



**BHARAT HEAVY ELECTRICALS LIMITED**  
Ramachandrapuram, Hyderabad, Telangana - 502032

Phone: 040-2318-4088

Enquiry  
CMM Purchase

eMail [anilrbk@bhel.in](mailto:anilrbk@bhel.in)

Supplier's Copy	Enquiry No	Enquiry Date	No. of Items	Duration	Due Date
	N6A1X37799	31.05.2024	10	5	05.06.2024

  

Enq. S.No.	Specification	Material Code	Item Description	Unit	Quantity	Delivery Schedule	Supplier Delivery Period
1	AA56114	HY5610005736	ZINC RICH PLYMD EPXY PRMR,PNTDR ZINC8536	L	4,000.00	4Weeks	<b>Delivery Period : 4 weeks from the date of placement of purchase order.</b> Loading for delay beyond 4 weeks: For suppliers quoting delivery period beyond 4 weeks a loading at a rate of 0.5% per week is applicable up to a maximum delivery period of 6 weeks.  Any delivery period beyond 6 weeks is not acceptable and offer shall be summarily rejected.
2	AA56113	HY5610005914	INORGANIC ZINC SILICATE PRIMER400 DEG.C	L	1,200.00	4Weeks	
3	AA56149	HY5610034620	HEAT RESIST SILCON AL TEMP.500-1200DEG.F	L	1,800.00	4Weeks	
4	HY9050001/08	HY9050001114	ACRYLIC POLYESTER POLYUR.PAINT-W.GREY	L	2,260.00	4Weeks	
5	HY9050001/08	HY9050001181	TINNER-ACRYLIC POLYESTER POLYURETHANE P	L	1,000.00	4Weeks	
6	AA56708/04	HY5670062140	THINNER FOR INORGANI ZINC SILICATE PRIMR	L	500	4Weeks	
7	AA56708/04	HY5670062159	THINNER FOR HIGH TEMP SILICON AL PAINT	L	700	4Weeks	
8	AA56708/04	AA5670008006	THINNER FOR EPOXIDE PRIMING & FINISHING	L	2,000.00	4Weeks	
9	HY9050001/08	HY9050001017	INORGANIC ZINC SILICATE COATING	L	80	4Weeks	
10	HY9050001/08	HY9050001220	EPOXY-HIGH BUILD MIO	L	80	4Weeks	

**Remarks:**

1. This enquiry is in two part bid system.
2. Batch Test certificate is required along with supply.
3. All other Terms & Conditions are as per ITB Rev 13.
4. Reverse Auction is applicable for this RFQ.
5. Tender document and ITB Rev 13 has to be submitted duly filled and signed and stamped.

Bharat Heavy Electricals Limited  
B Anil Kumar  
Manager / Purchase / CMM

Item 10:

MATERIAL No: HY5610005736

ITEM QTY:4,000.000

SHORT DESCRIPTION:ZINC RICH PLYMD EPXY PRMR,PNTDR ZINC8536

LONG DESCRIPTION: EPOXY BASED ZINC RICH PRIMER PAINT (TWO PACK)IN 20LTR PACK. COLOUR : GREY AS PER SPEC.NO - AA56114

Item 20:

MATERIAL No: HY5610005914

ITEM QTY:1,200.000

SHORT DESCRIPTION:INORGANIC ZINC SILICATE PRIMER400 DEG.C

LONG DESCRIPTION: INORGANIC ZINC SILICATE PRIMER 400 DEG.C IN 20LTR DRUM. SPEC - AA56113,Rev. No. 02

ITEM NO: 30

MATERIAL No: HY5610034620

ITEM QTY:1,800.000

SHORT DESCRIPTION:HEAT RESIST SILCON AL TEMP.500-1200DEG.F

LONG DESCRIPTION: HEAT RESISTANT SILICON ALUMINIUM TEMP.500-1200DEG.F IN 20LTR DRUM. Spec-AA56149,Rev No.01

ITEM NO: 40

MATERIAL No: HY9050001114

ITEM QTY:2,260.000

SHORT DESCRIPTION:ACRYLIC POLYESTER POLYUR.PAINT-W.GREY

LONG DESCRIPTION: HIGH BUILD GLOSS ALIPHATIC ACRYLIC POLYURETHENE PAINT IN 20 LTR DRUM. SPEC.NO-HY9050001,REV.NO-R08 SHADE - RAL 9002

ITEM NO: 50

MATERIAL No: HY9050001181

ITEM QTY:1,000.000

SHORT DESCRIPTION:TINNER-ACRYLIC POLYESTER POLYURETHANE P

LONG DESCRIPTION: THINNER FOR ACRYLIC POLYESTER POLYURETHANE PAINT IN 20LTR DRUM.  
SPEC.NO-HY9050001,REV.NO-R08

ITEM NO: 60

MATERIAL No: HY5670062140

ITEM QTY:500.000

SHORT DESCRIPTION:THINNER FOR INORGANI ZINC SILICATE PRIMR

LONG DESCRIPTION: THINNER FOR INORGANIC ZINC SILICATE PRIMER IN 20LTR DRUM. Spec.No-  
AA56708,REV.NO-04.

ITEM NO: 70

MATERIAL No: HY5670062159

ITEM QTY:700.000

SHORT DESCRIPTION:THINNER FOR HIGH TEMP SILICON AL PAINT

LONG DESCRIPTION: THINNER FOR HIGH TEMP SILICON AL PAINT IN 20LTR DRUM. Spec.No-  
AA56708,REV.NO-04.

**ITEM NO: 80**

MATERIAL No: AA5670008006

ITEM QTY:2,000.000

SHORT DESCRIPTION:THINNER FOR EPOXIDE PRIMING & FINISHING

LONG DESCRIPTION: THINNER FOR EPOXIDE PRIMING & FINISHING IN 20LTR DRUM. Spec.No-  
AA56708,REV.NO-04.

ITEM NO: 90

MATERIAL No: HY9050001017

ITEM QTY:80.000

SHORT DESCRIPTION:INORGANIC ZINC SILICATE COATING

LONG DESCRIPTION: INORGANIC ZINC SILICATE COATING IN 20LTR DRUM. SPEC.NO-  
HY9050001,REV.NO-R08

ITEM NO: 100

MATERIAL No: HY9050001220

ITEM QTY:80.000

SHORT DESCRIPTION:EPOXY-HIGH BUILD MIO

LONG DESCRIPTION: EPOXY HIGH BUILD MIO IN 20LTR DRUM. SPEC.NO-HY9050001,REV.NO-R08

REMARKS:

- 1.Shelf life shall be minimum 12 months from the date of supply to BHEL.
- 2.Vendors to submit product datasheets and MSDS along with offers.
- 3.Test certificates to be submitted during supply.
- 4.All paints are to be procured from single source – Evaluation is on overall basis.
- 5.Transportation shall be in supplier scope.
6. The RAL shade card for all the paints should be communicated during technical evaluation stage.

**Customer Approved vendor list is applicable.**

**PAINTS FORM BELOW RECOMMENDED MANUFACTURERS ONLY ACCEPTABLE AS PER CAV LIST.**

1. Asian Paints India Ltd.
2. Shalimar Paints
3. Jotun
4. Akzonobel
5. Berger Paints
6. Good lass Nerolac Paints
7. Bombay Paints
8. Jenson & Nicholson

**Note:**

**Authorized dealer for approved manufacturer may also be accepted with authorisation certificate from OEM.**

Paints should be procured from the above customer approved vendor list only .

If any dealer quotes, they should be able to supply from the customer approved vendor list brand only.

They should provide previous supply orders of the same brand and also OEM authorised certificate.

1. Reverse Auction

- a) BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on [www.bhel.com](http://www.bhel.com)) for this tender. RA shall be conducted among all the techno-commercially qualified bidders.

Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered for Reverse Auction (RA).

In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking.”

b) Reverse Auction Process

Reverse Auction will be conducted if two or more bidders are techno-commercially qualified. In case of two or three qualified bidders, there shall be no elimination of H1 bidder (whose quote is highest in sealed envelope price bid). In case of four qualified bidders, the H1 bidder shall be eliminated whereas in case of five qualified bidders, H1 & H2 bidders shall be eliminated. However, in case of six or more qualified bidders are available, RA would be conducted amongst first 50% of the bidders arranged in the order of prices from lowest to highest. Number of bidders eligible for participating in RA would be rounded off to next higher integer value if number of qualified bidders is odd (e.g. if 7 bids are qualified, then RA will be conducted amongst lowest four bidders).

However, there will be no elimination of qualified bidders who are MSE or qualifying under PPP-MII, Order 2017, provided their bids are within their respective margin of purchase preference {presently 15% for MSEs and 20% for PPP-MII, or as amended from time to time}.

In case of multiple H1 bidders, all H1 bidders (except MSEs and bidders qualifying under PPP-MII, Order 2017, who are within the margin of purchase preference) shall be removed provided minimum two bidders remain in fray, else no H1 removal.

- c) For detailed RA guidelines please refer the link <https://www.bhel.com/guidelines-reverse-auction-2021>
- d) L1 bidder shall be decided after Reverse Auction Process.



CORPORATE PURCHASE SPECIFICATION

AA 561 13

Rev. No. 02

PREFACE SHEET

**INORGANIC ETHYL ZINC SILICATE PRIMER**

**FOR INTERNAL USE ONLY  
REMOVE THIS PREFACE BEFORE ISSUE TO SUPPLIERS**

**Comparable Standards:**

1. INDIAN : IS 14946-2001, Main coat

**Suggested/Probable Suppliers and Grades:**

1. CDC Carbolin :  
2. Asian paints :  
3. Goddass Nerolac Paints :  
4. Sigma coatings :

**User Plants /References:**

1. HARDWAR : HW 56175  
2. BHOPAL :  
3. TRICHY :  
4. HYDERABAD :

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It must not be used directly or Indirectly in any way detrimental to the Interest of the company.

Revisions :  
As per 40<sup>th</sup> MOM of MRC-CPO

APPROVED :  
INTERPLANT MATERIAL  
RATIONALISATION COMMITTEE-MRC (CPO)

Rev. No. 02

Amd.No.

Reaffirmed

Prepared

Issued

Dt. of 1st Issue

Dt: 26.05.2012

Dt :

Year :

HARDWAR

Corp. R&D

JUNE, 2001



## CORPORATE PURCHASE SPECIFICATION

AA 561 13

Rev. No. 02

PAGE 1 OF 4

### INORGANIC ETHYL ZINC SILICATE PRIMER

#### 1.0 GENERAL

This specification prescribes the quality requirements and application procedure for two components, air drying, Inorganic Zinc Ethyl Silicate priming paint. This priming paint when applied on steel structures provides excellent resistance to temperature, soil chemicals, salts, water, and chemical resistance under marine conditions and outside weather ability.

#### 2.0 APPLICATION

The material shall be intended for use as a primer coat in the painting system on new steel structures internally and externally. Normally, for best performance, the surface to be coated shall be ensured free from oil, loose rust/dust etc., followed by blast cleaning to Sa 2 ½ min. with a surface profile of 35 to 50 microns. This shall be followed by application of single coat of the priming paint by spray method so as to achieve dry film thickness t of 65-75 microns. The surface profile after blasting shall be 20 –35 microns.

#### 3.0 COMPLIANCE WITH NATIONAL STANDARDS

The material shall comply with the requirements of following Indian standard and also, meet other requirements of this specification.

IS: 14946-2001, Main coat: Zinc Ethyl Silicate Primer, Two Components

#### 4.0 COLOUR

The colour of the material shall be Grey.

#### 5.0 FINISH

Smooth and Matt.

#### 6.0 COMPOSITION

The material shall be two components moisture and self cured Inorganic Ethyl Silicate Binder pigmented with zinc metal powder conforming to IS: 14355 and having a purity of 99% and particle size of 4-5 microns, in the recommended proportion. The coating of this material attains water resistance within 30 minutes of application and remains unaffected by rains, condensation or dew etc. The manufacturer shall specify the principal type of binder used.

The supplier of the material shall declare that components of paint supplied shall meet the legislative requirements ISO: 14001.

#### Revisions:

As per 40<sup>th</sup> MOM of MRC-CPO

#### APPROVED:

INTERPLANT MATERIAL  
RATIONALISATION COMMITTEE-MRC (CPO)

Rev. No. 02

Amd.No.

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Prepared

Issued

Dt. of 1st Issue

Dt:26.05.2012

Dt :

Year:

HARDWAR

Corp. R&D

JUNE, 2001

**7.0 MIXING RATIO:**

The components of paints are to be mixed in the proportion as recommended by supplier of the material.

**8.0 TEST METHODS:**

Unless specified otherwise, tests shall be conducted as prescribed in relevant parts and section of Indian standard IS: 101 and IS: 14946. The test panels shall preferably be prepared on blast cleaned surface.

**9.0 PROPERTIES:**

The material shall meet the following technical requirements:

**9.1 DRYING TIME:**

Surface dry : 15 minutes, max.  
Hard dry : 2 hrs., min.  
Time to topcoat : 24 hrs., min.

**9.2 CONSISTENCY:**

The liquid component mixed with powder shall be suitable for application by spray as such or when thinned in the proportions at specified by the manufacturer.

**9.3 FLASH POINT:**

Not below 15° C

**9.4 MASS PER TEN LITRES:**

20 kgs., min.

**9.5 VOLUME SOLIDS:**

60.0 % , min.

**9.6 POT LIFE OF MIX (ANNEXURE D OF IS: 14946):** 4 hrs., min. at 30° C**9.7 DRY FILM THICKNESS:**

65-75 microns per cot when measured after 72 hrs. of curing.

**9.8 RESISTANCE TO SALT SPRAY TEST (TYPE TEST):**

The material shall pass resistance to salt spray test, when test panels cured for 72 hrs. are subjected to continuous exposure for 2000 hrs.

**9.9 PROTECTION AGAINST CORROSION UNDER CONDITIONS OF CONDENSATION (TYPE TEST):**

The material shall pass the test, when test panels cured for 72 hrs., are subjected to exposure at specified conditions for 2000 hrs.

