









		ERECTION WELDING SCHEDULE										PG NO : 24								
		CUST No : 1828,1829,1830										PG NAME : Boiler Integral Piping and Fittings								
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Start up system								
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : - CUST DOC REV : -								
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW											
							Qty in Nos.		Qty in gms	Qty in Nos.										
								Ø2.5	Ø3.15	Ø4.0						SPEC. NO	ACC NORM			
11	0-24-808-01063	PIPE + VALVE	SA106GrC + SA216WCC	406.5	55	GTAW + SMAW	55 	ER70S-A1	E7018-1			1004/04	100	610 ± 15	100% RT					
							4	527	117	192	1147			140						
12	0-24-808-01063	PIPE + PIPE	SA106GrC + SA106GrC	406.5	55	GTAW + SMAW	55 	ER70S-A1	E7018-1			1004/04	100	610 ± 15	100% RT					
							2	264	59	96	574			140						
13	0-24-808-01063	PIPE + PIPE	SA106GrC + SA106GrC	33.4	9.09	GTAW + SMAW	9.09 	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift					
							4	19	48	-	-									
14	0-24-808-01063	PIPE + PIPE	SA106GrC + SA105	168.3	25.4	GTAW + SMAW	25.4 	ER70S-A1	E7018-1			1004/04	100	610 ± 15	100% RT					
							1	54	13	20	27			65						
15	0-24-805-01060	PIPE + PIPE	SA106GrC + SA105	508	80	GTAW + SMAW	80 	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)					
							1	155	37	60	649			200						
16	0-24-805-01060	PIPE + TEE	SA106GrC + SA234WPC	508	80	GTAW + SMAW	80 	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)					
							3	463	110	180	1947			200						
17	0-24-805-01060	PIPE + ELBOW	SA106GrC + SA234WPC	508	80	GTAW + SMAW	80 	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)					
							8	1233	292	478	5191			200						
18	0-24-805-01060	PIPE + VALVE	SA106GrC + SA216WCC	508	80	GTAW + SMAW	80 	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)					
							4	617	146	239	2596			200						
19	0-24-805-01060	PIPE + PIPE	SA106GrC + SA106GrC	33.4	9.09	GTAW + SMAW	9.09 	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift					
							4	19	48	-	-									
20	0-24-805-01060	PIPE + VALVE	SA106GrC + SA105	33.4	9.09	SMAW	10 	-	E7018-1			1021/02	Nil	Nil	10% LPI or MPI					
							2	-	-	5	-									
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.	
R Gopinath								GUNASEKARAN V				17-09-2019		1828-24-STU-EWS			0		2/3	
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ERECTION WELDING SCHEDULE

PG NO : 24

CUST No : 1828,1829,1830

PG NAME : Boiler Integral Piping and Fittings

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)

SYSTEM DESCRIPTION : Start up system

WELDING CODE : IBR / ASME

PRESSURE PARTS/~~NON-PRESSURE PARTS~~

CUST DOC NO : -

CUST DOC REV : -

SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV											
				SIZE	THICK		Qty in Nos.	GTAW Qty in gms	SMAW																				
									Qty in Nos.																				
									Ø2.5	Ø3.15					Ø4.0														
21	0-24-805-01060	PIPE + PIPE	SA106GrC + SA106GrC	48.3	10.15	GTAW + SMAW	10.15 ▽	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift														
							1		9	8	4									-									
22	0-24-805-01060	PIPE + NOZZLE	SA106GrC + SA105	508	80	GTAW + SMAW	80 ▽▽	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)														
							1		155	37	60			649						200									
23	0-24-807-01062	PIPE + PIPE	SA106GrC + SA105	558.8	76.2	GTAW + SMAW	76.2 ▽▽	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)														
							1		180	41	66			675						195									
24	0-24-807-01062	PIPE + ELBOW	SA106GrC + SA234WPC	558.8	76.2	GTAW + SMAW	76.2 ▽▽	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)														
							8		1437	321	526			5396						195									
25	0-24-807-01062	PIPE + VALVE	SA106GrC + SA216WCC	558.8	76.2	GTAW + SMAW	76.2 ▽▽	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)														
							4		719	161	263			2698						195									
26	0-24-807-01062	PIPE + PIPE	SA106GrC + SA106GrC	33.4	9.09	GTAW + SMAW	9.09 ▽	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift														
							4		19	48	-			-															
27	0-24-807-01062	PIPE + PIPE	SA106GrC + SA106GrC	73	14.02	GTAW + SMAW	14.02 ▽	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift														
							1		14	11	12			-															
28	0-24-807-01062	PIPE + NOZZLE	SA106GrC + SA105	558.8	76.2	GTAW + SMAW	76.2 ▽▽	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)														
							1		180	41	66			675						195									
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.			REV NO :		PAGE NO.											
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SUMMARY LIST FOR SITE ELECTRODES

CUST NO : 1828,1829,1830

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)

PG NO : 24

PG NAME : Boiler Integral Piping and Fittings

SYSTEM DESCRIPTION : Start up system			

[illegible]

NOTES :

1. RESERVE 25% ADDED.
2. QUANTITY GIVEN IS PER BOILER.
3. THIS FIELD WELDING SCHEDULE IS FOR REFERENCE PURPOSE ONLY.


EWS DOC ID : 1828-24-STU-EWS REV : 0


PREPARED BY : R Gopinath












CHECKED BY :












