

**ITEM: SUPPLY OF CORONA RINGS FOR INSULATORS AS PER ANNEXURE No. A/12303374/17.02.2023**

**TECHNICAL PQR, DRAWING, QAP: AS ATTACHED**

**QUANTITY: As per AS ATTACHED BOQ**

**BILL OF MATERIAL (BOM):**

Sr. No.	BHEL Item Code	Description of Item/Specification	Quantity	UOM	Technical Specification/ Drawings/QAP
1	125622	CORONA R_(T) Ø500HT210_39831401825/01	70	EA	AS ATTACHED

- Bidder to provide signed & Sealed GEM BID, drawings, QAP & Annexure No. **A/12303374/17.02.2023** with their offer.
- To get MSE preference, bidder to choose MSE purchase preference on GEM portal otherwise purchase preference shall not be applicable.
- To get MII preference, bidder to choose MII purchase preference on GEM portal and bidder to submit signed local content declaration otherwise purchase preference shall not be applicable.
- Item shall be manufactured as per attached drawing.
- Delivery Schedule: **Material shall be supplied to BHEL SBD MP Stores, Bangalore within 45 days from the date of PO.**
- Delivery location: BHEL SBD MP Stores Bangalore-560012 as per GeM consignee.
- Price basis: **Price shall be firm till completion of the contract. No PVC is applicable.**
- Payment terms: Hundred Percent (100%) of basic price of the material supplied as per PO, along with 100% taxes & duties (as applicable) shall be payable on pro-rata as per following manner
  - 45 days for Micro & Small Enterprises (MSEs)
  - 60 days for Medium Enterprises
  - 90 days for Non-MSME
 from the date of receipt of goods at BHEL SBD and receipt of complete documents at BHEL SBD as specified in Clause No. 9 below subject to acceptance of materials. [i.e. date of acceptance of material or date of submission of complete set of documents (whichever is later) shall be considered for reckoning the due date of payment.]
- Documents to be Submitted by Vendor for payment:
  - Original GST compliant invoice. (Original for Buyer copy)
  - Copy of LR/ Delivery Challan for local supplier in place of LR
- Invoice to be made as per the prevailing GST format only. TDS Deductions applicable as per GST Law & TDS certificate shall be issued by BHEL in line with the latest amendment in GST Law.
- Technical PQR- requirement i.e. Years of Past Experience of 01 year as per technical PQR
- Past Experience shall be supply of 100% of bid quantity.
- Minimum Average Annual Turnover of the Bidders: Not applicable.
- Inspection and Quality Clearance: As per attached QAP

BOQ FOR 12303374							
Item Number	Item Code	Item Description	Quantity	UOM	Unit Price (Inclusive of TAX) [QUOTED/NOT QUOTED]	Applicable GST %	HSN Code
1	125622	CORONA R._(T) Ø500HT210_ 39831401825/01	70.00	EA			

FIRST ANGLE PROJECTION

ALL DIMENSIONS ARE IN mm.

01

3 983 14 01825

DRG No.

