with this purchase instruction and ASME Sec.II.C, SFA-5.4,E316L-16 shall be sent.

| BHARAT HEAVY ELECTRICALS LIMITED<br>TRICHY-620 014<br>WELDING TECHNOLOGY CENTRE | WCPI - 201<br>Revision No.06<br>Date: 23.02.2016 |
|---|---|

## WELDING CONSUMABLE PURCHASE INSTRUCTION (WCPI) FOR ASME SEC.II.C, SFA-5.1 E6013

### 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.II.C.SFA-5.1, E6013. 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 using this electrode shall conform to ASME SEC IIC SFA-5.1, E6013 for each size of electrode supplied.

### 3.0 MECHANICAL PROPERTIES:

The mechanical properties of the weld metal deposited using this electrode shall meet the requirements of ASME SEC IIC SFA-5.1, E6013 for each size of electrode supplied.

### 4.0 RADIOGRAPHIC SOUNDNESS:

The radiographic soundness test shall meet the requirements of ASME SEC IIC SFA-5.1, E6013 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 IIC SFA 5.1, E6013 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-5.1.

### 7.0 CORE WIRE, COVERING, EXPOSED CORE, IDENTIFICATION AND METHOD OF MANUFACTURE:

The electrodes shall meet the requirements of clause 3.2, 3.3, 3.4 of SFA-5.02 and clause 19 of SFA 5.1.

| Prepared: | Reviewed and approved: |
|---|---|
| Suraj N<br>Engineer/WTC | S.Singaravelu<br>SDGM/WTC |

**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.

8.2 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 to ensure no damage to electrodes during shipment and normal storage conditions.

8.3 Weight of each crate shall not exceed 1000Kg.

8.4 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 of filler metal procurement guidelines in ASME Sec IIC. (latest edition)

9.4 Three copies of original certified material test report in English signed by manufacturer giving details about tests done in compliance with this WCPI and ASME Sec II C, SFA-5.1, E6013 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.II.C.SFA-5.1, E6013.

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| Sl. No. | Pre –Qualification Criteria – 135483568 | Bidder remark |
|---|---|---|
| 1 | Bidder shall be a manufacturer of the Quoted item 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.<br><br>(Specify: Manufacturer/Authorised Dealer) | |
| 2 | Bidder (Principle Supplier) shall successfully experiences for supplying of welding consumables (SMAW Electrode) to any govt. Organisation/PSUs/Public Ltd./Company/Reputed Industries etc.<br><br>Purchase order copies or related document to be submitted along with offer to consider the offer.<br><br>Note: Successful experience means – supplied and accepted. | |
| 3 | Quoted Welding Consumables brand name. | |
| 4 | Mill address (manufacturing address). | |
| 5 | Mill capacity quoted welding shall be provided along with offer. | |
| 6 | Manufacturer shall submit manufacturing process flow chart (Raw material to finished product). | |

| Sl. No. | Pre –Qualification Criteria - 135483568 | Bidder remark |
|---|---|---|
| 7 | Manufacturer (Principle Supplier) shall submit a valid ISO 9001 certificate or Quality management system certificate or Written down procedure for SMAW electrode inspection or ISO 45001 certificate or Written procedure for ISO 9001 or Written procedure for SMAW electrode manufacturing. | |
| 8 | Shall confirm to Technical specification as per Tender. | |
| 9 | Vendor should give confirmation to BHEL's Technical Specification.<br><br>Any deviation from the Specification are to be mentioned in the "Bidder remark Space".<br><br>If There is no deviation vendor should indicate "No Deviation". | |
| 10 | Quoted Diameter and length details. | |
| 11 | Kindly arrange to provide seal and sign on WCPI Copy for confirmation. | |

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.**

| ***To be filled by bidder*** | |
|---|---|
| **Description of the Equipment:** | |
| **GeM Tender No. & Date** | |
| **Name of the firm (Bidder)** | **:** |
| **Address** | **:** |
| **Contact person 1**<br>**Name:**<br>**Designation:**<br>**Office Phone:**<br>**Mobile:**<br>**e-mail:** | **Contact person 2**<br>**Name:**<br>**Designation:**<br>**Office Phone:**<br>**Mobile:**<br>**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:**<br>1. Payment terms for Non MSME Suppliers: Within 90 days after CRAC<br>2. Payment terms for Micro & Small Enterprises (MSEs): Within 45 days after CRAC. The supplier should upload UDYAM Registration Certificate in proof of MSE.<br>3. Payment terms for Medium Enterprises: Within 60 days after CRAC. The supplier should upload UDYAM Registration Certificate in proof of Medium Enterprises.<br>**Note:** Deviation in above payment terms is not acceptable. In case of Auto PRC/CRAC, Payment due date shall be calculated from CRAC date or material acceptance date by BHEL whichever is later. | |
| 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. | **Performance Bank Guarantee:**<br>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.<br>Please indicate how much GST percentage is included in quoted price. | GST in %:____ |