**9.10 HEAT RESISTANCE TEST:**

The film shall not show signs of cracking, blistering or flaking when coated test panels air dried for 48 hrs., are kept at 400±10°C for 6 hrs followed by plunging in cold water-three cycles, min.



## CORPORATE PURCHASE SPECIFICATION

AA 561 13

Rev. No. 02

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### 9.11 COMPOSITION:

#### 9.11.1 SOLID CONTENT:

68%, min. by weight of mixed paint.

#### 9.11.2 TOTAL METALLIC ZINC CONTENT (ANNEXURE B OF IS : 14946):

75%, min. by weight in non-volatile portion of the paint.

### 9.12 MUD-CRACKING TEST:

The coating applied to dry film thickness of 120 microns minimum, shall not show any mud cracking when viewed under 10 X magnification.

### 9.13 SEDIMENTATION TEST:

There shall not be any segregation of zinc powder from the base material within 2 hrs in the mixed paint.

### 9.14 CURE TEST:

The coated test panels air dried for 48 hrs shall pass the cure test when tested according to test procedure given in ASTM D 4752.

## 10.0 KEEPING PROPERTY

When stored in covered dry place in the original sealed containers under normal ambient conditions, the liquid portion shall not show thickening, curdling, gelling or hard caking and also retain the properties of mixed paint prescribed in this specification for a period of six months from date of delivery.

## 11.0 TEST CERTIFICATES

Unless otherwise stated, three copies of test certificates and product data sheet shall be supplied along with each consignment giving following information:

In addition, the supplier shall ensure to send one copy of test certificate along with the dispatch documents to facilitate quick clearance of the materials.

AA 561 13, Rev 02: Inorganic ethyl zinc silicate primer

BHEL order No. & Date

Manufacturers/suppliers Name:

Trade name/mark, if any:

Batch/Lot No.;

Quality supplied:

Date manufacture & expiry:

Test results as per 9.0

Mixing ratio

Technical information, if any:

**12.0 PACKING AND MARKING:**

Unless otherwise stated, the components of paint shall be supplied separately in moisture and leak proof containers in packing size as specified in the BHEL order.

Each container of the consignment shall bear the following information printed or pasted at suitable place so as to protect it from damage during transportation and handling.

AA 561 13: Inorganic ethyl zinc silicate primer.

BHEL order No. & Date

Manufacturers/ Supplier's name:

Trade name / mark , if any:

Batch/Lot No.:

Name of contents:

Mixing ratio:

Quantity in container:

Date of manufacture & expiry:

Technical information, If any:

**13.0 ENVIRONMENTAL REQUIREMENTS:**

The supplier shall furnish Material Safety Data Sheet (**MSDS**) covering all information relating to human safety and environmental impacts of the hazardous materials particularly during their transportation, storage, handling and disposal alongwith each supply.

Each container shall be marked with corresponding symbol and minimum worded cautionary notice for flammable / corrosive / toxic / harmful / irritant and oxidizing etc. as applicable.

**14.0 PRECAUTIONS**

- a) Use off the mixed paints within stipulated pot life i.e., 4 hrs after mixing and should be continuously agitated during application.
- b) Inorganic Zinc silicate primer should not be applied at relative humidity below 50 % and the surface should remain free from condensation at the time of application.
- c) After completion of the work, the application equipment must be cleaned thoroughly immediately with thinner and kept safely for next use.
- d) The surface to be painted must be blast cleaned to Sa 2 ½, min. and the painting shall be done by spray method uniformly. However, brush may be used for touch up of local areas only.

**15.0 REFERRED STANDARDS (Latest Publications Including Amendments)**

1) IS: 101

2) IS: 14355

3) IS: 14946

3) AA 067 41 01

5) ASTM D 4752



# CORPORATE PURCHASING SPECIFICATIONS

AA56114

Rev. No.03

PREFACE SHEET

## EPOXY BASED ZINC RICH PRIMER PAINT (TWO PACK)

FOR INTERNAL USE ONLY

REMOVE THIS PREFACE SHEET BEFORE ISSUE TO SUPPLIERS

### Equivalent / Comparable Standards:

1. INDIAN . IS:14589 – 1999 (RA-2004), Grade 2

### Suggested/ Probable Suppliers and Grades:

1. Refer plant vendors list

### User plants & Replaced Plant Specifications / References:

1. HPBP, Trichy :
2. HEEP, Haridwar :

Revisions:  
As per 40<sup>th</sup> MOM of MRC-CPO

**APPROVED:**  
INTER PLANT MATERIAL RATIONALISATION  
COMMITTEE – MRC(CPO)

Rev. No.03	Amd. No.	Reaffirmed
Dt:26-05-2012	Dt:	Year:

Prepared HPBP, Trichy	Issued Corp. R&D	Dt. of 1 <sup>st</sup> Issue Dec 2001
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# CORPORATE PURCHASING SPECIFICATIONS

AA56114

Rev. No.03

PAGE 1 of 5

## EPOXY BASED ZINC RICH PRIMER PAINT (TWO PACK)

### 1.0 GENERAL:

This specification deals with the quality requirements and test for Epoxy Based Zinc Rich Primer Paint suitable for corrosion protection.

### 2.0 APPLICATION:

The paint shall be used as a primer coat on abrasive blast cleaned steel structures internally and externally, in conjunction with epoxy base paints on fabricated structures and components.

### 3.0 COMPLIANCE WITH NATIONAL STANDARD:

The material shall comply with the following national standard and also meet the requirements of this specification.

IS: 14589 – 1999(RA-2004) Grade 2 : Zinc priming paint, epoxy based, two-pack specification.

### 4.0 COMPOSITION:

The paint consists of two components a base and a hardener. The base contains epoxy binder pigmented with zinc dust and suitable extenders. The hardener contains polyamide and solvents to cure the base of paint system.

### 5.0 MIXING RATION:

The components of paint are to be mixed as recommended in the product data sheet supplied by the manufacturer of the paint.

### 6.0 COLOUR: Grey

### 7.0 FINISH: Smooth and matt.

### 8.0 FREEDOM FROM DEFECTS:

The base of the paint system shall remain free from defects like hard setting of pigments, skinning and livering when kept in closed container till its shelf life.

### 9.0 SAMPLING: As per IS: 101

### 10.0 TECHNICAL REQUIREMENTS:

Unless otherwise specified, the sample (mixed paint) shall be tested in accordance with IS: 101

**10.1. Mass PER 10 litres:** 21.5 kg per 10 litres, minimum

**10.2. Consistency:** Paint shall be mixed so that it produces a smooth and uniform paint suitable for application.

Revisions:  
As per 40<sup>th</sup> MOM of MRC-CPO

**APPROVED:**  
INTER PLANT MATERIAL RATIONALISATION  
COMMITTEE – MRC(CPO)

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# CORPORATE PURCHASING SPECIFICATIONS



- 10.3. **Drying time at room temp. (Hard dry):** 4 hours, maximum.
- 10.4. **Volatile matter, percent by mass** : 30.0 maximum.
- 10.5. **Pigment content, percent by mass** : 65.0 minimum.
- 10.6. **Volume solids, percent** : 35.0, minimum.
- 10.7. **Dry film thickness** : 45.0 microns, minimum.
- 10.8. **Flash point** : 15° C, minimum.
- 10.9. **Pot life at ambient temperature (Annexure-A):** 6.0 hours, minimum.
- 10.10. **Metallic zinc content on the non-volatile of the paint (Annexure-B):**  
85.0 percent by mass, minimum.

## 11.0 TYPE APPROVAL:

### 11.1. Samples:

Samples for type approval testing shall be accepted only from those manufacturers whose manufacturing and testing facilities are considered satisfactory to ensure continuous supply of good product.

### 11.2. Type tests:

#### 11.2.1. Protection against corrosion under condensation using abrasive blasted steel panel for 28 days (IS 101, Part 6/Section 1):

The test panel, after testing period, shall not show any film deterioration and corrosion of the steel. Crippage shall not more than 3mm on either side of the scribe lines for passing the test.

#### 11.2.2. Resistance to salt spray for 30 days (Annexure-C):

The test panel, after testing period, shall not show any film deterioration and corrosion of the steel. Crippage shall not more than 3mm on either side of the scribe lines for passing the test.

## 12.0 TEST CERTIFICATES

Unless otherwise stated, three copies of test certificates shall be supplied along with each consignment giving following information:

In addition, the supplier shall ensure to send one copy of test certificate along with the dispatch documents to facilitate quick clearance of the materials.

BHEL order

AA56114 , Rev 03 : EPOXY BASED ZINC RICH PRIMER PAINT (TWO PACK)

Manufacturer's/supplier's Name:

Trade name/mark, if any:

Batch/Lot No.:

Quantity supplied:

Date manufacture & expiry:



# CORPORATE PURCHASING SPECIFICATIONS

AA56114

Rev. No. 03

PAGE 3 of 5

Test results of clause 9.0

Mixing ratio

## 13.0 KEEPING PROPERTY

When stored in covered dry place in the original sealed containers under normal temperature conditions, the material shall retain the properties prescribed in this specification for a period of 12 months after the date of manufacture which shall be subsequent to the date of placement of BHEL order.

## 14.0 PACKING AND MARKING

Unless otherwise stated, base and hardener shall be packed separately in steel containers of approximate capacities. Each container shall bear the following information:

AA56114 EPOXY BASED ZINC RICH PRIMER PAINT (TWO PACK)

BHEL Order No.

Manufacturer's/ Supplier's name:

Trade name / mark, if any:

Batch/Lot No.:

Name of components:

Mixing ratio:

Quantity supplied:

Date of manufacture & expiry:

## 15.0 ENVIRONMENTAL REQUIREMENTS:

The supplier shall furnish Material Safety Data Sheet (MSDS) covering all information relating to human safety and environmental impacts of the hazardous materials particularly during their transportation, storage, handling and disposal along with each supply.

Each container shall be marked with corresponding symbol and minimum worded cautionary notice for flammable / corrosive / toxic / harmful / irritant and oxidizing etc. as applicable

## 16.0 REFERRED STANDARDS (Latest Publications Including Amendments):

- 1) IS: 101
- 2) IS: 14589

# CORPORATE PURCHASING SPECIFICATIONS



## ANNEXURE - A (C1 10.9)

If the mixed paint, as recommended by the supplier, could be still thinned, the end of the working life (pot life) has not been reached. The end of the working life is reached when the test material (paint) gels, becomes stringy or cannot be thinned for application. The time interval between the mixing time and time of gelling shall be reported as pot life of the mixed paint.

## ANNEXURE - B (C1 10.10)

### DETERMINATION OF METALLIC ZINC

#### I. Reagents required:

- a) 0.1 N Potassium Permanganate
- b) Ferric chloride solution: 20 g of ferric chloride ( $\text{FeCl}_3 \cdot 6 \text{H}_2\text{O}$ ) and 20ml of 20% sodium solution.
- c) Anhydrous sodium acetate 20% solution.
- d) Zimmerman - Reinhardt solution: One litre of solution contains 67g of manganese sulphate ( $\text{Mn SO}_4 \cdot 4 \text{H}_2\text{O}$ ), 130ml of concentrated sulphuric acid and 138ml of phosphoric acid.

#### II. Procedure:

0.2g of the sample of the pigment is weighed and transferred to 600ml Erlenmeyer flask and 50ml of ferric chloride solution is added. The flask is agitated constantly till all zinc is completely dissolved. 50ml of Zimmerman -Reinhardt solution and 250ml of water are added. This is titrated with 0.1 N Potassium permanganate solution till a pink colour is obtained. A blank determination is also carried out using the same amounts of reagents.

#### III. Calculation:

$$\text{Metallic zinc percent, by mass} = \frac{(V-B) \times N \times 0.0327}{\text{Wt. of sample in gm}} \times 100$$

Where

V = ml of potassium permanganate solution required for titration

B = ml of potassium permanganate solution required for titration of blank

N = Normality of potassium permanganate solution and

W = wt. of the sample in gram

## ANNEXURE - C (C1 11.2.2)

### RESISTANCE TO SALT SPRAY TEST

The test panels of size 50 mm X 1.5 mm of abrasive blasted steel shall be given one coat of paint to produce desired dry film thickness and the paint film is allowed to cure for seven days. In the middle of the panel a scribe mark extending up to metal is made. (Each mark 50 mm long using a cutting edge at least 0.75 mm wide). The painted panels shall be exposed to salt spray test continuously as described in 3 of IS 101 for 30 days.



# CORPORATE PURCHASING SPECIFICATIONS

AA56114

Rev. No. 03

PAGE 5 of 5

After specified period of exposure, the test panels shall be examined for deterioration and corrosion of the steel. Crippage shall not be more than 3mm on either side of the scribe lines for passing the test.



**CORPORATE PURCHASING SPECIFICATION**

AA56149

Rev No.01

PREFACE SHEET

**HEAT RESISTANT ALUMINIUM PAINT-Gr. 1  
(TEMPERATURE UPTO 600°C)**

FOR INTERNAL USE ONLY  
REMOVE THIS PREFACE BEFORE ISSUE TO SUPPLIERS

**Equivalent/Comparable Standards**

INDIAN : IS 13183-1991, Gr: 1

**User Plants and Replaced Plant Specifications/References:**

HARIDWAR : HW56176

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**Revisions:**  
As per Clause 44.4.a) of MOM of MRC-CPO+NM

**APPROVED:**  
INTERPLANT MATERIAL RATIONALISATION  
COMMITTEE – MRC(CPO+NM)

Rev No.01  
Dt:01-02-2005

Amd No.  
Dt:

Reaffirmed  
Year:2015

Prepared  
HEEP, Haridwar

Issued  
Corp.R&D

Dt. of 1<sup>st</sup> Issue  
01-06-2001

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**CORPORATE PURCHASING SPECIFICATION**

AA56149

Rev No. 01

PAGE 1 of 4

**HEAT RESISTANT ALUMINIUM PAINT-Gr. 1  
(TEMPERATURE UPTO 600°C)**

**1 GENERAL**

This specification governs the quality requirements of Heat Resistant Aluminium Paint which shall be capable to withstand temperature upto 600°C.

**2 APPLICATION**

The paint shall be used as primer and finishing paint on steam turbine components like HP casing, IP casing, ESV & CV casing etc., and on other components where temperature is likely to go upto 600°C. The paint shall be capable of being brushed or air sprayed on the components.

