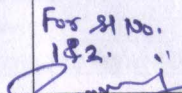


**CORRIGENDUM TO TENDER ENQUIRY 2024 BHEL 38592 1**

1. BID SUBMISSION DATE OF TENDER ENQUIRY EXTENDED TILL 26<sup>TH</sup> SEPTEMBER 2024 1345 HRS IST
2. QUALITY REQUIREMENT REVISED – REVISED QAP ENCLOSED
3. EMD NOT REQUIRED FOR THIS TENDER ENQUIRY

MANUFACTURER'S NAME AND ADDRESS			QUALITY PLAN				PROJECT					
BHEL	VENDOR'S NAME	ITEM	STAINLESS STEEL-CLAD PLATES	QP NO.	QA/F/QP/035/NPCIL	PACKAGE						
		DRG. NO	AS PER PO	REV.: 01	CONTRACT NO.							
		SPEC	AA10732		CONTRACTOR		BHEL					
		REV	AS PER P.O.	Page 1 of 3								
		TDC	AS PER PO									
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			REMARKS
									M	C	N	
1	2	3	4	5	6	7	8	9	D	10		11

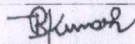
1.	BASE PLATE MATERIAL (SINGLE PIECE WITHOUT JOINT)	REVIEW OF TCs FOR (i)DIMENSIONAL CHECK (ii)CHEMICAL COMPOSITION (iii)MECHANICAL PROPERTIES (iv)ULTRASONIC TESTING (v)HEAT TREATMENT	MAJOR	VISUAL CHEMICAL MECHANICAL UT HT CYCLE	100%	ASME SA-516 Gr.70 (S1, S5 & S12)	ASME SA-516 Gr. 70 (S1, S5 & S12)	TC	√	P	V	V	* REFER NOTE-5 OF GR of customer approved QP.  RAW- MATERIAL ON THE BASIS OF CO-RELATED ORIGINAL OR CO-RELATED COMPUTER GENERATED MATERIAL TEST CERTIFICATE (MTC), ORIGINATED FROM OEM (SEALED AND SIGNED BY OEM) FROM NPCIL/BHEL APPROVED MATERIAL MANUFACTURER IS ACCEPTABLE. VENDOR TO PROVIDE CONFIRMATION FOR COMPLIANCE OF THIS REQUIREMENT.  -HOLD POINTS OF CUSTOMER (NPCIL), WORK CAN NOT BE PROCEED FURTHER WITHOUT CUSTOMER CLERANCE FOR BASE PLATE MATERIAL MTC AND CLAD SHEET MATERIAL TC.
2.	CLAD SHEET MATERIAL. (IN CASE OF EXPLOSION BONDING, ONLY ONE JOINT IS ALLOWED IN CLAD SHEET MATERIAL) (SINGLE PIECE WITHOUT JOINT FOR OTHER BONDING PROCESS)	REVIEW OF TCs FOR (i)CHEMICAL COMPOSITION (ii)MECHANICAL PROPERTIES (iii)DIMENSIONAL CHECK	MAJOR	VISUAL CHEMICAL MECHANICAL	100%	ASTM A 240 Gr. 316L	ASTM A 240 Gr. 316L	TC	√	P	V	V	
3.	WELD SEAM LOCATION AND ORIENTATION SHALL BE PROVIDED BY MANUFACTURER FOR APPROVAL, BEFORE SEAM WELDING OF CLAD SHEET.								√	P	V		CLAUSE 3, 4 AND 5 ARE ONLY APPLICABLE IN CASE OF EXPLOSION BONDING.
4.	WELDING PROCEDURE QUALIFICATION	BHEL APPROVED WPS & PQR	MAJOR	REVIEW OF WPS & PQR	100%	ASME SEC.IX	ASME SEC.IX	WPS & PQR	√	P	V		
5.	SEAM WELDING OF CLAD SHEET	SEAM WELDING	MAJOR	(i)RADIOGRAPH IC TEST (ii)DPT	100%	ASME SEC.VIII Div. 1	ASME SEC.VIII Div. 1	I.R.	√	P	V		