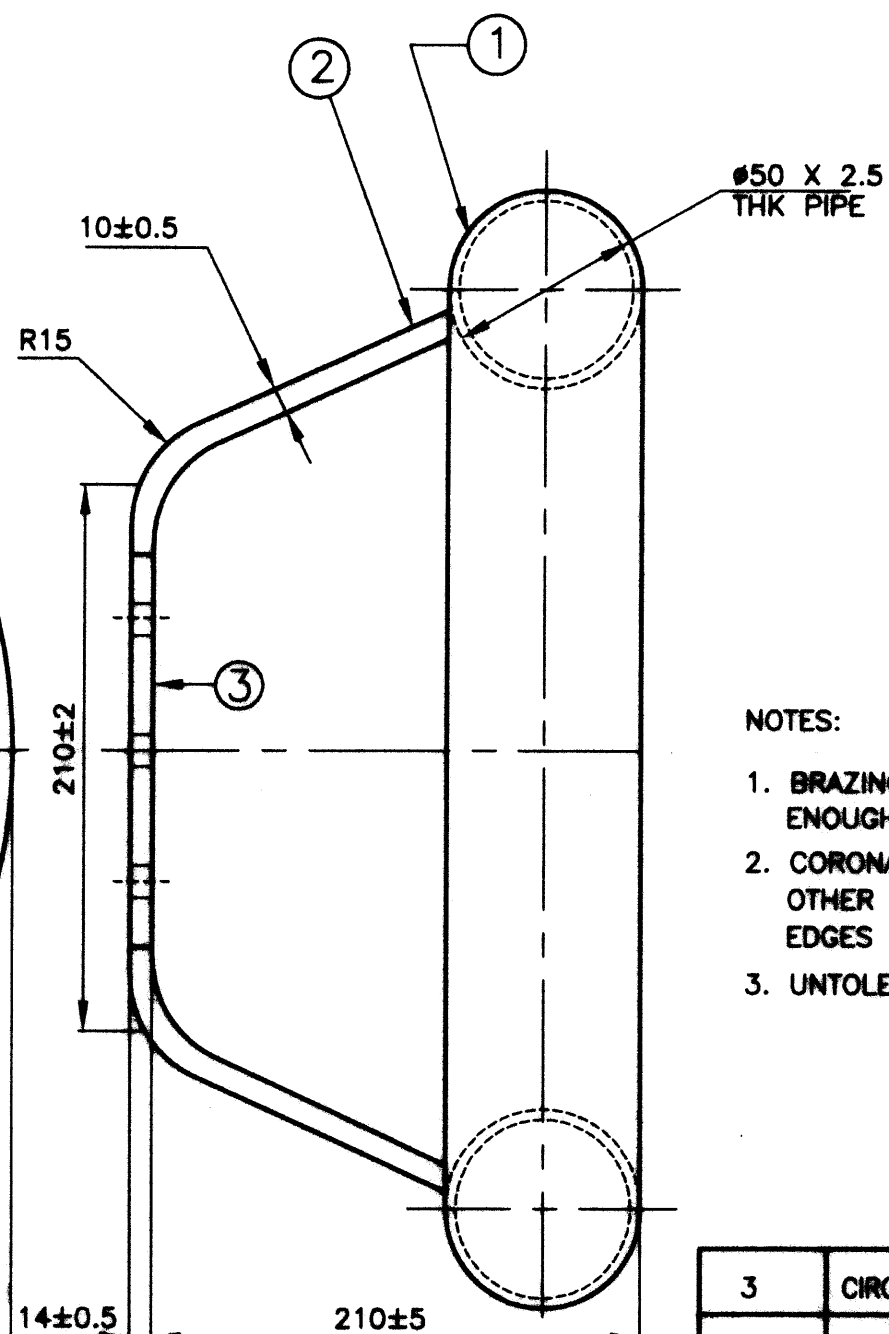
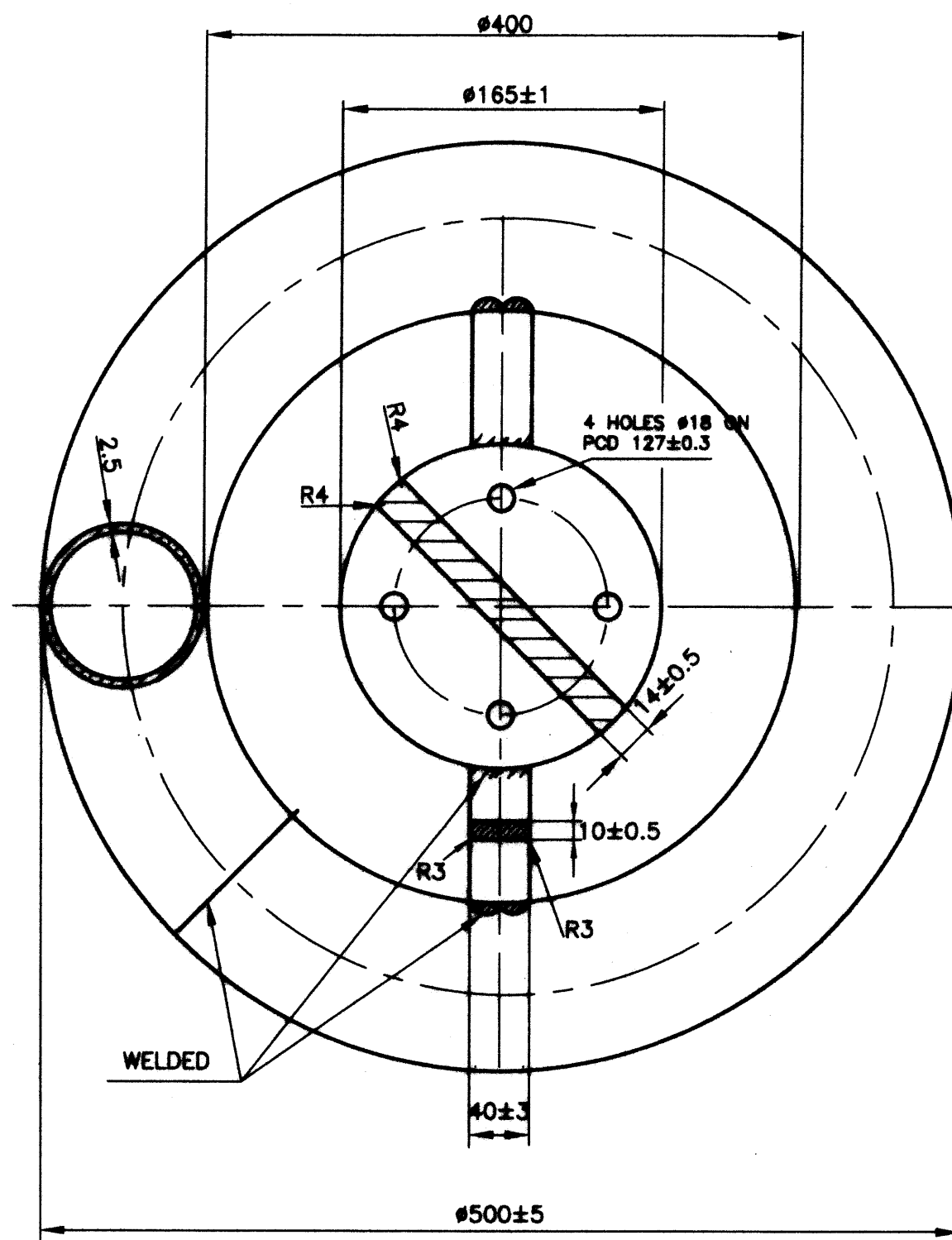
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REF. DRG. No.