APPROVED BY : GUNASEKARAN V












DATE : 17-09-2019

		ERECTION WELDING SCHEDULE										PG NO : 24									
		CUST No : 1828,1829,1830										PG NAME : Boiler Integral Piping and Fittings									
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Spray system									
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : -					CUST DOC REV : -				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC					WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW												
									Qty in Nos.												
								Ø2.5	Ø3.15	Ø4.0							SPEC. NO	ACC NORM			
80	0-00-047-16469	PIPE + PIPE	SA106GrC + SA106GrC	88.9	11.13	GTAW + SMAW	11.13 ∇	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT						
							8	165	122	57	-										
81	0-00-047-16469	PIPE + VALVE	SA106GrC + SA216WCC	88.9	11.13	GTAW + SMAW	11.13 ∇	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT						
							4	83	61	29	-										
82	0-00-047-16469	PIPE +CONNECTOR	SA106GrC + SA182F12CL2	88.9	11.13	GTAW + SMAW	11.13 ∇	ER70S-A1	E7018-1			1017/04	125	Nil	100% RT						
							4	83	61	29	-										
83	0-00-047-16469	CONNECTOR + CONNECTOR	SA182F12CL2 + SA182F22CL3	88.9	11.13	GTAW + SMAW	11.13 ∇	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT						
							4	83	61	29	-			60							
84	0-00-047-16469	CONNECTOR + VALVE	SA182F22CL3 + SA217WC9	88.9	11.13	GTAW + SMAW	11.13 ∇	ER90S-B3	E9018-B3			1014/03	150	680-720	100% RT						
							4	83	61	29	-			60							
85	0-00-047-16469	PIPE + VALVE	SA217WC9 + SA335P91	88.9	11.13	GTAW + SMAW	11.13 ∇	ER90S-B3	E9018-B3			1038/05	220	745 ± 15	100% RT						
							4	139	61	29	-			30							
86	0-00-047-16469	PIPE + VALVE	SA335P91 + SA217WC9	88.9	15.24	GTAW + SMAW	15.24 ∇∇	ER90S-B3	E9018-B3			1038/05	220	745 ± 15	100% RT						
							4	111	26	42	12			60							
87	0-00-047-16469	PIPE + TEE	SA335P91 + SA234WP91	88.9	15.24	GTAW + SMAW	15.24 ∇∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% UT						
							4	111	43	57	17			40							
10	0-00-047-16470	PIPE + ELBOW	SA335P91 + SA234WP91	88.9	15.24	GTAW + SMAW	15.24 ∇∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% UT						
							30	831	319	426	123			40							
11	0-00-047-16470	PIPE + PIPE	SA335P91 + SA335P91	88.9	15.24	GTAW + SMAW	15.24 ∇∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% UT						
							10	277	107	142	41			40							
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.				REV NO :		PAGE NO.	
R Gopinath								GUNASEKARAN V				17-09-2019		1828-24-SPR-EWS				0		2/11	
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		ERECTION WELDING SCHEDULE					PG NO : 24													
		CUST No : 1828,1829,1830					PG NAME : Boiler Integral Piping and Fittings													
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)					SYSTEM DESCRIPTION : Spray system													
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS			CUST DOC NO : -			CUST DOC REV : -							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW											
									Qty in Nos. Ø2.5 Ø3.15 Ø4.0											
12	0-00-047-16470	PIPE + VALVE	SA335P91 + SA217C12A	88.9	15.24	GTAW + SMAW	15.24 ∩∩ 2	ER90S-B9 56	E9015-B91 22 29 9			1036/08	220	745 ± 15 40	100% UT					
13	0-00-047-16470	PIPE + ELBOW	SA335P91 + SA182F22CL3	33.4	9.09	SMAW	10 ∇ 8	- -	E9018-B3 - 19 -			1113/02	220	745 ± 15 30	100% LPI or MPI					
14	0-00-047-16470	PIPE + VALVE	SA335P91 + SA217C12A	33.4	9.09	SMAW	10 ∇ 6	- -	E9015-B91 - 19 -			1118/00	220	745 ± 15 30	100% LPI or MPI					
1	0-00-047-16471	PIPE + PIPE	SA335P91 + SA335P91	88.9	15.24	GTAW + SMAW	15.24 ∩∩ 6	ER90S-B9 167	E9015-B91 64 86 25			1036/08	220	745 ± 15 40	100% UT					
2	0-00-047-16471	PIPE + ELBOW	SA335P91 + SA234WP91	88.9	15.24	GTAW + SMAW	15.24 ∩∩ 26	ER90S-B9 720	E9015-B91 277 369 106			1036/08	220	745 ± 15 40	100% UT					
3	0-00-047-16472	PIPE + PIPE	SA335P91 + SA335P91	88.9	15.24	GTAW + SMAW	15.24 ∩∩ 4	ER90S-B9 111	E9015-B91 43 57 17			1036/08	220	745 ± 15 40	100% UT					
4	0-00-047-16472	PIPE + ELBOW	SA335P91 + SA234WP91	88.9	15.24	GTAW + SMAW	15.24 ∩∩ 28	ER90S-B9 776	E9015-B91 298 397 115			1036/08	220	745 ± 15 40	100% UT					
5	0-00-047-16473	PIPE + ELBOW	SA335P91 + SA234WP91	88.9	15.24	GTAW + SMAW	15.24 ∩∩ 30	ER90S-B9 831	E9015-B91 319 426 123			1036/08	220	745 ± 15 40	100% UT					
6	0-00-047-16473	PIPE + PIPE	SA335P91 + SA335P91	88.9	15.24	GTAW + SMAW	15.24 ∩∩ 10	ER90S-B9 277	E9015-B91 107 142 41			1036/08	220	745 ± 15 40	100% UT					
7	0-00-047-16473	PIPE + VALVE	SA335P91 + SA217C12A	88.9	15.24	GTAW + SMAW	15.24 ∩∩ 2	ER90S-B9 56	E9015-B91 22 29 9			1036/08	220	745 ± 15 40	100% UT					
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.	
R Gopinath								GUNASEKARAN V				17-09-2019		1828-24-SPR-EWS			0		3/11	
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		ERECTION WELDING SCHEDULE										PG NO : 24								
		CUST No : 1828,1829,1830										PG NAME : Boiler Integral Piping and Fittings								
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Spray system								
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : - CUST DOC REV : -								
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW											
									Qty in Nos.											
									Ø2.5	Ø3.15	Ø4.0									
8	0-00-047-16473	PIPE + ELBOW	SA335P91 + SA182F22CL3	33.4	9.09	SMAW	10 	-	E9018-B3			1113/02	220	745 ± 15	100% LPI or MPI					
							8	-	-	19	-		30							
9	0-00-047-16473	PIPE + VALVE	SA105 + SA105	33.4	9.09	SMAW	10 	-	E7018-1			1021/02	Nil	Nil	10% LPI or MPI					
							6	-	-	14	-									
15	0-00-047-16474	PIPE + ELBOW	SA106GrC + SA234WPC	168.3	26	GTAW + SMAW	26 	ER70S-A1	E7018-1			1004/04	100	610 ± 15	100% RT					
							20	1059	242	396	564		65							
16	0-00-047-16474	PIPE + PIPE	SA106GrC + SA106GrC	168.3	26	GTAW + SMAW	26 	ER70S-A1	E7018-1			1004/04	100	610 ± 15	100% RT					
							6	318	73	119	169		65							
88	0-00-047-16475	PIPE + PIPE	SA106GrC + SA106GrC	168.3	26	GTAW + SMAW	26 	ER70S-A1	E7018-1			1004/04	100	610 ± 15	100% RT					
							8	424	97	159	226		65							
89	0-00-047-16475	PIPE + PIPE	SA106GrC + SA106GrC	33.4	6.35	GTAW + SMAW	6.35 	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift					
							7	44	44	-	-									
90	0-00-047-16475	PIPE + VALVE	SA106GrC + SA105	33.4	6.35	SMAW	7 	-	E7018-1			1021/02	Nil	Nil	10% LPI or MPI					
							21	-	50	-	-									
91	0-00-047-16475	PIPE + ELBOW	SA106GrC + SA105	33.4	6.35	SMAW	7 	-	E7018-1			1021/02	Nil	Nil	10% LPI or MPI					
							20	-	47	-	-									
92	0-00-047-16475	PIPE + VALVE	SA335P91 + SA182F316	33.4	6.35	SMAW	7 	-	ENiCrFe-3			1063/01	on Gr 91	745 ± 15	100% LPI or MPI					
							2	-	8	-	-		30							
93	0-00-047-16475	PIPE +TEE	SA106GrC + SA234WPC	168.3	26	GTAW + SMAW	26 	ER70S-A1	E7018-1			1004/04	100	610 ± 15	100% RT					
							4	212	49	80	113		65							
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.	
R Gopinath								GUNASEKARAN V				17-09-2019		1828-24-SPR-EWS			0		4/11	
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		ERECTION WELDING SCHEDULE					PG NO : 24													
		CUST No : 1828,1829,1830					PG NAME : Boiler Integral Piping and Fittings													
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)					SYSTEM DESCRIPTION : Spray system													
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS			CUST DOC NO : -			CUST DOC REV : -							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW							SPEC. NO	ACC NORM			
									Qty in Nos.	Qty in gms	Qty in Nos.									
								Ø2.5	Ø3.15	Ø4.0										
94	0-00-047-16475	TEE + REDUCER	SA234WPC + SA105	168.3	26	GTAW + SMAW	26 	ER70S-A1	E7018-1			1004/04	100	610 ± 15	100% RT					
							4		212	49	80			113						65
95	0-00-047-16475	REDUCER + PIPE	SA105 + SA106GrC	114.3	17.12	GTAW + SMAW	17.12 	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT					
							4		149	33	54			27						
96	0-00-047-16475	PIPE + ELBOW	SA106GrC + SA234WPB	114.3	17.12	GTAW + SMAW	17.12 	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT					
							8		298	66	108			53						
97	0-00-047-16475	ELBOW + VALVE	SA234WPB + SA216WCC	114.3	17.12	GTAW + SMAW	17.12 	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT					
							4		149	33	54			27						
98	0-00-047-16475	PIPE + PIPE	SA106GrC + SA106GrC	114.3	17.12	GTAW + SMAW	17.12 	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT					
							8		298	66	108			53						
99	0-00-047-16475	PIPE + VALVE	SA106GrC + SA216WCC	114.3	17.12	GTAW + SMAW	17.12 	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT					
							4		149	33	54			27						
100	0-00-047-16475	PIPE +CONNECTOR	SA106GrC + SA182F12CL2	114.3	17.12	GTAW + SMAW	17.12 	ER70S-A1	E7018-A1			1018/05	150	650-670	100% RT					
							4		149	33	54			27						60
101	0-00-047-16475	CONNECTOR + CONNECTOR	SA182F12CL2 + SA182F22CL3	114.3	17.12	GTAW + SMAW	17.12 	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT					
							4		149	33	54			27						60
102	0-00-047-16475	CONNECTOR + VALVE	SA182F22CL3 + SA217WC9	114.3	17.12	GTAW + SMAW	17.12 	ER90S-B3	E9018-B3			1014/03	150	680-720	100% RT					
							4		149	33	54			27						60
103	0-00-047-16475	PIPE + VALVE	SA217WC9 + SA335P91	114.3	17.12	GTAW + SMAW	17.12 	ER90S-B3	E9018-B3			1035/05	220	740-770	100% RT					
							4		149	33	54			27						60
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.	
R Gopinath								GUNASEKARAN V				17-09-2019		1828-24-SPR-EWS			0		5/11	
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		ERECTION WELDING SCHEDULE										PG NO : 24								
		CUST No : 1828,1829,1830										PG NAME : Boiler Integral Piping and Fittings								
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Spray system								
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : - CUST DOC REV : -								
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW							SPEC. NO	ACC NORM			
									Qty in gms	Qty in Nos.										
								Ø2.5	Ø3.15	Ø4.0										
104	0-00-047-16475	PIPE + VALVE	SA335P91 + SA217WC9	127	20	GTAW + SMAW	20 	ER90S-B3	E9018-B3			1035/05	220	740-770	100% RT					
							4	161	37	60	46									60
105	0-00-047-16475	PIPE + TEE	SA335P91 + SA234WP91	127	20	GTAW + SMAW	20 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT					
							4	161	61	81	64			60						
17	0-00-047-16476	PIPE + PIPE	SA335P91 + SA335P91	127	20	GTAW + SMAW	20 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT					
							12	482	183	243	191			60						
18	0-00-047-16476	PIPE + ELBOW	SA335P91 + SA234WP91	127	20	GTAW + SMAW	20 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT					
							30	1205	456	608	478			60						
19	0-00-047-16476	PIPE + VALVE	SA335P91 + SA217C12A	127	20	GTAW + SMAW	20 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT					
							2	81	31	41	32			60						
20	0-00-047-16476	PIPE + ELBOW	SA335P91 + SA182F22CL3	33.4	9.09	SMAW	10 	-	E9018-B3			1113/02	220	745 ± 15	100% LPI or MPI					
							2	-	-	5	-			30						
21	0-00-047-16476	PIPE + VALVE	SA335P91 + SA182F91	33.4	9.09	SMAW	10 	-	E9015-B91			1118/00	220	745 ± 15	100% LPI or MPI					
							7	-	-	22	-			30						
22	0-00-047-16477	PIPE + PIPE	SA335P91 + SA335P91	127	20	GTAW + SMAW	20 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT					
							5	201	76	102	80			60						
23	0-00-047-16477	PIPE + ELBOW	SA335P91 + SA234WP91	127	20	GTAW + SMAW	20 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT					
							40	1607	607	810	637			60						
24	0-00-047-16478	PIPE + PIPE	SA335P91 + SA335P91	127	20	GTAW + SMAW	20 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT					
							5	201	76	102	80			60						
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R Gopinath								GUNASEKARAN V				17-09-2019		1828-24-SPR-EWS			0		6/11	
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ERECTION WELDING SCHEDULE