MANUFACTURER/SUB CONTRACTOR	CONTRACTOR	LEGEND: ! D: RECORDS IDENTIFIED WITH 'TICK' SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION. !! M: MANUFACTURER / SUBCONTRACTOR C: BHEL/ NPCIL APPROVED TPIA N: CUSTOMER INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHP' OF NTPC	REVIEWED BY	APPROVED BY
	<i>For 31 No. 182.</i> 			



MANUFACTURER'S NAME AND ADDRESS			QUALITY PLAN				PROJECT					
BHEL	VENDOR'S NAME	ITEM	STAINLESS STEEL-CLAD PLATES		QP NO.	QA/F/QP/035/NPCIL REV.: 01		PACKAGE				
		DRG. NO.	AS PER PO					CONTRACT NO.				
		SPEC	AA10732					CONTRACTOR		BHEL		
		REV	AS PER P.O.		Page 2 of 3							
		TDC	AS PER PO									
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			REMARKS
									M	C	N	
1	2	3	4	5	6	7	8	9	D	10		11

6.	BASE PLATE MATERIAL and CLAD SHEET MATERIAL	Visual and dimension	MAJOR	Visual and measurement	100%	AA 10732	AA 10732 For thickness - ASME SA 264 Cl. 11.2		√	P	W		-BASE PLATE MATERIAL (SINGLE PIECE WITHOUT JOINT). - CLAD SHEET MATERIAL. (1. IN CASE OF EXPLOSION BONDING, ONLY ONE JOINT IS ALLOWED IN CLAD SHEET MATERIAL. 2. SINGLE PIECE WITHOUT JOINT FOR OTHER BONDING PROCESS)
7.	BONDING	BONDING	MAJOR	VISUAL	100%	AA 10732	AA 10732	I.R.	√	P	V		
8.	CLADDED PLATE AFTER BONDING	Visual and dimension	MAJOR	Visual and measurement	100%	AA 10732	AA 10732 For thickness - ASME SA 264 Cl. 11.2		√	P	W		-BASE PLATE MATERIAL (SINGLE PIECE WITHOUT JOINT). - CLAD SHEET MATERIAL. (1. IN CASE OF EXPLOSION BONDING, ONLY ONE JOINT IS ALLOWED IN CLAD SHEET MATERIAL. 2. SINGLE PIECE WITHOUT JOINT FOR OTHER BONDING PROCESS)
9.	In Case of any non-bonding beyond acceptable limits, cladded tube plate shall be repaired only after prior approval from BHEL and NPCIL, Please refer customer approved QP for inspection stages and BHEL/BHEL TPIA & Customer interfaces.												
10.	STRESS RELIEVING	STRESS RELIEF	MAJOR	TIME-TEMP CHART	100%	VENDOR STANDARD	VENDOR STANDARD	TC	√	P	V		
11.	FLATTENING	FLATNESS	MINOR	STRAIGHT EDGE	100%	AA 10732	AA 10732	I.R.	√	P	V		
12.	MACHINING	MACHINING TO FINAL DIMENSION	MAJOR	DIMENSION	100%	BHEL PO AND STANDARD	BHEL PO AND STANDARD	I.R	√	P	V		

MANUFACTURER/SUB CONTRACTOR	 CONTRACTOR	LEGEND:	REVIEWED BY	APPROVED BY
		!! D: VRECORDS IDENTIFIED WITH 'TICK' SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION.		
		!! M: MANUFACTURER / SUBCONTRACTOR C: BHEL/ NPCIL APPROVED TPIA N: CUSTOMER		
		INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION		
		ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHP' OF NTPC		



MANUFACTURER'S NAME AND ADDRESS			QUALITY PLAN				PROJECT					
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		SPEC	AA10732			CONTRACTOR		BHEL				
		REV	AS PER P.O.		Page 3 of 3							
		TDC	AS PER PO									
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			REMARKS
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1	2	3	4	5	6	7	8	9	D	10		11