SIGN AND DATE

INVENTORY No.

REV	DATE	ALTERED	REV	DATE	ALTERED	REV	DATE	ALTERED
		CHECKED			CHECKED	01	16.1.19	CHECKED
						MATERIAL SPECIFICATION WAS AL.ALLOY 63400/6063, IS: 733		
						PH.No: 5966		



CONTROLLED COPY

## NOTES:

1. BRAZING OF #1, #2 & #3 MUST BE STRONG ENOUGH TO WITHSTAND VIBRATIONS IN SERVICE.
2. CORONA RING #1 MUST BE BUFFED VERY SMOOTH FINISH. OTHER COMPONENTS ALSO MUST BE FREE FROM SHARP EDGES AND BURRS.
3. UNTOLERANCED DIMENSIONS ARE MAINTAINED WITHIN  $\pm 2\%$ .

ITEM No.	DESCRIPTION	MATERIAL	QTY.
3	CIRCULAR PLATE	ALUMINIUM ALLOY 63401/19501 IS 5082	1
2	SUPPORT	ALUMINIUM ALLOY 63401/19501 IS 5082	2
1	CORONA RING	ALUMINIUM ALLOY 63401/19501 IS 5082	1

BHARAT HEAVY ELECTRICALS LTD.,  
ELECTROPORCELAINS DIVISION  
BANGALORE - 560 012

	NAME	SIGN	DATE
DRN	MAHESH K	<i>K. Mahesh</i>	09.01.2016
CHD	A V M	<i>A. V. M.</i>	08.01.2016
APPD	S S P	<i>S. S. P.</i>	05.01.2016

WT (kg)	REF TO ASSY.DRG	ITEM No.	No. OF ITEMS
2			
(approx)			

CARD CODE	DRAWING No.	REV.
	3 983 14 01825	01
	No. OF SHEETS	

SUPERSEDES DRG. No.