**3 COMPLIANCE WITH NATIONAL STANDARDS**

The material shall conform to the requirements of following national standard and also shall meet other requirements of this specification.

IS 13183-1991, Gr. 1: Aluminium Paint, Heat Resistant specification

**4 COLOR**

That of metallic Aluminium

**5 FINISH**

The dried coating shall be bright, smooth and lustrous.

**6 FREEDOM FROM DEFECTS**

The paint shall remain free from defects like hard settling of pigments, skinning when kept in a closed container and livering (excessive viscosity build up) during its rated shelf life.

The dried paint film shall be free from defects like bittyness, floating of pigments, surface haze, orange peel, colour fading, wrinkles etc.

**7 CHEMICAL COMPOSITION**

The paint shall be based on special grade of silicone binder of required thermal stability of 600°C, pigmented with aluminium paste and extenders in suitable proportions so as to meet the requirements of the specification. The supplier should provide IR-Spectrograph in support of above composition.

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**Revisions:**  
As per Clause 44.4.a) of MOM of MRC-CPO+NM

**APPROVED:**  
INTERPLANT MATERIAL RATIONALISATION  
COMMITTEE – MRC(CPO+NM)

Rev No.01	Amd No.	Reaffirmed	Prepared	Issued	Dt. of 1 <sup>st</sup> Issue
Dt:01-02-2005	Dt:	Year:2015	HEEP, Haridwar	Corp.R&D	01-06-2001



## 8 PROPERTIES

The material when tested in accordance with relevant parts and clauses of IS 101 shall show the following properties.

### 8.1 DRYING TIME

- 8.1.1 **Surface Dry** : 1 hour, max.  
 8.1.2 **Tack free** : 3 hours, max.  
 8.1.3 **Hard Dry** : 18 hours, max.  
 8.2 **NON VOLATILE MATTER** : 30% by mass, min.  
 8.3 **CONSISTENCY** : 20 secs. min. at 27±2°C

### 8.4 SCRATCH HARDNESS

To pass the test at 6H pencil hardness, when tested on the paint film dried for 48 hours at room temperature.

- 8.5 **VOLUME SOLIDS** : 20%, min.  
 8.6 **FLASH POINTS** : Not below 27°C  
 8.7 **MASS PER TEN LITRES** : 10.3±0.5 kg

### 8.8 \*SALT SPRAY RESISTANCE

The film of the paint shall pass the salt spray test when the panel is exposed for 96 hours in salt spray cabinet. The test panel shall be of cold rolled steel and the paint film is dried in air for 30 minutes followed by heating at 250°C for one hour and cooled to room temperature before loading for the test.

### 8.9 \*WATER RESISTANCE

The film of the paint shall show no more than slight whitening or dulling in comparison to the fresh sample, when immersed the test panel in water for 24 hours at 27±2°C.

### 8.10 RESISTANCE TO HEAT

To pass the test when tested as per Annexure.

### 8.11 \*FLEXIBILITY AND ADHESION

To pass the test when the paint panel is dried for 48 hours at room temperature and then subjected to bend test.

### 8.12 PROTECTION AGAINST CORROSION UNDER CONDITIONS OF CONDENSATION

To pass the test when the test panel is dried for 48 hours at RT and then subjected to an exposure in temperature humidity chamber for a period of 7 days.

Note: \* Test shall be conducted after the paint is fully cured.

## 9 TYPE APPROVAL

Samples for type approval testing shall be accepted only from reputed and those manufacturers whose manufacturing and testing facilities are considered satisfactory to ensure continuous supply of consistent and good product.



## CORPORATE PURCHASING SPECIFICATION

AA56149

Rev No. 01

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### 10 TEST CERTIFICATES

Unless otherwise stated, three copies of test certificates shall be supplied giving the following information. In addition, the supplier shall ensure to send one copy of the Test certificate along with despatch documents for quick clearance of material.

AA56149, Rev 01: HEAT RESISTANT ALUMINIUM PAINT-Gr. 1(TEMPERATURE UPTO 600°C)

BHEL order & Date

Supplier's Name & Trade Mark, if any

Batch/Lot No.

Date of Manufacture & Expiry

Test Results of clauses 7 & 8

Quantity of the lot.

T.C. No & Date.

### 11 KEEPING PROPERTY

When stored in a covered dry place in the original sealed container under normal temperature conditions, the material shall retain the properties prescribed in this specification for a period of 12 months after the date of manufacture which shall be subsequent to the date of placing the order.

### 12 PACKING AND MARKING

The paint shall be supplied in sealed and leak proof metal containers preferably in 4 litres size and each container shall bear the following information:

AA56149: HEAT RESISTANT ALUMINIUM PAINT-Gr. 1(TEMPERATURE UPTO 600°C)

BHEL Order No.

Manufacturer's/Supplier's Name

Trade Mark, if any

Batch/Lot No.

Date of Manufacture & Expiry

Quantity supplied

### 13 ENVIRONMENTAL REQUIREMENTS

The supplier shall furnish Material Safety Data Sheet (MSDS) covering all information relating to human safety and environmental impacts of the hazardous materials particularly during their transportation, storage, handling and disposal along with each supply.

Each container shall be marked with corresponding symbol and minimum worded cautionary notice for flammable / corrosive / toxic / harmful / irritant and oxidizing etc. as applicable.

### 14 Referred Standards (Latest Publications Including Amendments)

- 1) IS 101

**Annexure (CI 8.10)****TESTING OF HEAT RESISTANCE****A.1 COLD ROLLED STEEL**

Prepare and clean the test panels made from cold rolled steel. Apply the paint uniformly on the test panels. Air dry the panels for 30 minutes and bake subsequently at 250°C for 1 hour. Cool the test panels for room temperature. Place the panels in the furnace at  $600 \pm 5^\circ\text{C}$  for a period of 24 hours. Remove the panels from the furnace cool and examine the surface for any cracking, blistering, flaking or peeling. In absence of above surface defects, the material is deemed to have passed the heat resistance test.

**A.2 HOT ROOLED STEEL**

Take test panels of low carbon steel, clean them thoroughly using hydrocarbon solvent. Coat these test panels with paint under test so as to get a coating thickness of 25-30 microns. Dry them in air for 24 hours. Keep these test panels in the furnace and are subjected to following heating schedule.

Expose the test panels for 8 hours at 400°C followed by further heating for 8 hours at 500°C and finally for 8 hours at 600°C. The panels shall be removed from the furnace for short interval for physical examination.

In absence of above surface defects, the material is deemed to have passed the heat resistance test.



## CORPORATE PURCHASE SPECIFICATION

AA 567 08

Rev. No. 04

PAGE 1 OF 2

### THINNER FOR EPOXY PAINTS

#### 1.0 GENERAL:

This specification governs the quality requirements of Thinner for all types of Epoxy Paints.

#### 2.0 COMPLIANCE WITH NATIONAL STANDARDS:

There is no Indian standard covering the requirements of this material.

#### 3.0 FREEDOM FROM DEFECTS:

The material shall be clear and free from sediments, suspended and undissolved matters.

#### 4.0 TEST SAMPLE:

1/2 litre sample shall be drawn from each consignment for testing and approval.

#### 5.0 COMPOSITION:

The material shall be a blend of either esters, ketones and/or Aromatic hydrocarbons.

#### 6.0 PROPERTIES:

The material shall be compatible with all types of epoxy and stoving (priming & finishing) paints.

#### 7.0 TEST CERTIFICATES:

Unless otherwise stated, three copies of test certificates shall be supplied, alongwith each consignment, giving the following information:

In addition, the supplier shall ensure to send one send one copy of the test certificates along with the despatch documents to facilitate quick clearance of the material.

AA 56708 (Rev. 04) : Thinner For Epoxy Paints.

BHEL Order No.

Supplier's/Manufacturer's Name & Trade Mark, if any.

Batch No,

Date of Manufacturer & Expiry, if any,

Test results of Cl.6.0.

#### Revisions:

As per 40<sup>th</sup> MOM of MRC -CPO

#### APPROVED:

INTERPLANT MATERIAL  
RATIONALISATION COMMITTEE-MRC (CPO)

Rev. No. 04

Amd.No.

Reaffirmed

Prepared

Issued

Dt. of 1st Issue

Dt. 26.05.2012

Dt :

Year:

BHOPAL

Corp. R&D

AUGUST, 1988

**8.0 PACKING AND MARKING:**

The material shall be suitably packed in 20 litre drums to avoid damage during transit.'  
Each container shall be marked with the following information:

AA 56708: Thinner for Epoxy Paints.

BHEL Order No.  
Manufacturer's/ Supplier's Name.  
Trade Mark, if any.  
Date of Manufacturer & Expiry, if any,  
Batch No,  
Quantity Supplied.

**9.0 ENVIRONMENTAL REQUIREMENTS:**

The supplier shall furnish Material Safety Data Sheet (**MSDS**) covering all information relating to human safety and environmental impacts of the hazardous materials particularly during their transportation, storage, handling and disposal alongwith each supply.

Each container shall be marked with corresponding symbol and minimum worded cautionary notice for flammable / corrosive / toxic / harmful / irritant and oxidizing etc. as applicable

**10.0 REFERRED STANDARDS (Latest Publications Including Amendments):**

– NIL –



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**PAINTS REQUIRED FOR TURBINE & COMPRESSOR AND ITS AUXILIARY SYSTEM  
APPLICATIONS**

**1. INTRODUCTION**

This specification defines the list of paints required for painting external & internal surfaces following components:

1. Steam Turbine
  - a) Outer Casing, Balance piston piping, inter connecting piping and LP Governing valve
  - b) Bearing pedestals, Governing assemblies and Rotor lifting equipment.
2. Compressor
3. Base frame of Compressor & Turbine
4. Base frame of LO reservoir internal
5. Base frame of LOP & EOP
6. Assembly of LOP & EOP
7. BHEL fabricated Dry gas seal control & filter skid etc.

**2. MATERIALS**

The list of rationalized varieties of Primers, Intermediate & Finish Paints, Thinners & Putties etc., required for main production purpose is given in the Variant table. Any deviation from this standard without written deviation permit from appropriate authority will result in rejection of job. The supplied paint shall be suitable for the metallic structures blasted surface finish SSPC-SP-10(Near white metal).

**3. CODES & STANDARDS**

IS-5	Colour coding
RAL DUTCH	International Standard for Colour Shade (Dutch Standard)
IS-101	Methods of test for ready mixed paints and enamels.
IS-2379	Indian Standard for pipe line identification –color code
ASTM Vol 6.1&6.3	American standard test methods for paints and coatings.
SSPC	Steel Structure Painting Council
ANSI A 13.1	Scheme for identification of piping systems: American National Standards Institution

The paint Supplier shall provide the instructions/ documents for the following:

- a) Instructions for storage to avoid exposure as well as extremes of temperature.
- b) Surface preparation prior to painting.
- c) Mixing and thinning preparation.
- d) Application of paints and recommended limit on time intervals between coats.
- e) Suggested Quality assurance procedures.

**4. PAINT MATERIALS**

Paint manufacturers shall furnish the characteristics of all paints materials on printed literature along with the test certificate for all specified characteristics given in this

<b>Revisions:</b> Var no. 37 added (Refer Page 10)			<b>Issued :</b> STANDARDS ENGINEERING & IPR COORDINATION DEPARTMENT		
<b>Rev. No. 08</b>	<b>Amd .No.</b>	<b>Reaffirmed:</b>	<b>Prepared:</b> Manager	<b>Approved:</b> Sr. DGM (ME, R&D and EC)	<b>Date of 1<sup>st</sup> issue:</b>
<b>Dt. 02 Sep 2023</b>	<b>Dt.</b>	<b>Year:</b>	<b>(Comp. Engg.)</b>		<b>21 MAY 2019</b>

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specification. All the paint materials shall be on first quality and confirm to the following general characteristics as per the tables 4.1, 4.2, 4.3 and 4.4.

**TABLE No. 4.1 PRIMER PAINT REQUIREMENTS**

Sr. No.	Description	P1	P2	P3	P4	P5
1	Technical Name	Inorganic zinc silicate coating	Epoxy zinc phosphate Primer	Epoxy Zinc Rich Primer	Zinc Dust Graphite Paint	Epoxy Phenolic
2	Material Code	<b>HY9050001017 (VAR-01)</b>	<b>HY9050001025 (VAR-02)</b>	<b>HY9050001033 (VAR-03)</b>	<b>HY9050001254 (VAR-25)</b>	<b>HY9050001297 (Var-29)</b>
3	Type and composition	A two pack air drying self-curing solvent based inorganic zinc Silicate coating with Minimum 80% Zinc content on dry film. The Final cure of the dry film shall pass the MEK Rub Test.	Two component polyamine cured epoxy resin medium pigmented with zinc Phosphate.	A two-pack polyamide cured high solid, high build epoxy Zinc Rich Primer	Primer containing Zinc dust (31 +/-2 % by wt.) and Graphite (24 +/-2 %)	Two pack ambient temperature curing epoxy phenolic coating system
4	Volume Solids (approx.)	60 +/-3 %	50 +/-1 %	64 +/-2 %	40 +/-2 %	67
5	DFT (Dry Film thickness) per coat in microns (approx.)	65-75µ	40-50µ	60-125µ	40-45µ	75-100
6	Theoretical covering capacity in M2/coat/litre (approx.)	8-9	8-10	8-9	10-11	4-5
7	Weight per liter in kgs/liter (approx.)	2.3+/- 0.03	1.4 +/- 0.05	2.4+/- 0.03	2.3+/- 0.03	1.65±0.03
8	Touch dry at 30 °C (approx.)	30 minutes	After 30 min	After 1 hr	After 12 hr	3
9	Over coating interval (approx.)	Min : 12 hrs at 20 <sup>o</sup> C & 50% RH	Min.: 8 hrs.	Min.: 8 hrs.	Min.: 24 hrs.	Mon: 36 Hrs
10	Pot life (approx) at 30 °C for two component paints	4 to 6 hrs	6 to 8 hrs.	4 to 6 hrs	12 to 18 hrs	4-6