PG NO : 24

CUST No : 1828,1829,1830

PG NAME : Boiler Integral Piping and Fittings

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)











SYSTEM DESCRIPTION : Spray system


WELDING CODE : IBR / ASME


PRESSURE PARTS/~~NON~~-PRESSURE PARTS












CUST DOC NO : -

CUST DOC REV : -

SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV	
				SIZE	THICK		Qty in Nos.	GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15					Ø4.0				
25	0-00-047-16478	PIPE + ELBOW	SA335P91 + SA234WP91	127	20	GTAW + SMAW	20 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT				
							32		1286	486	648								
26	0-00-047-16478	PIPE + PIPE	SA335P91 + SA335P91	127	20	GTAW + SMAW	20 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT				
							6		241	92	122								
27	0-00-047-16478	PIPE + ELBOW	SA335P91 + SA234WP91	33.4	9.09	SMAW	10 	-	E9015-B91			1118/00	220	745 ± 15	100% LPI or MPI				
							4		-	-	13								
28	0-00-047-16478	PIPE + VALVE	SA335P91 + SA182F91	33.4	9.09	SMAW	10 	-	E9015-B91			1118/00	220	745 ± 15	100% LPI or MPI				
							4		-	-	13								
29	0-00-047-16478	STUB + PIPE	SA335P91 + SA335P91	33.4	9.09	SMAW	10 	-	E9015-B91			1118/00	220	745 ± 15	100% LPI or MPI				
							1		-	-	4								
30	0-00-047-16478	PIPE + VALVE	SA335P91 + SA182F91	33.4	9.09	SMAW	10 	-	E9015-B91			1118/00	220	745 ± 15	100% LPI or MPI				
							3		-	-	10								
31	0-00-047-16479	PIPE + PIPE	SA335P91 + SA335P91	127	20	GTAW + SMAW	20 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT				
							3		121	46	61								
32	0-00-047-16479	PIPE + ELBOW	SA335P91 + SA234WP91	127	20	GTAW + SMAW	20 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT				
							38		1527	577	770								
43	0-00-047-16480	PIPE + ELBOW	SA106GrC + SA234WPB	114.3	17.12	GTAW + SMAW	17.12 	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT				
							20		743	164	269								
44	0-00-047-16480	PIPE + PIPE	SA106GrC + SA106GrC	114.3	17.12	GTAW + SMAW	17.12 	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT				
							5		186	41	68								
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R Gopinath							GUNASEKARAN V			17-09-2019		1828-24-SPR-EWS		0		7/11			
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		ERECTION WELDING SCHEDULE										PG NO : 24								
		CUST No : 1828,1829,1830										PG NAME : Boiler Integral Piping and Fittings								
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Spray system								
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : - CUST DOC REV : -								
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW											
							Qty in Nos.		Qty in gms	Qty in Nos.										
								Ø2.5	Ø3.15	Ø4.0										
52	0-00-047-16481	PIPE + PIPE	SA106GrC + SA106GrC	114.3	17.2	GTAW + SMAW	17.2 ∩∩	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT					
							8		297	66	108									53
53	0-00-047-16481	PIPE + PIPE	SA106GrC + SA106GrC	33.4	9.09	GTAW + SMAW	9.09 ∩	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift					
							7		33	84	-									-
54	0-00-047-16481	PIPE + VALVE	SA106GrC + SA105	33.4	9.09	SMAW	10 ∇	-	E7018-1			1021/02	Nil	Nil	10% LPI or MPI					
							21		-	-	48									-
55	0-00-047-16481	PIPE + ELBOW	SA106GrC + SA105	33.4	9.09	SMAW	10 ∇	-	E7018-1			1021/02	Nil	Nil	10% LPI or MPI					
							20		-	-	46									-
56	0-00-047-16481	PIPE + VALVE	SA335P91 + SA182F316	33.4	9.09	SMAW	10 ∇	-	ENiCrFe-3			1063/01	on Gr 91	745 ± 15	100% LPI or MPI					
							2		-	-	7			-						30
57	0-00-047-16481	PIPE +TEE	SA106GrC + SA234WPC	114.3	17.2	GTAW + SMAW	17.2 ∩∩	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT					
							4		149	33	54									27
58	0-00-047-16481	TEE + REDUCER	SA234WPC + SA105	114.3	17.2	GTAW + SMAW	17.2 ∩∩	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT					
							4		149	33	54									27
59	0-00-047-16481	REDUCER + PIPE	SA105 + SA106GrC	88.9	15.24	GTAW + SMAW	15.24 ∩∩	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT					
							4		111	26	42									12
60	0-00-047-16481	PIPE + ELBOW	SA106GrC + SA234WPB	88.9	15.24	GTAW + SMAW	15.24 ∩∩	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT					
							8		222	51	84									24
61	0-00-047-16481	ELBOW + VALVE	SA234WPB + SA216WCC	88.9	15.24	GTAW + SMAW	15.24 ∩∩	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT					
							4		111	26	42									12
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.	
R Gopinath								GUNASEKARAN V				17-09-2019		1828-24-SPR-EWS			0		8/11	
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		ERECTION WELDING SCHEDULE										PG NO : 24							
		CUST No : 1828,1829,1830										PG NAME : Boiler Integral Piping and Fittings							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Spray system							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : - CUST DOC REV : -							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
							Qty in Nos.		Qty in gms	Qty in Nos.									
										Ø2.5					Ø3.15	Ø4.0			
62	0-00-047-16481	PIPE + PIPE	SA106GrC + SA106GrC	88.9	15.24	GTAW + SMAW	15.24 ∩∩	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT				
							8	222	51	84	24								
63	0-00-047-16481	PIPE + VALVE	SA106GrC + SA216WCC	88.9	15.24	GTAW + SMAW	15.24 ∩∩	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT				
							4	111	26	42	12								
64	0-00-047-16481	PIPE +CONNECTOR	SA106GrC + SA182F12CL2	88.9	15.24	GTAW + SMAW	15.24 ∩∩	ER70S-A1	E7018-A1			1018/05	150	650-670	100% RT				
							4	111	26	42	12			60					
65	0-00-047-16481	CONNECTOR + CONNECTOR	SA182F12CL2 + SA182F22CL3	88.9	15.24	GTAW + SMAW	15.24 ∩∩	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT				
							4	111	26	42	12			60					
66	0-00-047-16481	CONNECTOR + VALVE	SA182F22CL3 + SA217WC9	88.9	15.24	GTAW + SMAW	15.24 ∩∩	ER90S-B3	E9018-B3			1014/03	150	680-720	100% RT				
							4	111	26	42	12			60					
67	0-00-047-16481	PIPE + VALVE	SA217WC9 + SA335P91	88.9	15.24	GTAW + SMAW	15.24 ∩∩	ER90S-B3	E9018-B3			1038/05	220	745 ± 15	100% RT				
							4	111	26	42	12			60					
68	0-00-047-16481	PIPE + VALVE	SA335P91 + SA217WC9	88.9	17	GTAW + SMAW	17 ∩∩	ER90S-B3	E9018-B3			1035/05	220	740-770	100% RT				
							4	105	26	42	18			60					
69	0-00-047-16481	PIPE + TEE	SA335P91 + SA234WP91	88.9	17	GTAW + SMAW	17 ∩∩	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT				
							4	105	43	57	25			60					
33	0-00-047-16482	PIPE + PIPE	SA335P91 + SA335P91	88.9	15.24	GTAW + SMAW	15.24 ∩∩	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% UT				
							4	111	43	57	17			40					
34	0-00-047-16482	PIPE + ELBOW	SA335P91 + SA234WP91	88.9	15.24	GTAW + SMAW	15.24 ∩∩	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% UT				
							46	1274	489	652	188			40					
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
R Gopinath								GUNASEKARAN V				17-09-2019		1828-24-SPR-EWS		0		9/11	
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		ERECTION WELDING SCHEDULE										PG NO : 24								
		CUST No : 1828,1829,1830										PG NAME : Boiler Integral Piping and Fittings								
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Spray system								
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON-PRESSURE PARTS					CUST DOC NO : - CUST DOC REV : -								
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV		
				SIZE	THICK			GTAW	SMAW						SPEC. NO	ACC NORM				
							Qty in Nos.		Qty in gms	Qty in Nos.										
										Ø2.5									Ø3.15	Ø4.0
35	0-00-047-16482	PIPE + ELBOW	SA335P91 + SA234WP91	88.9	17	GTAW + SMAW	17 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT					
							8	210	85	114	49									60
36	0-00-047-16482	PIPE + VALVE	SA335P91 + SA217C12A	88.9	17	GTAW + SMAW	17 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT					
							2	53	22	29	13									60
37	0-00-047-16482	PIPE + PIPE	SA335P91 + SA335P91	88.9	17	GTAW + SMAW	17 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT					
							6	157	64	86	37									60
38	0-00-047-16482	PIPE + ELBOW	SA105 + SA182F22CL3	33.4	9.09	SMAW	10 	-	E7018			1105/03	150	Nil	10% LPI or MPI					
							6	-	-	14	-									
39	0-00-047-16482	PIPE + PIPE	SA335P91 + SA335P91	33.4	9.09	SMAW	10 	-	E9015-B91			1118/00	220	745 ± 15	100% LPI or MPI					
							1	-	-	4	-			30						
40	0-00-047-16482	PIPE + VALVE	SA335P91 + SA182F91	33.4	9.09	SMAW	10 	-	E9015-B91			1118/00	220	745 ± 15	100% LPI or MPI					
							8	-	-	25	-			30						
41	0-00-047-16483	PIPE + ELBOW	SA335P91 + SA234WP91	88.9	17	GTAW + SMAW	17 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT					
							36	942	383	511	219			60						
42	0-00-047-16483	PIPE + PIPE	SA335P91 + SA335P91	88.9	17	GTAW + SMAW	17 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT					
							5	131	54	71	31			60						
45	0-00-047-16484	PIPE + PIPE	SA335P91 + SA335P91	88.9	17	GTAW + SMAW	17 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT					
							9	236	96	128	55			60						
46	0-00-047-16484	PIPE + ELBOW	SA335P91 + SA234WP91	88.9	17	GTAW + SMAW	17 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT					
							54	1412	574	766	329			60						
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.	
R Gopinath								GUNASEKARAN V				17-09-2019		1828-24-SPR-EWS			0		10/11	
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ERECTION WELDING SCHEDULE