SHT.24. SIZE A3 420 x 297



## PRE-QUALIFICATION REQUIREMENTS

Ref. No. : SBD/Ins. Prodn /PQR-Corona Ring

Dt : 27/01/23

ITEM : CORONA RING for Porcelain Insulators

P.R.No. 12303374

S. No.	BHEL qualification requirement	Documents Required
	<b>I. PRE QUALIFICATION CRITERIA</b>	
1	Vendor should have supplied 70nos. of Corona Rings during last one year.	Submitted / Not submitted (vendor should provide documentary evidence by way of P.O/Invoice/SRV etc.
2	Material supplied should be durable and vendor should guarantee for its durability for minimum three years in use.	Acceptable / Not acceptable
3	Vendor should accept for pre despatch inspection of material as per BHEL drawings.	Vendor to confirm Acceptable / Not acceptable

Note: Vendors to indicate clearly for acceptance or non-acceptance against each point. Technical bid can be processed further only when points mentioned above are responded and required documents are submitted.

  
**MANOJ KUMAR**  
DGM/Ins.Production

ಮನೋಜ್ ಕುಮಾರ್, ಉಪ ಪ್ರಧಾನ ವ್ಯವಸ್ಥಾಪಕರು / ಒಂಗಾಡೆ ಉತ್ಪಾದನೆ  
मनोज कुमार, उप महाप्रबंधक / इन्सुलेटर उत्पादन  
MANOJ KUMAR, DGM / Insulator Production  
BHEL-SBD, BENGALURU-560012



**BHARAT HEAVY ELECTRICALS LIMITED**  
SOLAR BUSINESS DIVISION  
PROF.C.N.R RAO CIRCLE, IISc POST MALLESHWARAM,  
BENGALURU-560012

### STANDARD QUALITY ASSURANCE PLAN

ITEM: GRADING RING/ CORONA RING  
(CASTED/ TUBULAR)

QP NO.: EPD\_QP\_CI\_2021-22\_0004

REV. NO.: 00

DATE: 01.07.2021

PAGE 1 OF 2

SL. NO	ITEM/ COMPONENT	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY	REMARKS
									M   B	
1.	2.	3.	4.	5.	6.	7.	8.	9.	D*	** 10.
A	INSPECTION BY SUPPLIER AT THEIR WORKS									
A.1	Corona Ring	Chemical Composition of Al Raw Material	Major	Chemical	1 / Ingot batch	BHEL Drg	BHEL Drg	Supplier TC	√	P   V
A.2		Visual Inspection	Major	Physical	100%	BHEL Drg	BHEL Drg	Supplier TC	√	P   V
A.3		Dimensions & Markings of Corona Ring including holder, clamp, support	Major	Physical	1% of Batch / Min 10 nos.	BHEL Drg	BHEL Drg	Supplier TC	√	P   V
A.4		Dye Penetration Test on weld joints	Major	Physical	100%	BHEL Drg/ IS 3658	Free from crack , surface discontinuities	Inspection Report	√	P   V
A.5	Fasteners	Dimension	Major	Physical	4 per lot	BHEL Drg	BHEL Drg	Supplier TC	√	P   V
A.6		Chemical Composition	Major	Chemical	1 per lot/type of Fasteners	BHEL Drg	BHEL Drg	Supplier TC	√	P/ V   V
A.7		Mass/Thickness of Zinc Coating on galvanized components	Major	Physical	4 per lot	IS 2633	No permanent deposit of copper for 1 min each after 4 dips	Supplier TC	√	P   V
B	PRE DISPATCH INSPECTION /INSPECTION AT BHEL WORKS									
B.1	Corona Ring	Visual	Major	Physical	5% of Lot	BHEL Drg	BHEL Drg	Inspection Report	-	-   P
B.2		Dimensions & Markings of Corona Ring including holder, clamp, support	Major	Physical	2 nos/1000 nos or part thereof	BHEL Drg	BHEL Drg	Inspection Report	-	-   P
B.3		Dye Penetration Test on weld joints	Major	Physical	IS:2500 PtlI AQL 0.25%	BHEL Drg/ IS 3658	Free from crack ,surface discontinuities	Inspection Report	-	-   P