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	(approx.)					
11	Temperature Resistance (Minimum)	400 °C (Dry Service)	80 °C (Dry Service)	150 °C (Dry Service)	450 °C (Dry Service)	150 (Method A)

**TABLE No. 4.2 INTERMEDIATE PAINT REQUIREMENTS**

Sr. No.	DESCRIPTION	I1	I2	I3
1	Technical Name	Epoxy high build Coating	Epoxy high build MIO	Epoxy-High Build Aromatic
2	Material Code	<b>HY9050001041 (VAR-04)</b>	<b>HY9050001220 (VAR-22)</b>	<b>HY9050001351 (VAR-34)</b>
3	Type and Composition	Polyamide cured Epoxy resin medium suitably pigmented	Polyamide cured Epoxy resin medium suitably pigmented with MIO	Aromatic amine cured epoxy resin medium suitably pigmented.
4	Volume Solids (approx.)	60 +/- 3 %	57 +/- 3 %	60 +/- 3 %
5	DFT (Dry Film thickness) per coat in microns (approx.)	100-125µ	100-125µ	100-125µ
6	Theoretical covering capacity in M2/coat/litre (approx.)	5-6	5-6	5-6
7	Weight per liter in kgs/liter (approx.)	1.42+/-0.03	1.42+/-0.03	1.42+/-0.03
8	Touch dry at 30 °C (approx.)	3 hrs	3 hrs	3 hrs
9	Over coating interval at 30 °C (approx.)	Min : 12hrs	Min : 12hrs	Overnight. Max.: 5 days
10	Pot life (approx.) at 30 °C for two component paints (approx.)	4-6 hrs	4-6 hrs	4-6 hrs
11	Temperature Resistance (Minimum)	80 °C (Dry Service)	80 °C (Dry Service)	80 °C (Dry Service)

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**TABLE No. 4.3 FINISH PAINT REQUIREMENTS**

Sl. No.	Description	F1	F2	F3	F4
1	Technical Name	Heat resistant silicone aluminum paint suitable up to 600°C dry temperature.	Acrylic polyurethane paint	Aliphatic Acrylic polyester polyurethane paint	INERT POLYMERIC MATRIX COATING
2	Material Code	<b>HY9050001050</b> Aluminum (VAR-05)  <b>HY9050001335</b> Basalt Grey (RAL 7012) (VAR-32)	<b>HY9050001068</b> Phirozi Blue (VAR-06) <b>HY9050001076</b> Brilliant Green (VAR-07) <b>HY9050001084</b> White Aluminum (VAR-08) <b>HY9050001092</b> Dark admiralty grey (VAR-09) <b>HY9050001190</b> Basalt grey (VAR-19) <b>HY9050001246</b> Blue grey (VAR-24) <b>HY9050001270</b> White Grey (VAR-27) <b>HY9050001289</b> Jet Black (Var-28) <b>HY9050001009</b> Bluish Green (Var-33)  <b>HY9050001360</b> Smoke Grey Shade no.692 of IS:5 (Var-36)  <b>HY9050001394</b> SKY BLUE 101 (Var-37)	<b>HY9050001106</b> Light Grey (VAR-10)  <b>HY9050001114</b> White Grey (VAR-11)	<b>HY9050001203</b> Aluminum (VAR-20)
3	Type and composition	Single pack silicone resin based medium with Aluminum flakes.	Two-pack aliphatic isocyanate cured acrylic finish paint	Two component polyester polyurethane finish paint	Suitable for high temp service & under approx.on coating for CS,AS & SS
4	Volume Solids (approx.)	20+/- 2 %	40 +/- 3 %	57 +/- 2 %	50+/- 2 %

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Sl. No.	Description	F1	F2	F3	F4
5	DFT (Dry Film thickness) per coat (approx.)	15 to 20 $\mu$	30-40 $\mu$	75-125 $\mu$	100-125
6	Theoretical covering capacity in M2/coat/litre (approx.)	8-10	11-15	8-10	3 minimum
7	Weight per liter in kgs/liter (approx.)	1 +/- 0.03	1.15+/-0.03	0.383+/-0.03	>1.3
8	Touch dry at 30 °C (approx.)	30 min	30 Minutes	1 hr	1 hr
9	Over coating interval (approx.)	Min. : 24 hrs	Min : 12 hrs.	Min: 12 hrs.	Min: 6 hrs.
10	Pot life (approx.) at 30 °C for two component paints (approx.)	Not applicable	6-8 hrs.	4 hrs.	1 hrs
11	Temperature Resistance	600 °C Dry service	80 °C Minimum (Dry Service)	93 °C Minimum (Dry Service)	650 °C Minimum

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**TABLE No. 4.4 THINNERS REQUIREMENT**

SI. NO.	TECHNICAL NAME	MATERIAL CODE
1	THINNER FOR INORGANIC ZINC SILICATE –(P1)	HY9050001122 (VAR-12)
2	THINNER FOR EPOXY ZINC PHOSPHATE PRIMER (P2)	HY9050001130 (VAR-13)
3	THINNER FOR EPOXY ZINC RICH PRIMER (P3)	HY9050001149 (VAR-14)
4	THINNER FOR EPOXY-HIGH BUILD COATING – (I1)	HY9050001157 (VAR-15)
5	THINNER FOR HEAT RESISTANT SILICONE ALUMINIUM PAINT - (F1)	HY9050001165 (VAR-16)
6	THINNER FOR ACRYLIC POLYURETHANE FINISH Paint – (F2)	HY9050001173 (VAR-17)
7	THINNER FOR ALIPHATIC ACRYLIC POLYESTER POLYURETHANE FINISH PAINT - (F3)	HY9050001181 (VAR-18)
8	THINNER FOR INERT POLYMERIC MATRIX COATING- (F4)	HY9050001211 (VAR-21)
9	THINNER FOR EPOXY-HIGH BUILD MIO – (I2)	HY9050001238 (VAR-23)
10	THINNER FOR ZINC DUST GRAPHITE PAINT – (P4)	HY9050001262 (VAR-26)
11	THINNER FOR EPOXY PHENOLIC PAINT- (P5)	HY9050001319 (VAR-31)
12	THINNER FOR AROMATIC AMINE CURED EPOXY RESIN (I3)	HY9050001343 (VAR-35)

**NOTES:**

1. For all the three type of Paints (Primer, Intermediate, Finish) & Respective Thinners shall be procured from the same manufacturer
2. Paint manufacturer shall submit the Technical data sheets for all paints at the time of submission of quotations/ offers.
3. Technical data sheet shall have the Application of paint, typical equipment's details, thinner mixing ratio, application conditions, curing schedule etc. shall be as per paint manufacturer instruction.

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**VARIANT TABLE**

<b>VARNO</b>	<b>TECHNICAL NAME</b>	<b>TYPE &amp; COMPOSITE</b>	<b>MATERIAL CODE</b>
1	INORGANIC ZINC SILICATE COATING <b>(P1)</b>	A two-pack air drying self-curing solvent based inorganic zinc silicate coating with minimum 80% zinc content on dry film. The final cure of the dry film shall pass the MEK rub test.	HY9050001017
2	EPOXY ZINC PHOSPHATE PRIMER <b>(P2)</b>	Two-component polyamine cured epoxy resin medium, pigmented with zinc phosphate.	HY9050001025
3	EPOXY ZINC RICH PRIMER <b>(P3)</b>	Two component Zinc rich Epoxy primer	HY9050001033
4	EPOXY-HIGH BUILD COATING <b>(I1)</b>	polyamide cured epoxy resin medium suitably pigmented	HY9050001041
5	HEAT RESISTANT SILICONE ALUMINIUM PAINT SUITABLE UPTO 600° C DRY TEMP. <b>(F1)</b> <b>Color shade:</b> <b>Aluminium</b>	Single pack silicone resin based medium with Aluminium flakes.	HY9050001050
6	ACRYLIC POLYURETHANE FINISH PAINT <b>(F2)</b> <b>Color shade:</b> <b>Phirozi Blue</b>	Two-pack aliphatic isocyanate cured acrylic finish paint.	HY9050001068
7	ACRYLIC POLYURETHANE FINISH PAINT <b>(F2)</b> <b>Color shade:</b> <b>Brilliant Green</b>	Two-pack aliphatic isocyanate cured acrylic finish paint.	HY9050001076
8	ACRYLIC POLYURETHANE FINISH PAINT <b>(F2)</b> <b>Color shade:</b> <b>White Aluminium</b>	Two-pack aliphatic isocyanate cured acrylic finish paint.	HY9050001084
9	ACRYLIC POLYURETHANE FINISH PAINT <b>(F2)</b> <b>Color shade:</b> <b>Dark Admiralty Grey</b>	Two-pack aliphatic isocyanate cured acrylic finish paint.	HY9050001092
10	ALIPHATIC ACRYLIC POLYESTER POLYURETHANE FINISH PAINT <b>(F3)</b> <b>Color shade:</b> <b>Light Grey</b>	Two-pack aliphatic acrylic polyester polyurethane finish paint.	HY9050001106

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VARNO	TECHNICAL NAME	TYPE & COMPOSITE	MATERIAL CODE
11	ALIPHATIC ACRYLIC POLYESTER POLYURETHANE FINISH PAINT (F3) <b>Color shade: white Grey</b>	Two-pack aliphatic acrylic polyester polyurethane finish paint.	HY9050001114
12	THINNER FOR INORGANIC ZINC SILICATE	THINNER FOR VAR 01	HY9050001122
13	THINNER FOR EPOXY ZINC PHOSPHATE PRIMER	THINNER FOR VAR 02	HY9050001130
14	THINNER FOR EPOXY ZINC RICH PRIMER	THINNER FOR VAR 03	HY9050001149
15	THINNER FOR EPOXY- HIGH BUILD COATING	THINNER FOR VAR 04	HY9050001157
16	THINNER FOR HEAT RESISTANT SILICONE ALUMINIUM PAINT	THINNER FOR VAR 05 & 32	HY9050001165
17	THINNER FOR ACRYLIC POLYURETHANE FINISH Paint	THINNER FOR VAR 06, 07, 08, 09, 19,24, 27,28 36 &37	HY9050001173
18	THINNER FOR ALIPHATIC ACRYLIC POLYESTER POLYURETHANE FINISH Paint	THINNER FOR VAR 10 &11	HY9050001181
19	ACRYLIC POLYURETHANE FINISH PAINT (F2) <b>Color shade: Basalt grey</b>	Two-pack aliphatic isocyanate cured acrylic finish paint.	HY9050001190
20	INERT POLYMERIC MATRIX COATING (F4) <b>Color shade: Aluminium</b>	Suitable for high temperature service and under insulation coating for CS,AS & SS	HY9050001203
21	THINNER FOR INERT POLYMERIC MATRIX COATING	THINNER FOR VAR 20	HY9050001211
22	EPOXY-HIGH BUILD MIO (I2)	polyamide cured epoxy resin medium suitably pigmented with MIO	HY9050001220

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VARNO	TECHNICAL NAME	TYPE & COMPOSITE	MATERIAL CODE
23	EPOXY-HIGH BUILD MIO	THINNER FOR VAR 22	HY9050001238
24	ACRYLIC POLYURETHANE FINISH PAINT (F2) <b>Color shade: Blue Grey</b>	Two-pack aliphatic isocyanate cured acrylic finish paint	HY9050001246
25	ZINC DUST GRAPHITE PAINT (P4) <b>Color shade: Aluminium</b>	Primer containing Zinc dust and Graphite	HY9050001254
26	THINNER FOR ZINC DUST GRAPHITE PAINT (P4)	THINNER FOR VAR 25	HY9050001262
27	ACRYLIC POLYURETHANE FINISH PAINT (F2) <b>Color shade: White Grey</b>	Two-pack aliphatic isocyanate cured acrylic finish paint	HY9050001270
28	ACRYLIC POLYURETHANE FINISH PAINT (F2) <b>Color shade: Jet Black</b>	Two-pack aliphatic isocyanate cured acrylic finish paint	HY9050001289
29	EPOXY PHENOLIC PRIMER (P5) <b>Colour Shade: Aluminium</b>	Two pack ambient temperature curing epoxy phenolic coating system	HY9050001297
31	THINNER FOR EPOXY PHENOLIC PAINT (P5)	THINNER FOR VAR-29	HY9050001319
32	HEAT RESISTANT SILICONE ALUMINIUM PAINT SUITABLE UPTO 600° C DRY TEMP. (F1) <b>Color shade: BASLT GREY (RAL7012)</b>	Single pack silicone resin based medium with Aluminium flakes.	HY9050001335
33	ACRYLIC POLYURETHANE FINISH PAINT (F2) <b>Color shade: Bluish Green</b>	Two-pack aliphatic isocyanate cured acrylic finish paint	HY9050001009

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VARN0	TECHNICAL NAME	TYPE & COMPOSITE	MATERIAL CODE
34	EPOXY-HIGH BUILD- AROMATIC (I3)	AROMATIC AMINE CURED EPOXY RESIN MEDIUM SUITABLY PIGMENTED.	HY9050001351
35	THINNER FOR AROMATIC AMINE CURED EPOXY RESIN MEDIUM SUITABLY PIGMENTED.	THINNER FOR EPOXY-HIGH BUILD- AROMATIC (I3)	HY9050001343
36	ACRYLIC POLYURETHANE FINISH PAINT (F2) <b>Color shade: Smoky Grey 692</b>	Two-pack aliphatic isocynate cured acrylic finish paint	HY9050001360
37	ACRYLIC POLYURETHANE FINISH PAINT (F2) <b>Color shade: SKY BLUE 101</b>	Two-pack aliphatic isocynate cured acrylic finish paint	HY9050001394

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### 5. Referee Methods

- Drying time - ASTM D1640
- Solids Content - ASTM D2697
- VOC Content - ASTM D3960
- Flash point - ASTM D3278

### 6. FREE FROM DEFECTS

The paint shall remain free from defects like hard settling of pigments, skinning when kept in a closed container and levering (excessive viscosity build up) during its rated shelf life. The dried coating of paint shall be free from defects like bittiness, floating of pigments, leafing/flaking of film from substrate etc.