Vendor's Seal & Signature

**ANNEXURE-B**

# / 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)

## Integrity Pact (IP)

(a) IP is a tool to ensure that activities and transactions between the Company and its Bidders / Contractors are handled in a fair, transparent and corruption free manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

| SL | IEM | Email |
|---|---|---|
| 1. | Shri Otem Dai, IAS (Retd.) | iem1@bhel.in |
| 2. | Shri Bishwamitra Pandey, IRAS (Retd.) | iem2@bhel.in |
| 3. | Shri Mukesh Mittal, IRS (Retd.) | Iem3@bhel.in |

(b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/ three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.

(c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.

Note:

*No routine correspondence shall be addressed to the IEM (phone/post/ email) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) departments officials whose contact details are provided below.*

Details of contact person(s): -

(1)

Name: M Kurinjiarasi

Deptt: MM/WC & CPSP

Address: 24 Building, BHEL, Trichy

Phone: 0431-2577597

Email: kurinji@bhel.in

(2)

Name: Sonu Majhi

Deptt: MM/ WC & CPSP

Address: 24 Building, BHEL, Trichy

Phone: 0431-2575636

Email: sonu@bhel.in

Annexure-1

**INTEGRITY PACT**

**Between**

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

**and**

_____, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

**Preamble**

The Principal intends to award, under laid-down organizational procedures, contract/s for _____

_____
_____ (hereinafter referred to as "Contract"). The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint panel of Independent External Monitor(s) (IEMs), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

**Section 1- Commitments of the Principal**

1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -

1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.

1.1.3 The Principal will exclude from the process all known prejudiced persons.

1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

**Section 2 - Commitments of the Bidder(s)/ Contractor(s)**

2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. The Bidder(s)/ Contractor(s) commits himself to observe the following principles during participation in the tender process and during the contract execution.

2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Indian Penal Code (IPC) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and shall await their decision in the matter.

**Section 3 - Disqualification from tender process and exclusion from future contracts**

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process , terminate the contract, if already awarded, exclude from future business dealings and/ or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

**Section 4** - **Compensation for Damages**

4.1 If the Principal has disqualified the Bidder (s) from the tender process before award / order acceptance according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.

4.2 If the Principal is entitled to terminate the Contract according to Section 3, or terminates the Contract in application of Section 3 above , the Bidder(s)/ Cotractor (s) transgression through a violation of Section 2 above shall be construed breach of contract and the Principal shall be entitled to demand and recover from the Contractor an amount equal to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee , whichever is higher, as damages, in addition to and without prejudice to its right to demand and recover compensation for any other loss or damages specified elsewhere in the contract.

**Section 5 - Previous Transgression**

5.1 The Bidder declares that no previous transgressions occurred in the last 3 (three) years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.

5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason or action can be taken as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

**Section 6 - Equal treatment of all Bidder (s)/ Contractor (s) / Sub-contractor (s)**

6.1 The Principal will enter into Integrity Pacts with identical conditions as this Integrity Pact with all Bidders and Contractors.

6.2 In case of Sub-contracting, the Principal Contractor shall take the responsibility of the adoption of Integrity Pact by the Sub-contractor(s) and ensure that all Sub-contractors also sign the Integrity Pact.

6.3 The Principal will disqualify from the tender process all Bidders who do not sign this Integrity Pact or violate its provisions.

**Section 7 - Criminal Charges against violating Bidders/ Contractors /Subcontractors**

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

**Section 8 -Independent External Monitor(s)**

8.1 The Principal appoints competent and credible panel of Independent External Monitor (s) (IEMs) for this Integrity Pact. The task of the IEMs is to review independently and objectively, whether and to what extent the parties comply with the obligations under this Integrity Pact.