PG NO : 24

CUST No : 1828,1829,1830

PG NAME : Boiler Integral Piping and Fittings

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)






SYSTEM DESCRIPTION :	Spray system
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WELDING CODE : IBR / ASME

PRESSURE PARTS/~~NON-PRESSURE PARTS~~

CUST DOC NO : -

CUST DOC REV : -

SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW										
							Qty in Nos.		Qty in gms	Qty in Nos.									
										Ø2.5	Ø3.15					Ø4.0			
47	0-00-047-16484	PIPE + VALVE	SA335P91 + SA217C12A	88.9	17	GTAW + SMAW	17 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT				
							2		53	22	29								
48	0-00-047-16484	PIPE + ELBOW	SA335P91 + SA182F22CL3	33.4	9.09	SMAW	10 	-	E9018-B3			1113/02	220	745 ± 15	100% LPI or MPI				
							10		-	-	23			-					
49	0-00-047-16484	PIPE + VALVE	SA335P91 + SA182F91	33.4	9.09	SMAW	10 	-	E9015-B91			1118/00	220	745 ± 15	100% LPI or MPI				
							8		-	-	25			-					
50	0-00-047-16485	PIPE + ELBOW	SA335P91 + SA234WP91	88.9	17	GTAW + SMAW	17 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT				
							38		994	404	539			231					
51	0-00-047-16485	PIPE + PIPE	SA335P91 + SA335P91	88.9	17	GTAW + SMAW	17 	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT				
							6		157	64	86			37					

PREPARED

CHECKED (W.T.C)

APPROVED

DATE

DOC NO.

REV NO :	
----------	--

PAGE NO.

R Gopinath

GUNASEKARAN V

17-09-2019

1828-24-SPR-EWS

0

11/11

CAUTION :

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* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98


SUMMARY LIST FOR SITE ELECTRODES**CUST NO : 1828,1829,1830****PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)****PG NO : 24****PG NAME : Boiler Integral Piping and Fittings****SYSTEM DESCRIPTION : Spray system**


SL NO	TYPE OF ELECTRODE/ROD	SIZE AND QTY (Nos)			GTAW ROD WT (gm)
		Ø 2.5	Ø 3.15	Ø 4.0	
1	ER70S-A1				8805
2	ER80S-B2				429
3	ER90S-B3				1399
4	ER90S-B9				21452
5	E7018-1	3030	3327	2159	
6	ENiCrFe-3	20	9	0	
7	E8018-B2	150	157	49	
8	E9018-B3	412	575	193	
9	E9015-B91	8319	11260	5864	
10	E7018-A1	74	120	49	
11	E7018	0	18	0	


NOTES :


1. RESERVE 25% ADDED.
2. QUANTITY GIVEN IS PER BOILER.
3. THIS FIELD WELDING SCHEDULE IS FOR REFERENCE PURPOSE ONLY.




EWS DOC ID : 1828-24-SPR-EWS REV : 0**PREPARED BY : R Gopinath****CHECKED BY :****APPROVED BY : GUNASEKARAN V****DATE : 17-09-2019**

		ERECTION WELDING SCHEDULE										PG NO : 17							
		CUST No : 1828,1829,1830										PG NAME : Reheater System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Reheater System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 00							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW							SPEC. NO	ACC NORM		
									Qty in gms	Qty in Nos.									
										Ø2.5	Ø3.15								
6	0-00-027-35137	R-04I2(LTRH Inter 2 Bank Coils + R-04I1(LTRH Inter 1 Bank Coils)	SA213T11 + SA213T22	69.85	4.57	GTAW + SMAW	4.57 ∇	ER80S-B2	E8018-B2			1011/01	150	Nil	20% RT subject to min 2 weld/ welder/ shift				
							963	18018	7042	-	-								
7	0-00-027-35137	R-04I1(LTRH Inter 1 Bank Coils + R-04UI(LTRH Upper Inter Bank Coils)	SA213T22 + SA213T22	69.85	4.57	GTAW + SMAW	4.57 ∇	ER90S-B3	E9018-B3			1013/02	150	Nil	20% RT subject to min 2 weld/ welder/ shift				
							963	18018	7042	-	-								
8	0-00-027-35137	R-04UI(LTRH Upper Inter Bank Coils + R-04U(LTRH Upper Bank Coils)	SA213T91 + SA213T91	69.85	4.57	GTAW	4.57 ∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB	
							963	96659	-	-	-			30					
9	0-00-027-35137	R-04U(LTRH Upper Bank Coils + R-07(LTRH Pendant)	SA213T91 + SA213T91	63.5	4	GTAW	4 ∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB	
							963	70821	-	-	-			30					
10	0-00-027-35137	R-07(LTRH Pendant + R-07TO(LTRH Outlet header Terminal tubes)	SA213T91 + SA213T91	63.5	4.2	GTAW	4.2 ∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB	
							963	76553	-	-	-			30					
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
NIRMAL RAJ N				LAKAVATH PRAVEEN KUMAR				SRIDHARAN K				17-08-2020		1828-17-RH-EWS		0		2/6	
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.										* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98. NOTE: HARDNESS CHECK OF 3% OF TOTAL WELD JOINTS IN ALLOY STEEL PIPES (OTHER THAN GR91) TO BE CARRIED OUT (247HB MAX).							