### 7. STORING PROPERTY

When stored in a covered dry place in the original sealed container under normal temperature conditions, the material shall retain the properties prescribed in this specification for a period of 12 months after the date of manufacture, which shall be subsequent to the date of placing the order.

### 8. TEST SAMPLES

Tender samples will not be required when once the type approval is given and the supplier /manufacturer declares that the materials for which tender is given is of the same quality and composition as that of type approved sample. Representative sample of the homogenised paint shall be drawn in accordance with applicable standard.

### 9. TEST CERTIFICATES

Unless otherwise specified, three copies of test certificates shall be supplied along with each consignment. In addition, the supplier shall ensure to send one copy of test certificates along with the despatch documents to facilitate quick clearance of the material.

The test certificates shall bear the following information:

- BHEL material no. with description
- BHEL Order No. & Date
- Manufacturer's / Supplier's Name
- Trade Mark, if any
- Batch / Lot No
- Date of Manufacture & Expiry
- Quantity supplied
- Applicable Test results

### 10. PACKING AND MARKING

The paint shall be supplied in sealed and leak proof metal containers in size as per BHEL order. Each container shall bear the following information neatly written or pasted at suitable location on it.

- BHEL material no. with description
- BHEL Order No.
- Manufacturer's/Supplier's Name
- Trade Mark, if any
- Batch/Lot No.
- Date of Manufacture & Expiry
- Quantity supplied
- Paint data sheet





(Attachment to Enquiry No. XXXXXXXXXXXX Due on Date XX.XX.XXXX for submission by 11.00 hrs to open from 14.00 hrs.)		
<b>INSTRUCTIONS TO BIDDER (ITB)</b>		
<b>NOTE: Bidder to confirm in affirmative by typing "YES" or "Applicable Data" in the response column. Deviations, if any shall be recorded in deviations/comments column (Separate sheet can be attached if needed). Non deviatable clauses are indicated as "NON DEVIATABLE".</b>		
Sl. No.	DETAILED TERMS & CONDITIONS	BIDDER RESPONSE (YES/NO) / DEVIATIONS / COMMENT
<b>1</b>	<b>SCOPE OF SUPPLY:</b>	
	Signed & Sealed offers are invited for the Scope of Supply of goods or services or both as detailed in the enquiry. Relevant enclosures/supporting documents / catalogue, if any shall be enclosed to the technical offer.	
<b>2</b>	<b>DEFINITIONS</b>	
A	'The Buyer' means BHEL-HPEP, Ramachandrapuram, Hyderabad-502 032 of Bharat Heavy Electricals Limited (A Govt. of India Undertaking) incorporated under the companies Act having its registered office at BHEL House, Siri fort, New Delhi-110049, India and shall be deemed to include its successors and assigns. It may also be referred to as BHEL.	
B	'The Bidder' means the persons, firm, company or organization on whom the Purchase order is placed and shall be deemed to include the bidder's successors, representatives, heirs, executors and administrator as the case may be. It may also be referred to as Contractor, supplier or bidder.	
C	'Contract' shall mean and include the Purchase order incorporating various documents viz., Notice Inviting Tender (NIT), Offer, Letter Of Intent/Acceptance (LOI/LOA), Instruction to Bidders (ITB) and Special Conditions of Contract (SCC), specifications, inspection/quality plan, schedule of prices and quantities, drawings, if any, enclosed by Bidder/ provided by the Buyer or his authorized nominee and the samples or patterns if any to be provided under the provision of the contract. In case of any inconsistency or contradiction between any of the documents, the order of precedence shall be Purchase Order, LOI/LOA followed by Minutes Of Meeting (MOM), NIT, SCC, ITB.	
D	'Parties to the contract' shall mean the bidder and the buyer as named in the main body of the Purchase Order.	
E	'Goods/Material' shall include Works and Services which are incidental or consequential to supply.	
<b>3</b>	<b>GENERAL INSTRUCTIONS:</b>	
A	Mode of submission of offer shall be as indicated in SCC	<b>Non Deviatable</b>
B	The quotation should be neatly typed and free from over writing/ erasures. Any correction or addition must be authenticated. The offer including annexures and brochures should be submitted in English / Hindi. All Pages of Techno Commercial Bids (Main Pages), ITB, SCC should be signed and Stamped. If there is a conflict in case of bilingual submission, the submission in English will be final. Prices shall be quoted both in figures and words. In case of any discrepancy in value, the prices quoted in words shall be considered for evaluation and establishing L1 Status. Any discount / revised offer / bids submitted by a bidder on his own shall be considered, provided it is received on or before the due date and time of offer / bid submission (Part-1). Conditional discounts shall not be considered for evaluation of tenders.	<b>Non Deviatable</b>
C	Incomplete offers are liable for rejection.	<b>Non Deviatable</b>
D	Bidders to please note that the Terms & conditions contained in this document and SCC are to be read fully before submission of quotations.	<b>Non Deviatable</b>
E	Bidders are advised to comply with ITB and SCC, should there be any deviations (where deviations are permitted), it shall be entered in the deviation column. BHEL reserves the right to reject such offers or load the bid suitably for evaluation.	<b>Non Deviatable</b>
F	Offers shall be submitted directly, only by the bidder or by their authorized representative / agent and the offer should be in line with the regulatory guidelines (i.e. A valid Agency agreement between principal bidder and agent / representative shall be attached and the agreement shall cover the scope of services rendered by Agent, Agency Commission and any other information called for as per the regulatory guidelines). OEM / Mill details shall be provided if bidder is not a manufacturer. Bid envelopes shall bear the name of Bidder. In case of submission through authorized representative/agent, the name of representative/agent should also be mentioned apart from bidder name.	<b>Non Deviatable</b>
G	Offer received after the specified time and date of submission will be rejected. No further correspondence shall be entertained.	<b>Non Deviatable</b>
H	Unsolicited offers will not be considered.	<b>Non Deviatable</b>
<b>4</b>	<b>OTHER PARTICULARS (Please indicate applicable data)</b>	
A	Name of the Bid currency (freely tradable foreign currency for imports and Indian Rupees for indigenous purchase).	
B	Name of the Port of loading and Port of Discharge (applicable to imports).	



<b>5</b>	<b>BID SUBMISSION PROCEDURE FOR CONVENTIONAL TENDER:</b>	
<b>A</b>	<b>For Single Part Bids:</b>	
	The complete bid shall be submitted in a single sealed cover superscribing the Tender number and due date, addressed to Sr DGM/CMM, Vendor Complex, BHEL, Hyderabad and sent by appropriate mode to above address or dropped in tender box located at vendor complex on or before the specified time and date of submission of offers, preferably in the bidder's envelope. E- mail bids shall be sent to mail ID <a href="mailto:pricebid_hyd@bhel.in">pricebid_hyd@bhel.in</a> only as an attachment.	<b>Non Deviatable</b>
<b>B.</b>	<b>For two-Part Bids:</b>	
<b>i</b>	<p>The offer is to be submitted in two parts viz.,                      Techno-commercial Bid - (Part-I), with all technical specification &amp; scope including bill of material etc., Earnest Money Deposit (EMD)(wherever applicable) and unpriced bid with all applicable Commercial Terms and Conditions, rates of agency commission, duties, taxes and other charges, Signed and Stamped ITB and SCC, <u>except the price</u>, shall be kept in a separate sealed cover, superscribing enquiry No. (Techno-Commercial Bid) and due date                      AND                      Price Bid (Part-II), containing ONLY the price (including agency commission, if any) and the applicable duties/taxes/other charges shall be kept in a separate sealed cover superscribing Enquiry no. (Price bid) &amp; due date.</p> <p>Both the above covers (Part –I &amp; II) shall be kept in a Third cover superscribing Enquiry no. &amp; due date.</p> <p>Bidder can also submit offer through email. Technical offer to be submitted to mail ID <a href="mailto:technicalbid_hyd@bhel.in">technicalbid_hyd@bhel.in</a>, and price bid to be submitted to mail ID <a href="mailto:pricebid_hyd@bhel.in">pricebid_hyd@bhel.in</a> only as an attachment. Interchanging the information in the mails may lead to rejection of the offer. Bidder shall have no claim on e-mail offers sent to any other e-mail ID.</p> <p>In case of e-mail offers, the mail subject should contain Enquiry Number, Due date and Bidder name. Bidder address including contact details shall be mentioned in the content of the mail. Without these details, the offer is liable for rejection.</p> <p>All techno commercial terms &amp; conditions mutually agreed prior to price bid opening shall prevail and supersede any terms and conditions specified otherwise in price bid.</p>	<b>Non Deviatable</b>
<b>ii</b>	The bidders whose bids are techno commercially not accepted will be informed and EMD shall be returned wherever submitted.	
<b>iii</b>	Bidders will be allowed to submit the impact on their quoted prices due to changes in technical scope, specifications, and commercial terms/conditions as specified in NIT which in the opinion of BHEL , warrant changes in prices.	<b>Non Deviatable</b>
<b>C</b>	Bids shall be opened on due time and date in the presence of bidders who may like to be present. Only one representative of each bidder shall be permitted to attend the bid opening. Only the price bids of bidder (in case of two part bid) whose techno commercial bids are accepted will be opened later on a specified date.	<b>Non Deviatable</b>
<b>6</b>	<b>DELIVERY TERMS</b>	
<b>A</b>	<b>Indigenous Purchase</b>	
	<p>a. Terms of Delivery for dispatches to BHEL Hyderabad (HPEP) shall be FOR Destination.</p> <p>b. Terms of Delivery for Direct Dispatch (DD) items shall be Ex Works.</p> <p>i. In case specified in SCC that insurance is in customer/BHEL scope, price quoted shall include Freight charges up to Destination.</p> <p>ii. Otherwise, price quoted shall include Freight and Insurance upto Destination. However, beneficiary for insurance shall be BHEL.</p>	
<b>B.</b>	<b>Imports</b>	
	The goods shall be delivered on FCA capital airport basis in case of freight by Air and CIP basis in case of freight by Sea.	
<b>7</b>	<b>Documentation for Payment</b>	
<b>A</b>	<b>Indigenous Purchase</b>	
	<p>Following documents shall be submitted immediately on dispatch of material to BHEL HPEP / Site</p> <p>a. Original Tax Invoice (Refer ITB clause no 11 for Tax Compliance)</p> <p>b. Packing List - clearly showing number of packages, gross weight and net weight.</p> <p>c. Test/Warranty/Guarantee certificates, O&amp;M Manual (If specified in SCC)</p> <p>d. Insurance intimation/declaration certificate</p> <p>e. Pre-dispatch Inspection report /Third Party Inspection Certificates.</p> <p>f. Consignee copy of LR signed &amp; stamped by Customer/Site representative for DD Items</p> <p>g. e-waybill</p> <p>h. Any other documents as specified in SCC.</p> <p>Softcopies of the above documents shall be uploaded in Pradan portal <a href="https://hpep.bhel.com/mm">https://hpep.bhel.com/mm</a> immediately after dispatch of the material.</p>	<b>Non Deviatable</b>



<p><b>B Imports</b></p> <p>i) Bidder shall inform BHEL the readiness of material along with packing details 30 days in advance from the date of delivery. For Hazardous cargo/DG cargo, supplier must provide the following documents prior to handing over shipment to freight forwarder, wherever freight is in BHEL scope:</p> <ol style="list-style-type: none"><li>1. Valid MSDS</li><li>2. DGD certificate with appropriate UN numbers.</li><li>3. Labelling and marking on DG cargo along with photo of packaging.</li><li>4. Self-declaration for consignment</li><li>5. Packaging Certificate as per DG Standards</li><li>6. TSA Approved Truckers details to be provided to forwarder at the time of shipment</li></ol> <p>In addition to the above, supplier should ensure to comply all IATA DG regulations, if any new requirement is added in future.</p> <p>ii). Bidder shall also upload the soft copy of the dispatch documents consisting of BL / AWB, Invoice, delivery note, packing list, country of origin &amp; Test certificates and other documents as specifically indicated in the SCC in PRADAN Portal (<a href="https://hpep.bhel.com/mm">https://hpep.bhel.com/mm</a>) within Five days from the B/L date for sea shipment and One day from AWB date for Air shipment and sent to email ids: mssea@bhel.in, msair@bhel.in, cmmfe@bhel.in.</p> <p>iii) AWB/BL must contain the information of BHEL GST no., and PAN no.</p> <p><b>iv) Air Shipments:</b> Bidder shall ensure the following</p> <ol style="list-style-type: none"><li>a) Port of discharge -- Mumbai/Chennai/Hyderabad (as indicated in SCC).</li><li>b) Consignee shall be BHEL, Hyderabad. Material shall be air freighted through cargo mode only and not through Courier.</li><li>c) Upon handing over the cargo to the forwarder, bidder shall ensure the acknowledgement receipt with wordings "Cargo handed over in sound condition for Air freighting". Note: Warehouse receipt will not be considered for penalty calculations.</li><li>d) In case of CIF/ shipments, bidder shall also inform BHEL the information about discharge port agent details and cargo arrival information within one day from the date of Shipment.</li><li>e) Following dimensions of single package may be noted.<ol style="list-style-type: none"><li>i). Maximum dimension of the cargo(ODC) -- 125" x 88" x 63"</li><li>ii). Maximum weight of the cargo -- 3.5 MT.</li></ol>If any package dimension or weight exceeds the above set limits, it will be treated as Over Dimension Cargo (ODC) or Over Weight Cargo and bidder shall inform BHEL 30 days in advance to the delivery date to enable BHEL to finalize the freight forwarder.</li><li>f). If package falls under Hazardous category, bidder shall communicate BHEL 30 days in advance period with document support.</li></ol> <p><b>v) Sea Shipments:-</b> bidder shall ensure the following</p> <ol style="list-style-type: none"><li>a). Port of discharge -- Nhavaseva/Mumbai/Chennai.</li><li>b). Place of Delivery / Final Destination for CIP shipments - Nhavaseva CFS / Chennai CFS.</li><li>c). In case of FOB shipments, bidder shall handover the material to BHEL nominated forwarder and obtain the cargo receipt.</li><li>d). If the material cannot be containerized in 20 or 40 GP containers, an advance information of 30 days prior to the delivery date shall be communicated to BHEL for necessary arrangements and finalisation of freight forwarder.</li><li>e). <b>For CIP shipments</b><ol style="list-style-type: none"><li>1. In case of FCL shipments, Detention free period must be 14 days.</li><li>2. Bidder shall also inform BHEL the information about discharge port agent details and cargo arrival information within 5 days from the date of Shipment.</li><li>3. No charges for the services rendered till place of destination will be payable by BHEL. In case liner / forwarder insist for charges, not in the scope of BHEL, the same will be adjusted from bidder account.</li><li>4. In case of CIF shipments -- Bidder must select a forwarder/liner whose discharge port published tariff for THC and other services is available. Any charges over and above the published tariff will not be borne by BHEL or will be adjusted from the bidder's bill.</li><li>5. bidder must insure the cargo for 110% of material value including the freight amount.</li></ol></li><li>(vi). Recovery charges for non-submission of documents: - Bidder shall submit all the required documents to BHEL as prescribed in the Purchase order and NIT.</li></ol> <p>If BHEL incurs any charges such as Penalty, demurrage, container detention, wharfage, storage, Ground rent etc., due to non - compliance / non - submission of documents prescribed in Purchase Order/ NIT/Letter of credit, the same shall be recovered from the bidder as under:</p> <ol style="list-style-type: none"><li>1. EUROPE/USA/Black Sea/ Far East/Middle East/South East sector</li></ol> <p><b>A. For FOB Sea Consignments:-</b></p> <p>Penalty for late submission / negotiation of documents beyond 14 days shall be as under:</p>
--