8.2 The IEMs are not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.

8.3 The IEMs shall be provided access to all documents/ records pertaining to the Contract, for which a complaint or issue is raised before them as and when warranted. However, the documents/records/information having National Security implications and those documents which have been classified as Secret/Top Secret are not to be disclosed.

8.4 The Principal will provide to the IEMs sufficient information about all meetings among the parties related to the Contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the IEMs the option to participate in such meetings.

8.5 The advisory role of IEMs is envisaged as that of a friend, philosopher and guide. The advice of IEMs would not be legally binding and it is restricted to resolving issues raised by a Bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some Bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.

8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process or during execution of Contract, the matter should be examined by the full panel of IEMs jointly, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.

8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to the CMD, BHEL at the earliest. They may also send their report directly to the CVO, in case of suspicion of serious irregularities requiring legal/ administrative action. Only in case of very serious issue having a specific, verifiable Vigilance angle, the matter should be reported directly to the Commission. IEMs will tender their advice on the complaints within 30 days.

8.8 The CMD, BHEL shall decide the compensation to be paid to the IEMs and its terms and conditions.

8.9 IEMs should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the Prinicpal should be looked into by the CVO of the Principal.

8.10 If the IEMs have reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code / Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the IEMs may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

8.11 After award of work, the IEMs shall look into any issue relating to execution of Contract, if specifically raised before them. As an illustrative example, if a Contractor who has been awarded the Contract, during the execution of Contract, raises issue of delayed payment etc. before the IEMs, the same shall be examined by the panel of IEMs. Issues like warranty/ guarantee etc. shall be outside the purview of IEMs.

8.12 However, the IEMs may suggest systemic improvements to the management of the Principal, if considered necessary, to bring about transparency, equity and fairness in the system of procurement.

8.13 The word `Monitor' would include both singular and plural.

**Section 9 - Pact Duration**

9.1 This Integrity Pact shall be operative from the date this Integrity Pact is signed by both the parties till the final completion of contract for successful Bidder, and for all other Bidders 6 months after the Contract has been awarded. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings.

9.2 If any claim is made/ lodged during currency of this Integrity Pact, the same shall be binding and continue to be valid despite the lapse of this Pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

**Section 10 - Other Provisions**

10.1 This Integrity Pact is subject to Indian Laws and exclusive jurisdiction shall be of the competent Courts as indicated in the Tender or Contract, as the case may be.

10.2 Changes and supplements as well as termination notices need to be made in writing.

10.3 If the Bidder(s)/ Contractor(s ) is a partnership or a consortium or a joint venture, this Integrity Pact shall be signed by all partners of the partnership or joint venture or all consortium members.

10.4 Should one or several provisions of this Integrity Pact turn out to be invalid, the remainder of this Integrity Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

10.5 Only those bidders / contractors who have entered into this Integrity Pact with the Principal would be competent to participate in the bidding. In other words, entering into this Integrity Pact would be a preliminary qualification.

10.6 In the event of any dispute between the Principal and Bidder(s)/ Contractor(s) relating to the Contract, in case, both the parties are agreeable, they may try to settle dispute through Mediation before the panel of IEMs in a time bound manner. In case, the dispute remains unresolved even after mediation by the panel of IEMs, either party may take further action as the terms & conditions of the Contract. The fees/expenses on dispute resolution through mediation shall be shared by both the parties. Further, the mediation proceedings shall be confidential in nature and the parties shall keep confidential all matters relating to the mediation proceedings including any settlement agreement arrived at between the parties as outcome of mediation. Any views expressed, suggestions, admissions or proposals etc. made by either party in the course of mediation shall not be relied upon or introduced as evidence in any further arbitral or judicial proceedings, whether or not such proceedings relate to the dispute that is the subject of mediation proceedings. Neither of the parties shall present IEMs as witness in any Alternative Dispute Resolution or judicial proceedings in respect of the dispute that was subject of mediation.

M KURINJIARASI Digitally signed by M KURINJIARASI Date: 2023.06.12 12:27:53 +05'30'

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For & On behalf of the Principal
(Office Seal)

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For & On behalf of the Bidder/ Contractor
(Office Seal)

Place _____
Date _____

Witness: SONU MAJHI Digitally signed by SONU MAJHI Date: 2023.06.12 12:35:42 +05'30'_____
(Name & Address) _____
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Witness:_____
(Name & Address) _____
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