		ERECTION WELDING SCHEDULE										PG NO : 17							
		CUST No : 1828,1829,1830										PG NAME : Reheater System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Reheater System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 00							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW										
									Qty in gms	Qty in Nos.									
										Ø2.5	Ø3.15					Ø4.0			
11	0-00-027-35137	R-07TO(LTRH Outlet header Terminal tubes + R-08(LTRH Outlet Header)	SA213T91 + SA213T91	63.5	4.2	GTAW	4.2 ∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB	
							214	17012	-	-	-		30						
12	0-00-027-35137	R-07TO(LTRH Outlet header Terminal tubes + R-08(LTRH Outlet Header)	SA213T91 + SA213T91	50.8	7.62	GTAW + SMAW	7.62 ∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB	
							749	14430	16322	-	-		30						
13	0-00-027-35141	R-08(LTRH Outlet Header + R-09(Link To RH DESH)	SA335P91 + SA234WP91	813	40	GTAW + SMAW	35.00 ∇∇	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB	
							2	654	195	260	791		100						
14	0-00-027-35141	R-09(Link To RH DESH + R-10(RH DESH)	SA335P91 + SA335P91	813	40	GTAW + SMAW	35.00 ∇∇	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB	
							2	654	195	260	791		100						
15	0-00-027-35141	R-10(RH DESH + R-11(Link From RH DESH To Finish RH Inlet Header)	SA335P91 + SA335P91	813	40	GTAW + SMAW	35.00 ∇∇	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB	
							2	654	195	260	791		100						
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
NIRMAL RAJ N				LAKAVATH PRAVEEN KUMAR				SRIDHARAN K				17-08-2020		1828-17-RH-EWS		0		3/6	
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.										* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98. NOTE: HARDNESS CHECK OF 3% OF TOTAL WELD JOINTS IN ALLOY STEEL PIPES (OTHER THAN GR91) TO BE CARRIED OUT (247HB MAX).							

		ERECTION WELDING SCHEDULE										PG NO : 17								
		CUST No : 1828,1829,1830										PG NAME : Reheater System								
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Reheater System								
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 00								
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC					WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW											
									Qty in gms	Qty in Nos.										
										Ø2.5	Ø3.15	Ø4.0								
16	0-00-027-35140	R-11(Link From RH DESH To Finish RH Inlet Header + R-11(Link From RH DESH To Finish RH Inlet Header)	SA335P91 + SA234WP91	813	40	GTAW + SMAW	35.00 ∇∇	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB		
							4	1307	389	519	1581			100						
17	0-00-027-35140	R-11(Link From RH DESH To Finish RH Inlet Header) + R-12(Finish RH Inlet Header)	SA335P22 + SA335P22	711	95	GTAW + SMAW	83.12 ∇∇	ER90S-B3	E9018-B3			1014/03	150	680-720	100% (ISRT + UT)					
							2	480	102	168	2027			240						
18	0-00-027-35151 0-00-027-35152	R-12 (Finish RH Inlet Header tubes) + R-13(Finishing RH Assembly)	SA213T22 + SA213T22	76.2	5.59	GTAW + SMAW	5.59 ∇	ER90S-B3	E9018-B3			1013/02	150	Nil	20% RT subject to min 2 weld/ welder/ shift					
							53	1063	596	-	-									
19	0-00-027-35151 0-00-027-35152	R-12 (Finish RH Inlet Header tubes) + R-13(Finishing RH Assembly)	SA213T22 + SA213T22	57.15	4.57	GTAW + SMAW	4.57 ∇	ER90S-B3	E9018-B3			1013/02	150	Nil	20% RT subject to min 2 weld/ welder/ shift					
							212	3130	1269	-	-									
20	0-00-027-35151 0-00-027-35152	R-12 (Finish RH Inlet Header tubes) + R-13(Finishing RH Assembly)	SA213T22 + SA213T22	38.1	4.5	GTAW + SMAW	4.5 ∇	ER90S-B3	E9018-B3			1013/02	150	Nil	20% RT subject to min 2 weld/ welder/ shift					
							159	1414	619	-	-									
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.		
NIRMAL RAJ N				LAKAVATH PRAVEEN KUMAR				SRIDHARAN K				17-08-2020		1828-17-RH-EWS		0		4/6		
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.										* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98. NOTE: HARDNESS CHECK OF 3% OF TOTAL WELD JOINTS IN ALLOY STEEL PIPES (OTHER THAN GR91) TO BE CARRIED OUT (247HB MAX).								

		ERECTION WELDING SCHEDULE										PG NO : 17							
		CUST No : 1828,1829,1830										PG NAME : Reheater System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Reheater System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001			CUST DOC REV : 00				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW										
									Qty in gms	Qty in Nos.						Ø2.5	Ø3.15		
21	0-00-027-35151 0-00-027-35152	R-12 (Finish RH Inlet Header tubes) + R-13(Finishing RH Assembly)	SA213T22 + SA213T22	38.1	5.08	GTAW + SMAW	5.08 ∇	ER90S-B3	E9018-B3			1013/02	150	Nil	20% RT subject to min 2 weld/ welder/ shift				
							318	2712	1516	-	-								
22	0-00-027-35151 0-00-027-35152	R-13 (Finishing RH Assembly) +R-13TO (Finish RH Outlet Terminal Tubes)	SA213UNSS304 32 + SA213UNSS304 32	76.2	5.08	GTAW	5.08 ∇	Nittetsu YT304H	-			1054/02	Nil	Nil	20% RT subject to min 2 weld/ welder/ shift				
							53	7067	-	-	-								
23	0-00-027-35151 0-00-027-35152	R-13 (Finishing RH Assembly) +R-13TO (Finish RH Outlet Terminal Tubes)	SA213UNSS304 32 + SA213UNSS304 32	63.5	4.19	GTAW	4.19 ∇	Nittetsu YT304H	-			1054/02	Nil	Nil	20% RT subject to min 2 weld/ welder/ shift				
							689	55605	-	-	-								
24	0-00-027-35151 0-00-027-35152	R-13TO(Finish RH Outlet Terminal Tubes) +R-14 (Finish RH Outlet Header)	SA213T92 + SA213T92	76.2	5.08	GTAW	5.08 ∇	9CrWV TIG/ Thermanit-MTS616	E9015-B92			1058/02	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB	
							53	6934	-	-	-			30					
25	0-00-027-35151 0-00-027-35152	R-13TO(Finish RH Outlet Terminal Tubes) +R-14 (Finish RH Outlet Header)	SA213T92 + SA213T92	63.5	5.08	GTAW	5.08 ∇	9CrWV TIG/ Thermanit-MTS616	E9015-B92			1058/02	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB	
							689	75114	-	-	-			30					
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
NIRMAL RAJ N				LAKAVATH PRAVEEN KUMAR				SRIDHARAN K				17-08-2020		1828-17-RH-EWS		0		5/6	
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.										* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98. NOTE: HARDNESS CHECK OF 3% OF TOTAL WELD JOINTS IN ALLOY STEEL PIPES (OTHER THAN GR91) TO BE CARRIED OUT (247HB MAX).							

		ERECTION WELDING SCHEDULE										PG NO : 17									
		CUST No : 1828,1829,1830										PG NAME : Reheater System									
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Reheater System									
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 00									
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC					WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW												
									Qty in Nos.												
							Qty in Nos.	Qty in gms	Ø2.5	Ø3.15	Ø4.0						SPEC. NO	ACC NORM			
26		GAMMA PLUG	SA182F22CL3 + SA335P12			SMAW	7 	-	E8018-B2			1102/01	200	Nil	100% LPI or MPI						
							2	-	1	-	-										
27		GAMMA PLUG	SA182F22CL3 + SA335P22			SMAW	7 	-	E9018-B3			1103/01	200	Nil	100% LPI or MPI						
							2	-	1	-	-										
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.			
NIRMAL RAJ N				LAKAVATH PRAVEEN KUMAR				SRIDHARAN K				17-08-2020		1828-17-RH-EWS		0		6/6			
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.										* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98. NOTE: HARDNESS CHECK OF 3% OF TOTAL WELD JOINTS IN ALLOY STEEL PIPES (OTHER THAN GR91) TO BE CARRIED OUT (247HB MAX).									