**LEGEND:** \*D: RECORDS, IDENTIFIED WITH "TICK" (√) SHALL BE ESSENTIALLY INCLUDED BY VENDOR IN QA DOCUMENTATION.

\*\* M: MANUFACTURER/SUB-VENDOR, B: BHEL/BHEL NOMINATED INSPECTION AGENCY

P: PERFORM W: WITNESS AND V: VERIFICATION.



FOR BHEL USE

PREPARED BY: D K MUKHERJEE		APPROVED BY: ADITYA KUMAR MOURYA	
		QUALITY ASSURANCE	

 BHEL-SBD		BHARAT HEAVY ELECTRICALS LIMITED SOLAR BUSINESS DIVISION PROF.C.N.R RAO CIRCLE, IISc POST MALLESHWARAM, BENGALURU-560012				<b>STANDARD QUALITY ASSURANCE PLAN</b>		QP NO.: EPD_QP_CI_2021-22_0004 REV. NO.: 00 DATE: 01.07.2021 PAGE 2 OF 2				
						ITEM: GRADING RING/ CORONA RING (CASTED/ TUBULAR)						
SL. NO	ITEM/ COMPONENT	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY		REMARKS
										M	B	
1.	2.	3.	4.	5.	6.	7.	8.	9.	D*	**		11.
B.4		Chemical Composition of Aluminium Corona Ring	Major	Chemical	1 per lot	BHEL Drg	As per Grade in BHEL Drg	Inspection Report	-	-	P	NABL accredited third party lab
B.5	Fasteners	Dimension	Major	Physical	4 per lot	BHEL Drg	BHEL Drg	Inspection Report	-	-	P	
B.6		Mass/Thickness of Zinc Coating on galvanized components	Major	Physical	4 per lot	IS 2633	No permanent deposit of copper for 1 min each after 4 dips	Inspection Report	-	-	P	

**Notes:**

- For first time supply of any new item by the vendor, vendor should take sample approval before bulk manufacturing from Quality/Engineering.
- The SQAP shall be read in conjunction with BHEL Specification mentioned in Purchase Order and shall deem to include any additional tests as per the specification/Standard.
- Material supplied shall be in line with BHEL Purchase Order, Technical Specification, Approved Drawings, applicable Standard References, or any other document/references.
- In case of any contradiction between this SQAP, BHEL Specifications the following precedence shall be followed:
  - 1<sup>st</sup>: BHEL Purchase Order Specification;
  - 2<sup>nd</sup>: This STANDARD QUALITY ASSURANCE PLAN & Applicable standard;
  - 3<sup>rd</sup>: Manufacturers plant standards
- Packing shall be as per BHEL purchase order.
- BHEL reserves the right for pre-dispatch inspection at vendor works by BHEL or BHEL nominated agency.
- In case of pre-dispatch inspection, Supplier shall raise the inspection call in the CQIR with inspection agency as BHEL SBD URL: [www.cqir.bhel.in](http://www.cqir.bhel.in) and shall upload Test Certificates, Internal Tests Report as per this SQAP in CQIR Portal. TC to be verified w.r.t to inspected item during inspection and to be signed by the inspector.
- Original Test Certificates, Internal Tests Report (Duly Sealed & signed), test bar per heat per lot as per this SQAP shall be sent along with lot for review.

<b>LEGEND:</b> *D: RECORDS, IDENTIFIED WITH "TICK" (✓) SHALL BE ESSENTIALLY INCLUDED BY VENDOR IN QA DOCUMENTATION. ** M: MANUFACTURER/SUB-VENDOR, B: BHEL/BHEL NOMINATED INSPECTION AGENCY P: PERFORM W: WITNESS AND V: VERIFICATION.	FOR BHEL USE			
				
	PREPARED BY: D K MUKHERJEE	APPROVED BY: KUMAR MOURYA	ADITYA	QUALITY ASSURANCE