Sl. no	Period (From Date of Bill of Lading)	Recoverable Charges		Recoverable Charges per day per container	
		LCL Break per day	per week/ bulk cargo	20FT Container	40FT Container
i	Upto 14th day	Nil		Nil	Nil
ii	15th day onward	USD 10		USD 110	USD 200

**B. For CIP Sea Shipments: -**  
 Bidder shall provide rates for detention charges after free period at the time of offer itself in case of engagement of 20FT Container and 40FT category. In case of late presentation of documents to the bank recovery will be effected from the Bidder as per the rates quoted by the Bidder at the time of offer in this regard.  
 In case of Break bulk cargo and LCL, Demurrage charges shall be recovered at the rate of USD 1 per Ton per day and storage charges at the rate of USD 10 per week respectively shall be charged as late presentation charges.

(vii) Description of items in invoice, packing list, BL / AWB or LR shall be same as PO item description. Bidders shall ensure that invoice shall contain PAN nos. of both bidder and BHEL along with other tax related numbers. BHEL PAN AAACB4146P and BHEL TAN HYDB00086C Any other additional documents sought by the statutory authorities, the same shall be produced by the bidder on priority basis.

(viii) Bidder shall provide package details including number of packages, gross weight, net weight etc.

(ix) The bidder shall provide the following documents at the time of submission of offer:  
 a) No Business Connection in India declaration issued by the bidder as per the format specified. (or)  
 b) (i) No Permanent Establishment in India declaration issued by the bidder as per the format specified.  
 (ii) Tax Residence Certificate issued by the bidder's tax authorities.  
 (iii) Form 10F, as attached in Annexure V, to be issued by the bidder.  
 c) In case the bidder has a Business Connection in India as per Section 9 of Income Tax Act or significant economic presence in India as per rule 11 UD of IT Act or Permanent Establishment in India as per Article 5 of Double Taxation Avoidance Agreement between India and the bidder's country, the bidder shall provide a withholding tax order issued by the Indian Income Tax authority for recovery of applicable tax.

<b>8</b>	<b>Delivery Schedule</b>		
	The tendered goods shall be delivered within the period stipulated in NIT/ SCC as accepted. Inordinate delay/early supply are liable for rejection/ Hold on payment.		<b>Non Deviatable</b>
<b>9</b>	<b>Pricing Terms</b>		
	Quoted price shall be inclusive of Packing & Forwarding and shall remain firm and valid during the execution of PO. Offers with PVC will be rejected outright except in cases where specifically called for in the SCC.		<b>Non Deviatable</b>
<b>10</b>	<b>PRICE VALIDITY :</b>		
	Unless otherwise specified, offer shall be valid for a period of 90 days from the date of bid opening (Technical bid /part-I in case of two part bid). However the prices quoted for spare parts of the Main equipment shall be kept valid for a period as specified in SCC.		<b>Non Deviatable</b>
<b>11</b>	<b>Taxes &amp; Duties (RATE TO BE INDICATED by the bidder against the space provided )</b>		



<p>A</p>	<p><b>Indigenous Purchase</b></p> <p>i) Only valid GST registered bidders will be considered for the tender. The GSTIN of the bidder should be clearly mentioned in the offer.</p> <p>ii) If bidder is exempted from GST registration under any provision of the GST Law, a declaration with due supporting documents should be furnished for considering the offer.</p> <p>iii) Bidder to quote the applicable taxes in the following manner:          - Harmonized System of Nomenclature (HSN) of Goods          - Services Accounting Code(SAC) of Services.          - IGST/CGST/SGST/UTGST: Rate of Tax to be quoted as extra in % against the space provided</p> <p>iv) Bidders to ensure correct applicability of IGST/CGST/SGST/UTGST based on the Inter / Intra state movement of goods/services.</p> <p>v) In case Bidder has opted for GST Composition Scheme, the same may be stated explicitly both in their technical and price bids. An undertaking to the effect that any change in the status of the bidder will be intimated.</p> <p>vi) Any other taxes &amp; duties not covered anywhere above may be indicated separately.</p> <p><b>Taxes deducted at source:</b>          - TDS as per the extant statutes shall be deducted.          - In case bidder does not provide PAN details, higher rate of tax shall be deducted as per the Act.          - Concessional certificates, if any, should be provided well in time for lower deduction of tax.</p>		<p><b>Non Deviatable</b></p>
	<p><b>Terms &amp; Conditions to be complied</b></p> <p>1. All invoices (incl. Credit Notes, Debit Notes) to contain BHEL HPEP GSTIN ie 36AAACB4146P1ZG. Invoices submitted should be in the format as specified under GST Law. All details as mentioned in Invoice Rules including Dealer GST registration number (GSTIN), invoice number with date of issue, quantity, rate, value, taxes with nomenclature – CGST, SGST, UGST, IGST mentioned separately, HSN Code / SAC Code etc.</p> <p>2. Reimbursement of GST amount will be made only upon completion of the following:          i. Bidder declaring such invoice in their GSTR-1 Return/ IFF          ii. Receipt of Goods or Services and Submission of Tax invoice by BHEL          iii. The tax invoice is reflected in the GSTR2B of BHEL, HPEP (buyer). Payment of GST will be made only if it is matching with data uploaded by the Bidder in GST portal.</p> <p>3. In case of discrepancy in the data uploaded by the bidder in the GSTN portal vis-a-vis the tax invoice or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit. The same would be available in PRADAN Portal for the bidder's information. Bidder has to rectify the data discrepancy in the GSTN portal or issue credit note or debit note (details also to be uploaded in GSTN portal) for the shortages or rejections in the supplies or additional claims for processing of such invoices.</p> <p>4. In cases where invoice details have been uploaded by the bidder but failed to remit the GST amount to GST Department within stipulated time, then GST on the invoices in default will be recovered from the bidder along with the applicable interest.</p> <p>5. In case GST credit is delayed/denied to BHEL due to non/delayed receipt of goods and/or tax invoice or expiry of timeline prescribed in GST law for availing such ITC, or any other reasons not attributable to BHEL, such GST amount will be recoverable from bidder along with interest levied/leviable on BHEL.</p> <p>6. GST TDS deducted as per GST Act, is uploaded in GSTN portal along GSTR7. Bidders can directly download the GST TDS Certificate from the GSTN Portal.</p> <p>7. Bidders to note that Rules &amp; Regulations pertaining to E-way bill system are to be strictly adhered to, as and when notified by Govt. authorities.</p> <p>8. Vendors who fall under the E-Invoice regulations, i.e., having an annual turnover of Rs. 10 crores (<b>Rs 5 crore w.e.f 01.08.2023</b>) in the previous year shall issue e-invoice in line with Rule 48(4) of CGST Rules failing which GST amount will not be reimbursed to the vendor even if the other requirements are fulfilled.</p> <p>9. In case the vendor is exempted by the GST department under the Rule 48(4) of CGST Rules from issuing E-invoice, a declaration as prescribed in the Notification 17/2022 - Central Tax dated 01-08-2022 shall be provided on the invoice.</p> <p>10. Vendors who do not fall under the E-Invoice regulations, i.e., whose annual turnover is less than Rs. 10 crores (<b>Rs 5 crore w.e.f 01.08.2023</b>) in the previous year have to give an undertaking indemnifying BHEL that the vendor is not falling under the E-invoice requirement category and that in case of any breach of this E-invoicing requirement, the vendor indemnifies BHEL of any consequences that may arise due to such a breach.</p> <p>11. No GST shall be levied on liquidated damages / penalty.</p>		
<p>B.</p>	<p><b>Foreign Purchase ( Imports )</b></p>		



	The offered price shall be inclusive of all the Taxes and duties as applicable in country of export / country of dispatch for the quoted price. Taxes deducted at source: a. In case of goods or services subject to Income tax in India, such tax as per the extant statute shall be recovered. b. In case bidder does not provide necessary documents for beneficial taxation (Refer clause 7-B-(ix) a-c of ITB), the TDS deduction shall be at the maximum percentage stipulated as per the provisions of Income Tax Act.		<b>Non Deviatable</b>
<b>12</b>	<b>Payment Terms: Unless otherwise specified in SCC, following shall be the terms of Payment.</b>		
<b>A</b>	<b>Indigenous:</b> a. Micro & Small Enterprises (MSEs) - 100% Direct EFT payment within 45 days b. Medium Enterprises - 100% Direct EFT payment within 60 days c. Non MSME Bidders - 100% direct EFT Payment within 90 Days Note A. Above due date is reckoned from the date of Receipt of material or 15 days from the date of submission of complete set of documents as per PO whichever is later. Payment will be made on acceptance of Material. B. MSEs (covered under MSME Act) need to register and renew periodically and update the same with BHEL C. The taxes that are reimbursed are limited to applicable taxes as on the Purchase Order delivery date or the amount actually paid whichever is less. D. Adherence to the above time schedule of payment is contingent upon Bidder complying with GST provisions and availment of Input Tax Credit by BHEL before the date of payment. E. In case of packaged items, 10% of supply value will be retained till completion of total supplies. F. Bidders to comply with <b>clause 11</b> on GST requirements G. MSE benefits are not applicable to Traders/Wholesalers registered as MSEs		
<b>B</b>	<b>Imports:</b> i) 100% payment (less Indian Agency Commission, if any) shall be through Wire Transfer with a credit period of 60 days - Cash Against Documents (CAD) ii) In case Bidder opts for Letter of Credit payment, the LC Usance period shall be 90 days with respective bank charges to respective accounts and loading of 0.50% iii) Indian Agency commission if payable and so specified in the Purchase order shall be paid in Indian Rupees, considering the SBI TT selling exchange rate, as on the date of payment after successful completion of the contract.		
<b>C</b>	<b>Conditions for LC:</b> a. LC validity period will be 90 days and for any extension, applicable charges will be to bidder's account. b. LC will be opened after successful completion of pre dispatch inspection prior to the scheduled / agreed delivery date. LC will be opened within 15 bank working days from the date of request.		<b>Non Deviatable</b>
<b>D</b>	<b>Conditions for both Indigenous &amp; Foreign Bidders:</b> a. In case Bidders insist for lesser Credit period and BHEL accepts, a loading of 0.60% for every 15 days reduction will be applicable. b. In case PBG as required is not furnished, Payment will be released deducting the BG amount, which will be paid after expiry of warranty period against submission of supplementary claim. c. Payment does not imply in any respect whatsoever a waiver of Buyer's right to performance of the Order. Buyer is entitled to set off claimable debts against claimable liabilities with the bidder by means of a setoff Note.		<b>Non Deviatable</b>
<b>E</b>	Wherever EMD is applicable, the EMD will be paid back to unsuccessful bidders within fifteen days after award of the contract. Successful bidder's EMD will be retained till submission of Performance Bank Guarantee (PBG). Tender Fee wherever applicable is not refundable. No interest shall be payable by BHEL on earnest money or security deposit or any money due to the contractor by BHEL.		<b>Non Deviatable</b>