SUMMARY LIST FOR SITE ELECTRODES

CUST NO : 1828,1829,1830

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)

PG NO : 17

PG NAME : Reheater System

SYSTEM DESCRIPTION : Reheater System

[illegible]

NOTES :

1. RESERVE 50% ADDED.
2. QUANTITY GIVEN IS PER BOILER
3. THIS FIELD WELDING SCHEDULE IS FOR REFERENCE PURPOSE ONLY

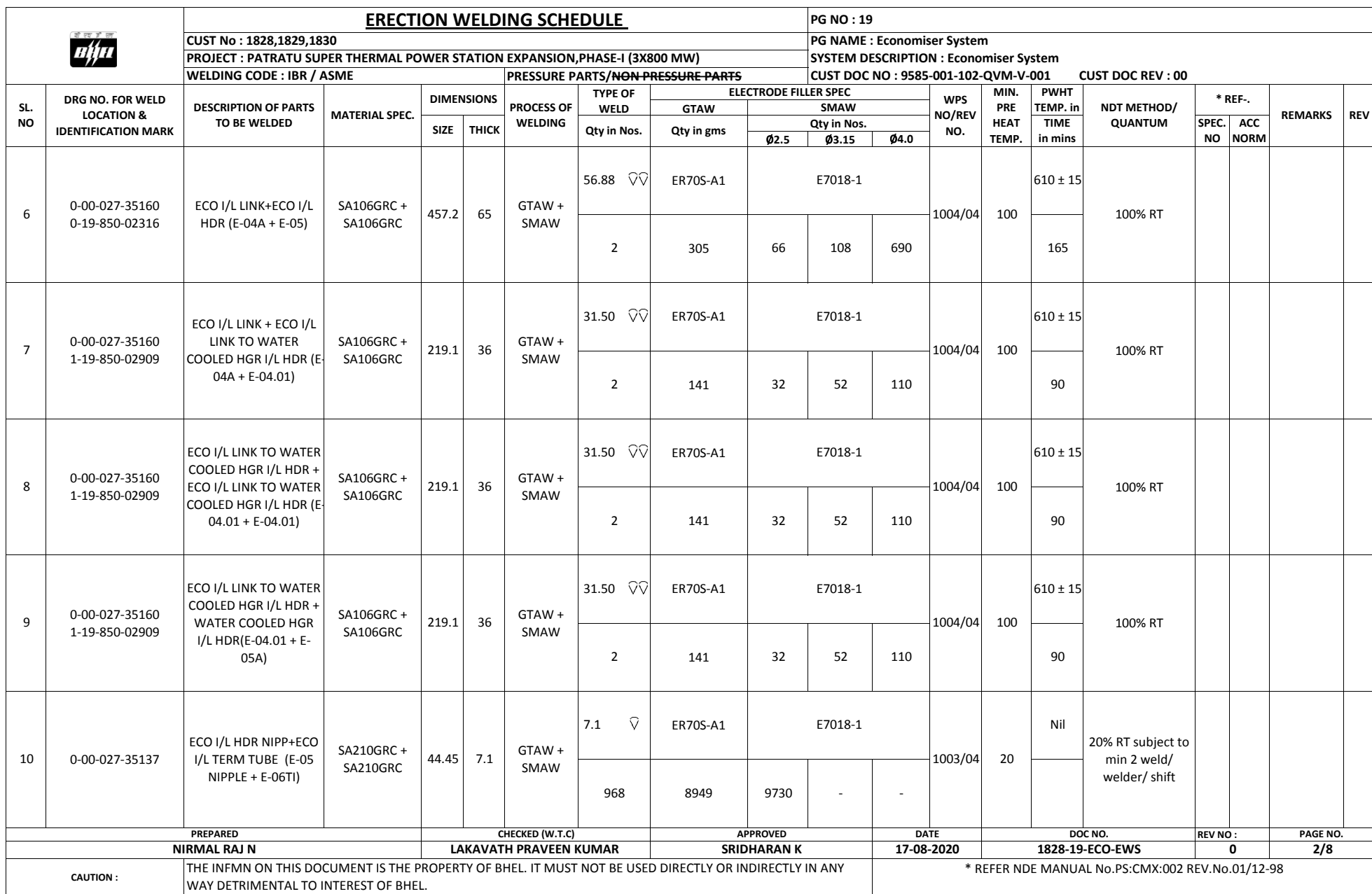
EWS DOC ID : 1828-17-RH-EWS REV : 0

PREPARED BY : NIRMAL RAJ N

CHECKED BY : LAKAVATH PRAVEEN KUMAR

APPROVED BY : SRIDHARAN K

DATE : 17-08-2020





ERECTION WELDING SCHEDULE

PG NO : 19

CUST No : 1828,1829,1830

PG NAME : Economiser System

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)