13.	TENSILE TEST	TENSILE TEST	MAJOR	MECHANICAL	100%	AA10732	AA10732	TC	√	P	W	V	-HOLD POINTS OF CUSTOMER (NPCIL), WORK CAN NOT BE PROCEED FURTHER WITHOUT CUSTOMER CLERANCE FOR BASE PLATE MATERIAL MTC AND CLAD SHEET MATERIAL TC.
14.	DUCTILTY TEST	DUCTILITY BEND TEST	MAJOR	(i)CLADDING MATERIAL IN TENSION (ii)CLADDING MATERIAL IN COMPRESSION	100%	AA10732	AA10732	TC	√	P	W	V	
15.	SHEAR STRENGTH TEST	SHEAR TEST	MAJOR	MECHANICAL	100%	AA10732	AA10732	TC	√	P	W	V	
16.	ULTRASONIC TEST & VISUAL	UT & VISUAL	MAJOR	NDT	100% SCAN	ASTM A 578 acceptance level Level C and SA264 Quality level 1	ASTM A 578 acceptance level Level C and SA264 Quality level 1	TC	√	P	W	V	
17.	CORROSION RESISTANCE	IGC TEST	MAJOR	TESTING	1 PER HEAT OF SS/HT BATCH	ASTM A 262 PRACTICE- E	ASTM A 262 PRACTICE- E	TC	√	P	W	V	
18.	DRILLING OF HOLES IN CLAD PLATE	Dimension of tube hole, Ligaments, Pitch & Overall Dimension, OVALITY, SURFACE FINISH	MAJOR	MEASUREMEN T	100%	DRAWING, TDC	DRAWING, TDC	DIEMSI ONAL REPOR T	√	P	W	W *	*For Tube Sheet holes: 10% by NPCIL
19.	DIMENSIONAL INSPECTION	LENGTH, WIDTH, THICKNESS, FLATNESS	MAJOR	DIMENSIONAL	100%	AA10732 & BHEL PO	AA 10732 & BHEL PO For thickness - ASME SA 264 Cl. 11.2	DIEMSI ONAL REPOR T	√	P	W		


MANUFACTURER/SUB CONTRACTOR	CONTRACTOR	LEGEND:	REVIEWED BY	APPROVED BY
		! D: RECORDS IDENTIFIED WITH 'TICK' SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION. !! M: MANUFACTURER / SUBCONTRACTOR C: BHEL/ NPCIL APPROVED TPIA N: CUSTOMER INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHP' OF NTPC		



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BHEL	VENDOR'S NAME	ITEM	STAINLESS STEEL-CLAD PLATES		QP NO.	QA/F/QP/035/NPCIL		PACKAGE					
		DRG. NO.	AS PER PO			REV.: 01		CONTRACT NO.					
		SPEC	AA10732					CONTRACTOR		BHEL			
		REV	AS PER P.O.			Page 4 of 3							
		TDC	AS PER PO										
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS		CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS		AGENCY		REMARKS
1	2	3		4	5	6	7	8	9	D	10		11

18.	MARKING AND PACKING	VISUAL 1) There shall be no visual debonding at the edges of clad plates. 2) The clad plates shall be dispatched in piles/stack. Weight of each stack/pile shall be covered with polythene/rubber/any soft material sheet to avoid any damage to SS surface. Top most clad plate of each pile/stack shall be finally completely covered with minimum 2mm thick GI/any metal sheet after covering its SS surface with polythene/rubber/any soft material sheet. Each Stack of clad plates and facilitate lifting of stack by slings. <b>Packing to be done as per vendor's drawing duly approved from BHEL.</b>		MAJOR	VISUAL	100%	TDC, AA10732 & BHEL PO	TDC, AA10732 & BHEL PO	I.R.	√	P	W	
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For customer clearance: customer approved QP shall be followed.

		LEGEND: !! D: √RECORDS IDENTIFIED WITH 'TICK' SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION. !! M: MANUFACTURER / SUBCONTRACTOR C: BHEL/ NPCIL APPROVED TPIA N: CUSTOMER INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHP' OF NTPC	REVIEWED BY	APPROVED BY
MANUFACTURER/SUB CONTRACTOR	CONTRACTOR			