SL No.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS
					M	C/ N			D*	M	C	N	
1	2	3	4	5	6	7	8	9	10	11			12
1.0	**Raw Material**												
1.1	Base Metal (Backing Steel, Single piece without joint)	a. Chemical Composition b. Mechanical Properties C. UT as per ASTM A578 (Level B)	A	Review MTC for each Batch / Lot / Heat	100 %	100 %	ASME A 36 & Data Sheet/ Specification	ASME A 36 & Data Sheet/ Specification	MTC	√	P	V	V	
1.2	Clad Material Titanium (ASME SB 265 Gr. II)	a. Chemical Composition b. Mechanical Properties	A	Review MTC for each Batch / Lot / Heat	100 %	100 %	Data Sheet / Specification / ASME SB 265 Gr. II	Data Sheet / Specification / ASME SB 265 Gr. II	MTC	√	P	V	V	
2.0	**In-Process Inspection before Explosion Operation**												

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					M	C/ N			D*	M	C	N	
1	2	3	4	5	6	7	8	9	10	11			12
2.1	Pre-Explosion Inspection	a. Dimension Verification b. Marking Verification c. Visual Inspection of Surfaces d. Alloy steel traceability shall be maintained e. Checks for surface polishing	B	Visual & Measurement	100%	-	Manufacturer Procedure / ASTM B898 / /MTC	Manufacturer Procedure / ASTM B898 /MTC	Internal Inspection Report	√	P	-	-	
2.2	Explosion Bonding	a. Process Compliance	B	Review	100%	-	Manufacturer Procedure / ASTM B898	Manufacturer Procedure / ASTM B898	Internal Inspection Report	-	P	-	-	
2.3	Initial UT	Initial UT after explosion	B	Review	100 %	-	ASTM A265 , ASTM A578 & UT Procedure	UT Procedure	UT Report	√	P	V	V	

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1	2	3	4	5	6	7	8	9	10	11			12
2.4	Visual & dimensional	Visual & dimensional checks after hot rolling	B	Measurement	100 %	-	ASTM B898	Tech Spec & ASTM B898	Internal Inspection Report	√	P	V	V	
2.5	Heat Treatment	Stress Relieving: - Loading temp: - 400°C(Max) Rate of heating: - 100°C/Hr.(Max) Soaking temp- 610±10°C Soaking time- 30 minutes (Min) Rate of Cooling– 100°C/Hr. Unloading temp- 400°C	B	HT Chart Review	100%	100%	ASME Sec VIII Div 1Edition 2017	ASME Sec VIII Div 1Edition 2017	Heat Treatment charts	√	P	V	V	
2.6	Flattening	Flatness	B	Straight Edge	100%	100%	ASTM B898	ASTM B898	IR	√	P	V	V	
3.0	**Composite Clad Plate**												

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					M	C/ N			D*	M	C	N	
1	2	3	4	5	6	7	8	9	10	11			12
3.1	Visual	Surface	B	Visual	100 %	20 %	ASTM B898 / Specification	Tech Spec	Internal Inspection Report	√	P	W	V	
3.2	Dimensional Inspection	**a.** Dimensional b. Straightness / flatness / Diagonal, Surface etc. **c.** Thickness of cladding	B	Measurement	100 %	20 %	ASTM B898 & Drawing / Specification	Tech Spec & Drawing	Internal Inspection Report	√	P	W	V	Thickness measurement as per ASTM E376
3.3	NDT	Visual & Bond Quality	A	Ultrasonic Testing	100 %	20 %	ASTM A265 , ASTM A578 & UT Procedure	UT Procedure & Bond Quality ASTM A265 Class 3	Inspection Report / NDT Report	√	P	W	V	
3.4	Cladded Plate	Corrosion Resistant Alloy (CRA)	B	PMI	100%	20%	ASTM A265	ASTM A265	Inspection Report	√	P	W	V	

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					M	C/ N			D*	M	C	N	
1	2	3	4	5	6	7	8	9	10	11			12
3.5	Tensile Test of Composite Plate (Base Metal)	Tensile & Chemical Properties	B	1 Sample per plate	100 %	10 % of total no. plates	ASTM B898 / Shall not be less than Min. specified TS of the BM	ASTM B898 / Shall not be less than Min. specified TS of the BM	Lab Test Report /IR	√	P	W	V	TS: Tensile Strength BM: Base Metal
3.6	Bonding Quality / Shear Strength of the alloy cladding and base metal	Check on Shear Block	B	1 Sample per plate	100 %	10 % of total no. plates	ASTM B898 / Shall not be less than 140 MPa	ASTM B898 / Shall not be less than 140 MPa	Lab test report /IR	√	P	W	V	
3.7	Ductility Test	Ductility Bend Test	B	Cladding Material in Tension & Compression	100%	10%	ASTM B898	As per Applicable code / Specification	Inspection Report/ TC	√	P	W	V	
3.8	PMI	PMI checks for cladding layer	B	PMI	100 %	10 %	ASME SB265 Gr.2	ASME SB265 Gr.2	PMI Report	√	P	W	V	
4.0	**Packing**													

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					M	C/ N				D*	M	C	N	
1	2	3	4	5	6	7	8	9	10	11				12
4.1		Surface protection on clad side and base metal	C	Visual	100%	100%	As per POS Specifications	Tech Spec	Inspection Report	√	P	V	-	As Applicable
4.2		Marking: Standard, size, plate No., Company logomark, etc.,	C	Visual	100%	100%	ASME Sect. II Part A & Sect. V Edition 2017	Tech Spec & Drawing	Inspection Report	√	P	V	-	No hard punch on clad side.
4.3	Inspection Clearance	Scope Completion, Review of Document Dossier	B	Review	100%	100%	POS / PO & QAP	Tech Spec & Drawing	MICN	√	P	H	-	