SYSTEM DESCRIPTION : Economiser System

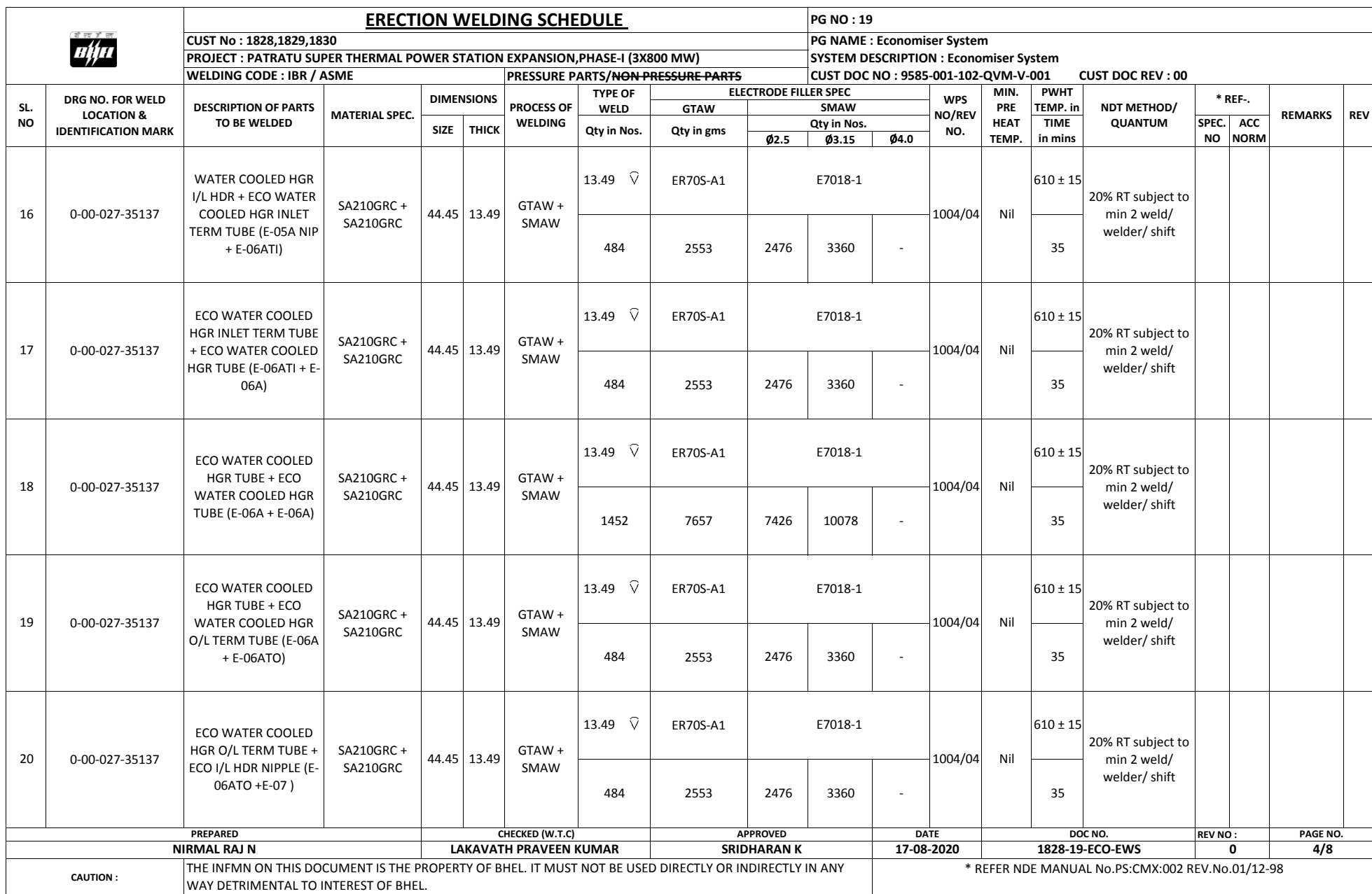
WELDING CODE : IBR / ASME


PRESSURE PARTS/~~NON-PRESSURE PARTS~~


CUST DOC NO : 9585-001-102-OVM-V-001

CUST DOC REV : 00

SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in	NDT METHOD/ QUANTUM	* REF.		REMARKS	REV	
				Qty in Nos.	GTAW		SMAW			TIME in mins			SPEC. NO		ACC NORM				
							Qty in Nos.												
							Ø2.5	Ø3.15	Ø4.0										
11	0-00-027-35137	ECO I/L TERM TUBE +ECO COIL LWR ASSY (E-06TI + E-06L)	SA210GRC + SA210GRC	44.45	7.1	GTAW + SMAW	7.1 ▽	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift				
							968	8949	9730	-	-								
12	0-00-027-35137	ECO COIL LWR ASSY +ECO COIL INTER ASSY (E-06L + E-06I)	SA210GRC + SA210GRC	44.45	7.1	GTAW + SMAW	7.1 ▽	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift				
							968	8949	9730	-	-								
13	0-00-027-35137	ECO COIL INTER ASSY +ECO COIL UPPER ASSY (E-06I + E-06U)	SA210GRC + SA210GRC	44.45	7.1	GTAW + SMAW	7.1 ▽	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift				
							968	8949	9730	-	-								
14	0-00-027-35137	ECO COIL UPPER ASSY + ECO O/L TERM TUBES (E-06U + E-06TO)	SA210GRC + SA210GRC	44.45	7.1	GTAW + SMAW	7.1 ▽	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift				
							968	8949	9730	-	-								
15	0-00-027-35137	ECO O/L TERM TUBES + ECO I/L HDR NIPPLE (E-06TO + E-07 NIPPLE)	SA210GRC + SA210GRC	44.45	7.1	GTAW + SMAW	7.1 ▽	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift				
							968	8949	9730	-	-								
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.			REV NO :		PAGE NO.	
NIRMAL RAJ N				LAKAVATH PRAVEEN KUMAR				SRIDHARAN K			17-08-2020		1828-19-ECO-EWS			0		3/8	
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.							* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98										



		ERECTION WELDING SCHEDULE										PG NO : 19								
		CUST No : 1828,1829,1830										PG NAME : Economiser System								
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Economiser System								
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001				CUST DOC REV : 00				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC					WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW			SPEC. NO					ACC NORM			
									Qty in gms	Qty in Nos.										
										Ø2.5	Ø3.15							Ø4.0		
21	0-00-027-35137	ECO JN. HDR NIPPLE +ECO LWR HGR TUBE (E-07 NIPPLE + E-08L)	SA213T12 + SA213T22	69.85	15.09	GTAW + SMAW	15.09 √	ER80S-B2	E8018-B2			1012/04	150	680-720	20% RT subject to min 2 weld/ welder/ shift					
							428	5210	4135	5787	-		60							
22	0-00-027-35137	ECO LWR HGR TUBE +ECO HGR TUBE (LTRH LWR ASSY) (E-08L + E-08LI/R-04L HANGER)	SA213T22 + SA213T22	69.85	15.09	GTAW + SMAW	15.09 √	ER90S-B3	E9018-B3			1014/03	150	680-720	20% RT subject to min 2 weld/ welder/ shift					
							428	5210	4135	5787	-		60							
23	0-00-027-35137	ECO INTER HGR TUBE (LTRH LWR ASSY)+ECO INTER HGR TUBE (LTRH LWR INTER ASSY) (R-04L HGR + E-08I/R-04LI HGR)	SA213T22 + SA213T22	69.85	15.09	GTAW + SMAW	15.09 √	ER90S-B3	E9018-B3			1014/03	150	680-720	20% RT subject to min 2 weld/ welder/ shift					
							1712	20838	16539	23147	-		60							
24	0-00-027-35137	ECO INTER HGR TUBE (LTRH UPR ASSY)+ECO UPR HGR TUBE (E-08I/R-04U HGR + E-08U)	SA213T22 + SA213T22	69.85	15.09	GTAW + SMAW	15.09 √	ER90S-B3	E9018-B3			1014/03	150	680-720	20% RT subject to min 2 weld/ welder/ shift					
							428	5210	4135	5787	-		60							
25	0-00-027-35137 0-00-027-35198	ECO UPR HGR TUBE +ECO HGR O/L TERM TUBE (E-08U + E-08TO)	SA213T22 + SA213T22	69.85	15.09	GTAW + SMAW	15.09 √	ER90S-B3	E9018-B3			1014/03	150	680-720	20% RT subject to min 2 weld/ welder/ shift					
							428	5210	4135	5787	-		60							
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.		
NIRMAL RAJ N				LAKAVATH PRAVEEN KUMAR				SRIDHARAN K				17-08-2020		1828-19-ECO-EWS		0		5/8		
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.										* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98								

		ERECTION WELDING SCHEDULE							PG NO : 19										
		CUST No : 1828,1829,1830							PG NAME : Economiser System										
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)							SYSTEM DESCRIPTION : Economiser System										
		WELDING CODE : IBR / ASME				PRESSURE PARTS/ NON PRESSURE PARTS			CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 00										
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW							SPEC. NO	ACC NORM		
									Qty in gms	Qty in Nos.									
										Ø2.5	Ø3.15								
26	0-00-027-35163	ECON JUNCTION HDR + ECON HGR TUBE FOR LTRH INLET HEADER (E-07 + E-08X)	SA213T12 + SA213T22	69.85	15.09	GTAW + SMAW	15.09 ∇	ER80S-B2	E8018-B2			1012/04	150	680-720	20% RT subject to min 2 weld/ welder/ shift				
							58	706	561	785	-		60						
27	0-00-027-35163	ECON HGR TUBE FOR LTRH INLET HEADER (E-08X + E-08X)	SA213T22 + SA213T22	69.85	15.09	GTAW + SMAW	15.09 ∇	ER90S-B3	E9018-B3			1014/03	150	680-720	20% RT subject to min 2 weld/ welder/ shift				
							348	4236	3362	4706	-		60						
28	0-00-027-35163	ECON HGR TUBE FOR LTRH INLET HEADER + ECON HGR TERM TUBE (E-08X + E-08TO)	SA213T22 + SA213T22	69.85	15.09	GTAW + SMAW	15.09 ∇	ER90S-B3	E9018-B3			1014/03	150	680-720	20% RT subject to min 2 weld/ welder/ shift				
							58	706	561	785	-		60						
29	0-00-027-35137 0-00-027-35198	ECO HGR O/L TERM TUBE +ECO O/L HDR NIPPLE (E-08TO + E-09 NIPP)	SA213T22 + SA213T12	69.85	15.09	GTAW + SMAW	15.09 ∇	ER80S-B2	E8018-B2			1012/04	150	680-720	20% RT subject to min 2 weld/ welder/ shift				
							486	5916	4695	6571	-		60						
30	0-00-027-35160 0-19-851-02315	ECO O/L HDR+ECO O/L LINK (E-09 + EF-01)	SA106GRC + SA106GRC	558.8	76.2	GTAW + SMAW	66.68 ∇∇	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)				
							2	376	81	132	1103		195						
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
NIRMAL RAJ N				LAKAVATH PRAVEEN KUMAR				SRIDHARAN K				17-08-2020		1828-19-ECO-EWS		0		6/8	
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.						* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98											



ERECTION WELDING SCHEDULE

PG NO : 19

CUST No : 1828,1829,1830

PG NAME : Economiser System

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)

SYSTEM DESCRIPTION : Economiser System

WELDING CODE : IBR / ASME

PRESSURE PARTS/~~NON-PRESSURE PARTS~~

CUST DOC NO : 9585-001-102-OVM-V-001

CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 00

SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.		REMARKS	REV
				SIZE	THICK		Qty in Nos.	GTAW	SMAW									
								Qty in gms	Qty in Nos.									
									Ø2.5	Ø3.15					Ø4.0			
31	0-00-027-35160 0-19-851-02315	ECO O/L LINK+ECO O/L LINK (EF-01 + EF-01)	SA234WPC + SA106GRC	558.8	76.2	GTAW + SMAW	66.68 ☑☑	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)			
							8	1504	321	526	4411		195					
32	0-00-027-35160 0-19-851-02315	ECO O/L LINK+ECO O/L LINK (EF-01 + EF-01)	SA106GRC + SA106GRC	558.8	76.2	GTAW + SMAW	66.68 ☑☑	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)			
							6	1128	241	394	3308		195					
33	0-00-027-35160 0-19-851-02315	ECO O/L LINK+ECO MIXING LINE (EF-01 + EF-02)	SA106GRC + SA234WPC	558.8	76.2	GTAW + SMAW	66.68 ☑☑	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)			
							2	376	81	132	1103		195					
34	0-00-027-35160	ECO MIXING LINE+ECO WW I/L LINK (EF-02 + EF-03)	SA234WPC + SA106GRC	558.8	76.2	GTAW + SMAW	66.68 ☑☑	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)			
							2	376	81	132	1103		195					
35	0-00-027-35160	ECO WW I/L LINK+ECO WW I/L LINK (EF-03 + EF-03)	SA106GRC + SA234WPC	558.8	76.2	GTAW + SMAW	66.68 ☑☑	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)			
							2	376	81	132	1103		195					
PREPARED				CHECKED (W.T.C)			APPROVED			DATE		DOC NO.			REV NO :		PAGE NO.	
NIRMAL RAJ N				LAKAVATH PRAVEEN KUMAR			SRIDHARAN K			17-08-2020		1828-19-ECO-EWS			0		7/8	
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.							* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98									