13	<p><b>Penalty clause:</b></p> <p>In the event of delay in supply /part-supply of goods, Penalty as detailed below is leviable</p> <p>a. Penalty of 0.5% per week or part there of shall be levied, limited to a max of 10% (ten percent) of delayed portion value / order value (as specified in SCC).</p> <p>b. Penalty applicable for delay in documentation is as per SCC.</p> <p>c. Date Reckoned for Penalty</p> <ul style="list-style-type: none"> <li>- Indigenous Orders with delivery terms FOR HPEP: C Note date.</li> <li>- Indigenous Orders (Others): Date of e-waybill.</li> <li>- Imports: For CIP/CIF Orders: IGM date</li> <li>- Imports: For FOB Orders: AWB / BL date</li> <li>- Imports: For FCA/Ex Work Orders: Date of acknowledgement from Freight Forwarder.</li> </ul> <p>d. In case of Deviation to above Penalty clause, loading applicable to the extent to which not agreed by Bidder.</p> <p>e. Timelines as mentioned in the Annexure 1 will be considered for reckoning delivery.</p> <p>Penalty amount so determined along with applicable GST (for Indigenous orders) thereon shall be recovered.</p> <p>Imposition, recovery or settlement of this penalty shall not affect BHEL's right to performance, compensation and termination of the order.</p>		
14	<p><b>Excess materials</b> supplied beyond tolerance limit as specified in PO will not be paid and bidder may raise credit note for the excess/unaccepted material as per GST law.</p>		<p><b>Non Deviatable</b></p>
15	<p><b>Rejected materials</b>, if any, shall be collected by the bidder within 90 days of such communication to the bidder. Beyond this period the bidder forfeits their right to the materials.</p>		<p><b>Non Deviatable</b></p>
16	<p><b>Guarantee / Warranty Period:</b></p> <p>Wherever required, and so provided in the specifications/SCC/Purchase Order, the bidder shall guarantee that the goods supplied shall comply with the specifications laid down, for materials, workmanship and performance.</p> <p>a. Guarantee period shall be 12 months from the date of commissioning or 18 months from the date of supply whichever is earlier.</p> <p>b. In case erection &amp; commissioning is involved, guarantee period shall be 12 months from the date of commissioning.</p> <p>c. In case of equipment bought as a package which are intended to be incorporated in installations or systems, the guarantee period shall be 12 months from the date of commissioning of such equipment.</p> <p>The guarantee period shall be extended by the period during which the goods are not in compliance. If the delivery is found to be non-complaint, bidder shall replace, repair or re-execute the as requested by BHEL. If the bidder defaults on his obligations, buyer has the right to proceed to replace, repair or re-execute at the bidder's expense.</p> <p>A guarantee period as described above shall apply afresh to replaced, repaired or re-executed parts of a delivery.</p> <p><b>Loading for deviation:</b></p> <p>In case warranty specified in SCC is over and above the period mentioned in b &amp; c above; loading will be 1% per annum for the deviation in warranty end period, on the contract value. Expected commissioning period is as indicated in SCC.</p>		<p><b>Non Deviatable</b></p>
17	<p><b>PERFORMANCE BANK GUARANTEE (PBG) (Applicable in case mentioned in SCC)</b></p> <p>In case enquiry specifically spells out PBG requirement, PBG is to be submitted by Bidder in requisite format as per Annexure VII.</p> <p>Further detailing on PBG as specified in SCC.</p> <p>The PBG shall be for the performance of the goods and shall remain binding not withstanding such variations, alterations or extensions of item as may be made, give, conceded or agreed to between the Bidder and BHEL under these Terms and conditions or otherwise.</p>		<p><b>Non Deviatable</b></p>
<p><b>NOTE: Deviations (Commercial as well as Technical) from the tender specifications and conditions are generally not acceptable. However, deviation if any, shall be brought out clearly with proper justification in the offer. The deviation, if considered by BHEL, shall be loaded for comparison, while evaluating the offer. If a bidder unconditionally withdraws any deviation before price bid opening, the same shall not be loaded. Loading criteria in respect of major commercial conditions where deviations if any are accepted shall be as per clause No.18. The Bidders may specifically note the following.</b></p>			
18	<p><b>Evaluation and Loading Criteria:</b></p>		

	<p>i) Evaluation Currency for this tender shall be "INR".</p> <p>ii) Evaluation of prices shall be done item-wise unless otherwise specified in the SCC.</p> <p>iii) Evaluation shall be on the basis of delivered cost, i.e. "Total Cost to BHEL" w.r.t the finalized technical scope and commercial conditions (after considering incidence of applicable taxes and duties and loading).</p> <p>iv) In the course of evaluation, if more than one Bidder happens to occupy L1 status, effective L1 will be decided by soliciting discounts from the respective L1 Bidders. In case more than one Bidder happens to occupy the L1 status even after soliciting discounts, the L1 Bidder shall be decided by a toss/draw of lots, in the presence of the respective L1 Bidders or their representatives. Ranking will be done accordingly. BHEL decision in such situations shall be final and binding.</p> <p><b>INDIGENOUS</b></p> <p>a. Bidder shall ensure to indicate the applicable taxes against each line item, failing which the same will be considered as inclusive/NIL.</p> <p>b. Ex-works offers received (as against FOR Destination mentioned in enquiry) shall be loaded by 2% of Ex-works value.</p> <p>c. GST and any other charges quoted will be added to the base price. However, in case input credit is available for GST (SGST, CGST/IGST), the same shall be excluded for arriving at "Total Cost to BHEL"</p> <p><b>IMPORTS</b></p> <p>For evaluation of offers in foreign currency, exchange rate (TT selling rate of State Bank of India) as on the date of bid opening (Part-I, in case of two-part bids) shall be considered. If the relevant day happens to be a bank holiday, then the forex rate as on the previous bank (SBI) working day shall be taken.</p> <p>In case of foreign Bidders, the quoted CIP price shall be loaded by the following factors to arrive at "Total Cost to BHEL":</p> <ul style="list-style-type: none"> <li>- Import duty as applicable on the date of Part-I bid opening.</li> <li>- Loading will be as per the table below</li> </ul> <table border="1" data-bbox="210 920 903 1424"> <thead> <tr> <th></th> <th>Ex Works</th> <th>FOB/FC A</th> <th>CIF/CFR</th> <th>CIP</th> </tr> </thead> <tbody> <tr> <td>Foreign Inland freight and insurance</td> <td>2%</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Marine freight and marine insurance</td> <td>3%</td> <td>3%</td> <td></td> <td></td> </tr> <tr> <td>Destination Port handling charges</td> <td>0.50%</td> <td>0.50%</td> <td>0.50%</td> <td></td> </tr> <tr> <td>clearing charges &amp; inland freight and insurance</td> <td>2%</td> <td>2%</td> <td>2%</td> <td>2%</td> </tr> </tbody> </table> <p>COMMON LOADING FOR IMPORTS &amp; INDIGENOUS that will be added for arriving the "Total Cost to BHEL"</p> <p>A. Loading on Deviated Penalty clause shall be 10% or to the extent to which the bidder has opted for deviation.</p> <p>B. Loading for payment terms as per clause 12 of ITB</p> <p>C. Loading for deviation in Warranty &amp; PBG as per clause 16,17.</p>		Ex Works	FOB/FC A	CIF/CFR	CIP	Foreign Inland freight and insurance	2%				Marine freight and marine insurance	3%	3%			Destination Port handling charges	0.50%	0.50%	0.50%		clearing charges & inland freight and insurance	2%	2%	2%	2%
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19	Procurement directly from the manufacturers/ suppliers shall be preferred. However, no agent shall be allowed to represent more than one manufacturer/ supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer/ supplier or the manufacturer / supplier could bid directly but not both. In case bids are received from both from the manufacturer/ supplier and the agent, bid received from the agent shall be ignored.																									
20	<b>RIGHT OF REJECTION /NON- PLACEMENT OF PO:</b> BHEL reserves the right to accept or reject any or all bid/s in full or part without assigning any reason whatsoever.																									
21	<b>INTEGRITY PACT</b> Bidders shall have to enter into Integrity Pact with BHEL as per Annexure VI - for Tender value of rupees two crores and above and shall be signed by the authorized signatory along with the offer, failing which Bidder's offer will be rejected.																									
22	<b>Public Procurement</b>																									
A	<b>Make in India</b> For this Procurement, the local content to categorize a bidder as a Class I local bidder / Class II local bidder / Non-Local bidder and purchase preference to Class I local bidder, is as defined in Public Procurement (Preference to Make in India) order No P-45021/2/2017-PP(BE-II) dated 04-06-2020 issued by DPIIT as amended from time to time. Proforma for self-certification for minimum local content and auditor's certification is given in Annexure III.																									
B	Any Bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with competent authority. GOI website <a href="https://www.mea.gov.in/">https://www.mea.gov.in/</a> to be referred for latest details of competent authority and exemptions . Proforma for self-certification for compliance is given in Annexure IV.																									
C	<b>Startups:</b> For Start-ups duly registered with DPIIT (Copy of certificate to be provided), condition of prior turnover and prior experience in Public Procurement may be relaxed subject to meeting of Quality and Technical Specifications. Startups are exempt from paying EMD.																									
23	<b>Benefits earmarked for Purchase from Micro &amp; Small Enterprises (MSEs) – Indigenous Purchase</b>																									
A	All Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy are exempt from Paying EMD. NSIC/UDYAM registered bidders shall submit NSIC/UDYAM Certificate along with bid documents. Date to be reckoned for determining the deemed validity will be the last date of Technical bid submission. Non- submission of such document will lead to consideration of their bid, at par with other bidders and MSE status of such bidders shall be shifted to Non- MSE Category till the bidder submits these documents.																									

<b>B</b>	In tender, MSEs quoting price within price band of L1+15% shall also be allowed to supply a portion of requirement by bringing down their price to L1 price in a situation where L1 price is from someone other than a MSE and such MSE shall be allowed to supply at least 25% of total tendered value. In case of more than one such MSE, the supply shall be shared proportionately. Out of these 25% minimum 3% shall be earmarked for MSEs owned by women and 6.25% for MSEs owned by SC/STs who submit the relevant documents.
<b>C</b>	If an enterprise falling under MSME category as defined in the Act, graduates to a higher category from its original category or beyond the purview of the Act, it shall continue to avail all non-tax benefits of its original category notified by the Ministry of Micro, Small and Medium Enterprise for a period of three years from the date of such graduation to the higher category.
<b>D</b>	BHEL HPEP is registered with RXIL (TReDS) platform. MSME bidders are requested to get registered with RXIL (TReDS) platform to avail the facility as per the GOI guidelines.
<b>24</b>	Inspection Measuring and Test Equipment (IMTE) used by the Bidder/ Contractor or sub-contractor shall be calibrated, maintained and controlled. Calibration shall be valid and IMTE maintained in sound condition during usage.
<b>25</b>	ISO-9001, ISO14001 & OHSMS 45001 shall be complied.
<b>26</b>	If BHEL registered supplier is not quoting against this NIT, supplier shall send regret letter positively with valid reasons for not participating. Repeated lack of response on the part of supplier may lead to deletion of such registered supplier from BHEL's approved supplier's list as per BHEL SEARP Guidelines.
<b>27</b>	<p><b>Risk Purchase clause:</b></p> <p>In case bidder fails/delays to supply whole or part of the ordered items or supplies defective items or fails to fulfil any other terms and conditions given in Purchase Order/Contract, BHEL has the right to terminate the order/contract or withdraw balance scope of work/supply and make the purchase of such material / services from elsewhere at the risk and cost of the defaulted bidder. The bidder is liable for the additional expenditure / difference in Cost, if any, including consequential losses which BHEL may sustain by reason of risk purchase in addition to the applicable LD as per the order/contract. Non-performance of contract attracts penal provisions in line with BHEL guidelines for Suspension of Business Dealings (SBD).</p>
<b>28</b>	Any other terms and conditions of the bidder attached / referred against the tender enquiry will not be considered.
<b>29</b>	All drawings, patterns and tools supplied by BHEL or made at BHEL's expense are BHEL's property. These cannot be used or referred to any other party and must be used only in the execution of BHEL's orders.
<b>30</b>	Any amount payable by the bidder under any of the conditions of this contract shall be liable to be adjusted against any amount payable to the bidder under any other work / contract awarded by BHEL HPEP or any other BHEL Units. This is without prejudice to any other action as may be deemed fit by BHEL.
<b>31</b>	The bids of the bidders who are on the banned list and also the bids of the bidders, who engage the services of the banned firms, will be rejected. The list of firms banned by BHEL is available on BHEL web site: <a href="http://www.bhel.com">www.bhel.com</a>
<b>32</b>	<b>Ordering and confirmation of order</b>
	<p>The bidder shall send the order acceptance within one week from the date of LOI/Purchase order or such other period as specified/agreed by the Buyer. Buyer reserves the right to revoke the order placed if the order confirmation differs from the original order placed. Buyer shall be legally bound, only if agreed for any deviation explicitly in writing. The acceptance of deliverables or supplies by Buyer as well as payments made in this regard shall not imply acceptance of any deviations. The Purchase order will be deemed to have been accepted if no communication to the contrary is received within one week (or the time limit as specified /agreed by the Buyer) from the date of P.O. Buyer, is at liberty to send signed P.O. through electronic media such as e-mail and the receipt of which shall be treated as receipt of order.</p>
<b>33</b>	<b>Execution</b>
	The whole contract is to be executed in the most workman like manner, substantial and approved as per the contracted terms.
<b>34</b>	<b>Progress Report</b>
	<p>The bidder shall render such report as to the progress of work and in such form as may be called for by the Buyer from time to time. The submission and acceptance of such reports shall not prejudice the rights of the buyer in any manner. Bidder shall communicate to BHEL immediately, the change of address, ownership, contact person(s), the mobile numbers and e-mail of the dealing person concerned. Milestones shall be periodically updated by bidder through PRADAN Portal (<a href="https://hpep.bhel.com/mm/">https://hpep.bhel.com/mm/</a>). Non updation will adversely affect service rating of bidder performance.</p>
<b>35</b>	<b>Non-disclosure Obligations</b>

	<p>Drawings, technical documents or other technical information received by one party shall not without the consent of the other party, be used for any other purpose than that for which they were provided. They may not, without the consent of the submitting party, otherwise be used or copied, reproduced, transmitted or communicated to third parties. All information and data contained in general product documentation, whether in electronic or any other form, are confidential and binding only to the extent that they are by reference expressly included in the contract.</p> <p>The bidder shall, as per agreed date/s but not later than the date of delivery, provide free of charge any information and/or drawings which are necessary to permit the Buyer to erect, commission, operate and maintain the product. Such information and drawings shall be supplied as specified in technical specification.</p> <p>All intellectual properties, including designs, drawings and product information etc. exchanged during the formation and execution of the contract shall continue to be the property of the submitting party.</p> <p>The bidder shall provide Buyer with all information pertaining to the delivery in so far as it could be of importance to Buyer. The bidder shall not reveal confidential information to its own employees not involved with the tender/contract and its execution and delivery or to third parties, unless Buyer has agreed to this in writing beforehand. The bidder shall not be entitled to use the Buyer's name in advertisements and other commercial publications including website without prior written permission from Buyer.</p> <p>In the event of violation of the confidentiality as agreed, BHEL will take legal action as deemed fit. Non-disclosure agreement to be entered as per <b>Annexure- II</b> wherever applicable.</p>
<b>36</b>	<b>Inspection and Testing</b>
<b>A</b>	The goods and stores shall be manufactured by approved quality system and each part/component may be inspected and tested by the Buyer prior to shipment and shall comply with relevant requirements. Buyer has the right to inspect at any stage during manufacture/ delivery.
<b>B</b>	<p>Buyer or his authorized representative shall be entitled at all reasonable times during execution to inspect, examine and test at the bidder's premises the material and workmanship of all stores to be supplied under the contract, and if the part of the stores are being manufactured at other premises, the bidder shall obtain for buyer or his authorized representative permission to inspect, examine and test as if the said stores are being manufactured at the bidder's premises. Such inspection, examination and testing, if made shall not release the bidder from any obligation under the contract.</p> <p>For indigenous bidders all costs related to first inspection request shall be borne by the buyer and the cost of subsequent inspections due to non-readiness of material/rework/ rejections shall be borne by the bidder. In case of imports all inspection charges including third party inspections if any shall be borne by the bidder. The cost of inspection staff/third party specified by the Buyer shall be borne by bidder unless otherwise specifically agreed. If the contract provides for tests on the premises of the bidder or any of his sub-contractor/s, bidder shall be responsible to provide such assistance, labor, materials, electricity, fuels, stores, apparatus, instruments as may be required and as may be reasonably demanded to carry out such tests efficiently. Cost of any type test or such other special tests shall be borne by the bidder unless otherwise specifically agreed in the contract. The Bidder shall give the authorized representative of the buyer reasonable notice in writing of the date on and the place at which any stores will be ready for inspection/ testing as provided in the Contract. Annexure – I, may strictly be complied with for the time lines. Any delay in submission of the documents by the bidder will not alter the delivery date.</p>
<b>37</b>	<b>Quality and Condition of the Deliverables</b>
	The bidder shall be responsible for compliance with applicable technical, safety, quality, environmental requirements and other regulations in relation to products, packaging and raw and ancillary materials.
<b>38</b>	<b>Packaging and Dispatch</b>
	<p>The bidder shall package the deliverables safely and carefully and pack them suitably in all respects considering the peculiarity of the material for normal safe transport by sea/air/rail/road to its destination suitably protected against loss, damage, corrosion in transit and the effect or tropical salt laden atmosphere. The packages shall be provided with fixtures/hooks and sling marks as may be required for easy and safe handling by mechanical means. Special packaging conditions/ environmental conditions as defined in the NIT shall be fully complied.</p> <p>Each package must be marked with consignee name, address, P.O. number, Package Number, gross weight &amp; net weight, dimensions (L x B x H) and bidder's name. The packing shall allow for easy removal and checking of goods on receipt and comply with carrier's conditions of packing or established trade practices. Packing list for goods inside each package with P.O. item No. &amp; quantity must also be fixed securely outside the box to indicate the contents. If any consignment needs special handling instruction, the same shall be clearly marked with standard symbols/instructions. Hazardous material should be notified as such and their packing, transportation and other protection must conform to relevant regulations.</p>
<b>39</b>	<b>Contract variations; Increase or decrease in the scope of supply</b>
	<p>Buyer may vary the contracted scope during execution due to exigencies of project requirement.</p> <p>If the bidder is of the opinion that the variation has an effect on the agreed price or delivery period, Buyer shall be informed of this immediately in writing along with technical details, and in the event of additional work, submit a quotation with regards to the price and period involved, as well as the effect this additional work will have on the other work to be performed by the bidder. Wherever unit rates are available in the contract, the same shall be applied to such additional work. The bidder shall not perform additional work before buyer has issued written instructions/amendment to the purchase order to that effect. The work which the bidder should have or could have anticipated in terms of delivering the service (s) and functionality (ies) as described in this agreement should be executed by the bidder without any price implication.</p> <p>In case of no change in the scope / technical specifications, bidder shall endeavor to keep the material ready and intimate the same to BHEL within the contractual delivery date, failing which, the delay if any will be attributed to supplier, and any upward price variation thereof for delivery at a later date is not admissible.</p>
<b>40</b>	<b>Rejected/Short shipments/ warranty/guarantee replacements</b>
	In case of any short shipment during initial supply which is subsequently dispatched by the bidder or any guarantee / warranty replacements shall be dispatched on "DDP-Delivered duty paid BHEL stores" basis for imported items and "FOR-BHEL Stores/designated destination" basis for indigenous items.
<b>41</b>	<b>Export Administration Regulations</b>
	If a delivery includes such technology and / or supply that is subjected to the export regulations the bidder shall obtain due permissions, approvals, license etc.
<b>42</b>	<b>Force Majeure</b>

	<p>The bidder shall not be considered in default if delay occurs due to causes beyond their control such as Acts of God, Natural calamities, Fire, Frost, Flood, Civil War, civil commotion, riot, Government Restrictions.</p> <p>Only those causes that have duration of more than seven days shall be considered cause of force majeure. Notification to this effect duly certified by local chamber of commerce/statutory authorities with supporting documents shall be given by the bidder to BHEL by registered letter/courier service immediately without loss of time.</p> <p>In the event of delay due to such causes the delivery schedule shall be extended for a length of time equal to the period of Force Majeure or at the option of BHEL the order may be cancelled. Such cancellation would be without any liability whatsoever on the part of BHEL.</p> <p>In the event of such cancellation the bidder shall refund any amount advanced or paid to the bidder by BHEL and deliver back any material issued to him by BHEL and release facilities, if any provided by BHEL.</p>
<b>43</b>	<b>Non-waiver of Defaults</b>
	If any individual provision of the contract is invalid, the other provisions shall not be affected.
<b>44</b>	<b>Settlement of Disputes</b>
	<p>Except as otherwise specifically provided in the contract, all disputes concerning questions of the facts arising under the contract, shall be decided by the Buyer, subject to written appeal by the bidder to the buyer, whose decision shall be final.</p> <p>Any disputes of differences shall to the extent possible be settled amicably between the parties thereto, failing which the disputed issues shall be settled through arbitration</p> <p>The bidder shall continue to perform the contract, pending settlement of disputes(s).</p>
<b>45</b>	<b>Conciliation clause</b>
	<p>CONCILIATION CLAUSE FOR CONDUCTING CONCILIATION PROCEEDINGS UNDER THE BHEL CONCILIATION SCHEME, 2018: The Parties agree that if at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the agreement, contract or the Memorandum of Understanding, penalty deduction, time extension), which the Parties are unable to settle mutually, arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.</p> <p>The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Procedure in <a href="http://www.bhel.com/index.php/story_details?story=2454">http://www.bhel.com/index.php/story_details?story=2454</a> . The Procedure together with its Formats will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in this ITB</p>
<b>46</b>	<b>ARBITRATION (WITH SOLE ARBITRATOR)</b>
	<p>Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the Parties, in respect of any dispute or difference; arising out of the formation, breach, termination, penalty deduction, validity or execution of the Contract; time extension, or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract, then, either Party may, by a notice in writing to the other Party refer such dispute or difference to the sole arbitration . Sole arbitrator to be appointed by Head of the Unit - BHEL , HPEP .</p>
	The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the Parties.
	Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be Sangareddy / Hyderabad, Telangana. The language of arbitration shall be English and the documents shall be submitted in English.
	The cost of arbitration shall initially be borne equally by the Parties subject to the final apportionment of the cost of the arbitration in the award of the Arbitrator.
	<p>Subject to the arbitration in terms of clause 45, the courts at Sangareddy, Telangana State shall have exclusive jurisdiction over any matter arising out of or in connection with this contract.</p> <p>Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner except where the Contract has been terminated by either Party in terms of this Contract.</p>
	<b>ARBITRATION FOR CONTRACT WITH PUBLIC SECTOR ENTERPRISE (PSE) OR A GOVERNMENT DEPARTMENT</b>
	In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE 0M No 4(1)/2013-DPE(GM/FTS 1835 dated 22-05-2018
<b>47</b>	<b>Applicable Laws and jurisdiction of Courts</b>
	This agreement shall be construed and interpreted in accordance with the laws of India and shall have exclusive jurisdiction of Sangareddy/Hyderabad courts, Telangana, India.
<b>48</b>	<b>BHEL-Fraud prevention policy shall be adhered to.</b>
	<p>The Bidder along with its associate/ Collaborators/ Sub-contractors/ sub-bidders/ consultants/ service providers shall strictly adhere to BHEL Fraud Prevention policy displayed on BHEL Website <a href="http://www.bhel.com">http://www.bhel.com</a> and shall immediately bring to the notice of BHEL management about any fraud or suspected fraud as soon as it comes to their notice.</p> <p>List of nodal officers is hosted on BHEL Hyderabad website <a href="https://hpep.bhel.com/">https://hpep.bhel.com/</a>.</p>
<b>49</b>	<b>Suspected Cartel Formation</b>
	The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). 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. In case , the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies / guidelines .
<b>50</b>	<b>Conflict of Interest:</b>
	"A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity's interests. The bidder found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:



- a) they have controlling partner (s) in common; or  
b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or  
c) they have the same legal representative/agent for purposes of this bid; or  
d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; or  
e) Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from. one bidding manufacturer in more than one bid; or  
f) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorize only one agent/dealer. There can be only one bid from the following:  
1. The principal manufacturer directly or through one Indian agent on his behalf; and  
2. Indian/foreign agent on behalf of only one principal; or  
g) A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid; or  
h) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business. "

Note: Purchase officer has to fill Annexure-I while sending enquiry

**( Attachment to Enquiry No. XXXXXXXXXX Due on Date XX.XX.XXXX**

**Special Conditions of Contract ( SCC )**

Rev 01

Sl.No	ITB Clause No.	Clause	Available Options	BHEL requirements	Bidder response
1	3	Mode of Submission	Conventional / E-Procurement		
2	5	Type of Bid	Single part / Two Part / Three Part		
3	6	Indigenous purchase - Destination	BHEL, RCPuram, Hyderabad / Site		
4			Destination in case of Site		
		Mode of Shipment	Air / Sea		
5		Imports purchase - Destination	Mumbai / Navasheva / Hyderabad / Others		
6		Freight	Customer / BHEL / Vendor		
7		Insurance	Customer / BHEL / Vendor		
8			<b>Basic Custom Duty</b>	Project Imports/ Concessional Duty / Merit Duty / Nil / Others Duty Structure	
9	9	Price validity	_____ days		
		Optional Spares price validity	_____ Months / years from the date of _____		
10	8	Delivery Period	_____ weeks / _____ Months ( Staggered delivery to be detailed )		
11	18	Evaluation basis	Itemwise / Total		
12	Others	Quantity Split	Splittable / Non-Splittable		
13			(Tabulation for splitting to be detailed )		
14	9	Price Variation Clouser (PVC)	Applicable / Not applicable		
15	12	Payments Terms	Inland Letter of Credit (ILC) In case Bidder opts for ILC Payment, the LC Usance period shall be 120 days with all charges to bidder's account and loading of 0.50%. Note : Wherever it is felt commercially prudent to include Inland Letter of Credit (ILC) payment term, a separate note, before publishing tender, with proper justification for inclusion of ILC payment terms to be concurred by Head of Finance and approved by Product/Functional Head (not less than GM).		
16		Tender cost	Applicable / Not applicable		
17		Earnest Money Deposit (EMD)	_____% of tender value / Not applicable		
18		E & C Supervision Charges	Applicable / Not applicable		
19			If applicable , max 2% of Total contract value .		
20		Bank Guarantee against milestone payment	(If envisaged to be detailed with % )		
21		Others	Contract execution Bank Guarantee	_____% of PO Value to be submitted after receipt of PO / Not Applicable	
22	17	Performance Bank Guarantee			
	7	Additional documentation for payment	Test / Warranty / Guaranty / O&M Manual etc.,		
24	13	Max Penalty applicable on	Delayed portion / Order value		
25	Others	Contract Specific Penalty Clause	including Documentation delay , Performance , E&C etc., to be detailed , considering Project , Unit , Set , etc.,		
26	16	Guarantee / Warranty Period	Applicable Clause a/b/c		
27		Contract Specific Guarantee / Warranty Period	Specific period if any to be detailed		
28	Others	Expected commissioning period	_____ months from the date of supply		
29	48	Detailed Billing Breakup (BBU)	Applicable / Not applicable		
30			(If applicable , Bidder shall provide detailed billing break-up in respect of the major items/components (stipulated in the tender) as part of offer .)		
31	Others	Customer approval of vendor	Applicable / Not applicable		
32		Drawing approval	Applicable / Not applicable		
33		QAP approval	Applicable / Not applicable		
34	36	Inspection by	BHEL / BHEL TPI / Vendor TPI / Customer		
35	Others	Financial / Commercial PQC	Applicable / Not applicable		
36			if Applicable to be detailed		

Note:

Special Conditions of Contract (SCC) shall be got approved by the Checklist approving authority, for all tenders.

Annexure-I			
Major Activity timelines shall be considered for indigenous purchases			
S No	Activity	Agency	Timeline
1	PO acknowledgement	Vendor	_____ days from PO
2	Submission of Drawings and QP	Vendor	_____ days from PO
3	Approval of Drawings and QP	BHEL/Customer	_____ days from PO
4	Raising of Inspection Call	Vendor	_____ days from PO
5	Inspection completion	Self/BHEL/Third party inspection agency	_____ days from inspection call date
6	Despatch Instructions	BHEL	_____ days from inspection report
7	Receipt of Material	Vendor	_____ days from Despatch instructions

Above is illustrative only. Purchase department can add more activities depending on nature of product/contracts

However absence of this annexure in NIT will entail non processing of delivery extension cases in case of delay in supplies of goods owing to reason attributable to BHEL.

## Annexure - III

### **Proforma for self-certification by Supplier for minimum local content on their letter head for tender value less than Rs 10 Crore**

"We \_\_\_\_\_ (Name of Manufacturer) undertake that we meet the mandatory minimum Local Content (LC) requirement i.e. \_\_\_\_\_ (to be filled as notified in the policy) for claiming Purchase Preference linked with Local Contents under the Govt. policy against tender no. \_\_\_\_\_."

## Annexure - IV

### **Proforma for self-certification by Supplier for Compliance to Clause No 20 (B)**

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and I certify that M/s.... (Name of firm) is **not from such a country/is from such a country** (delete whichever is NOT applicable) and has been duly registered with the Competent authority (delete if NOT applicable) . I hereby certify M/s ..... fulfills all requirements in this regard and is eligible to be considered . ( where applicable , valid registration by the competent authority shall be attached )

Sd/-

Authorised Signatory with Stamp