ERECTION WELDING SCHEDULE

PG NO : 19

CUST No : 1828,1829,1830

PG NAME : Economiser System

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)





SYSTEM DESCRIPTION : Economiser System

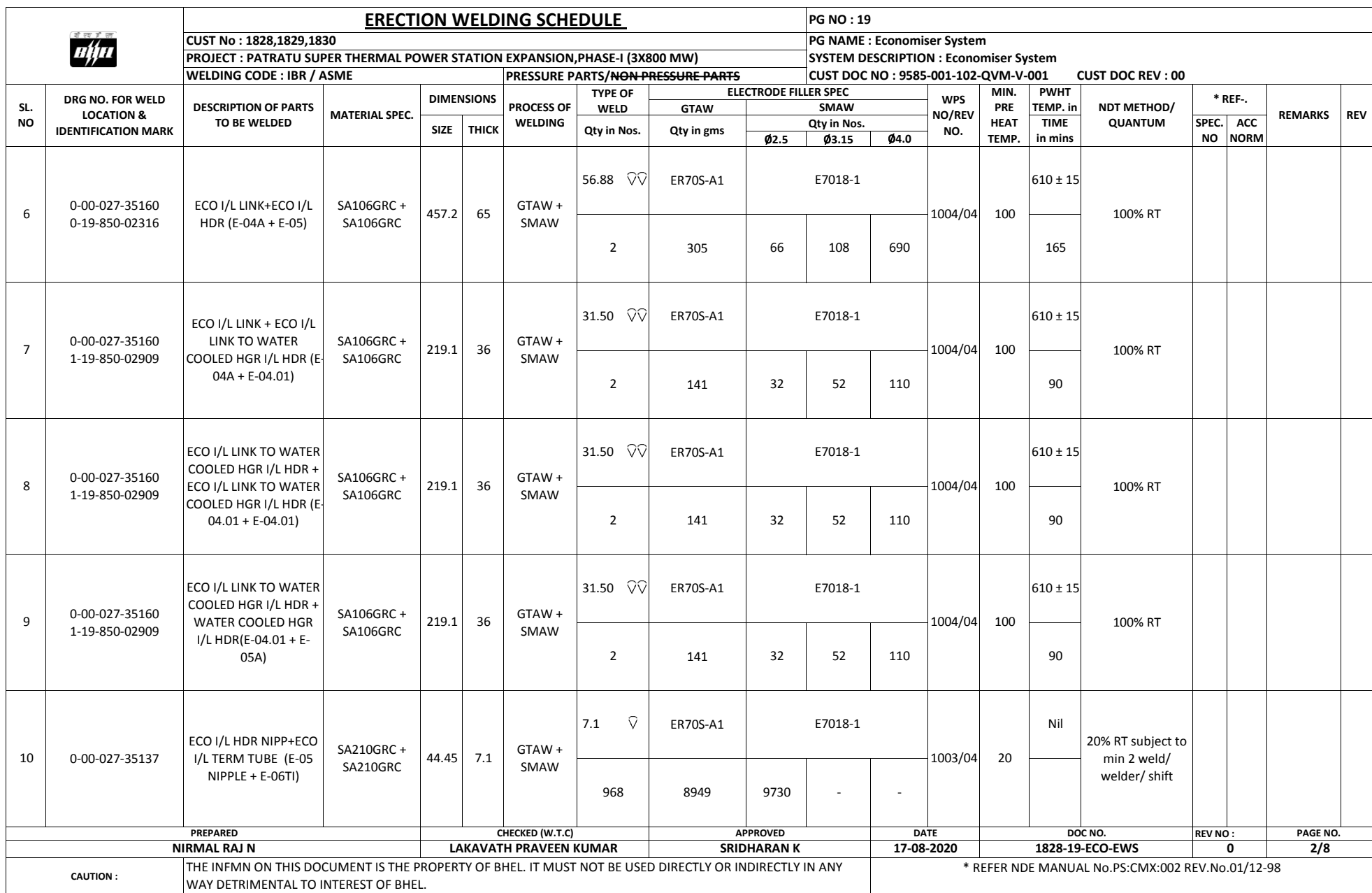
WELDING CODE : IBR / ASME

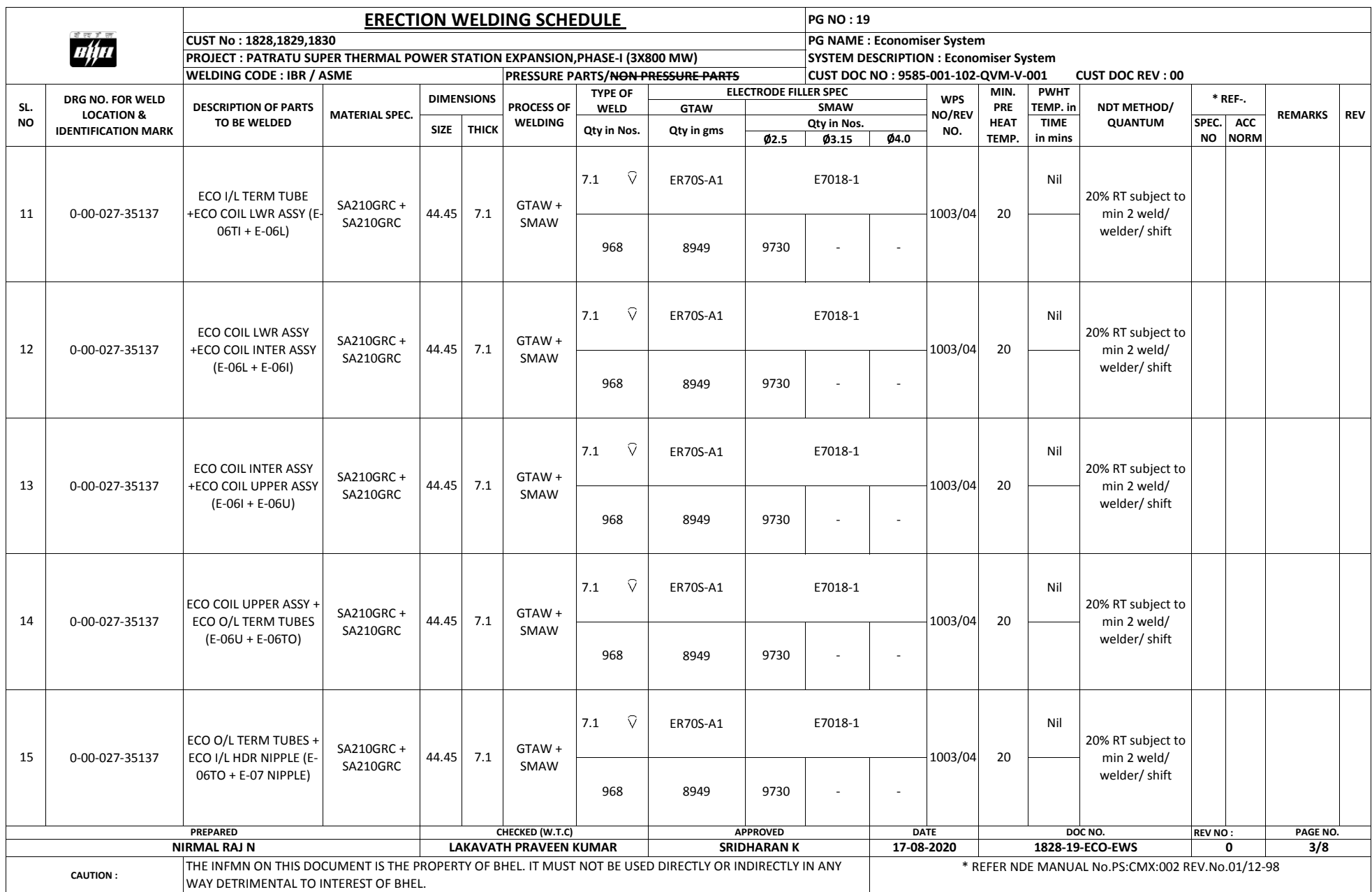
PRESSURE PARTS/~~NON-PRESSURE PARTS~~

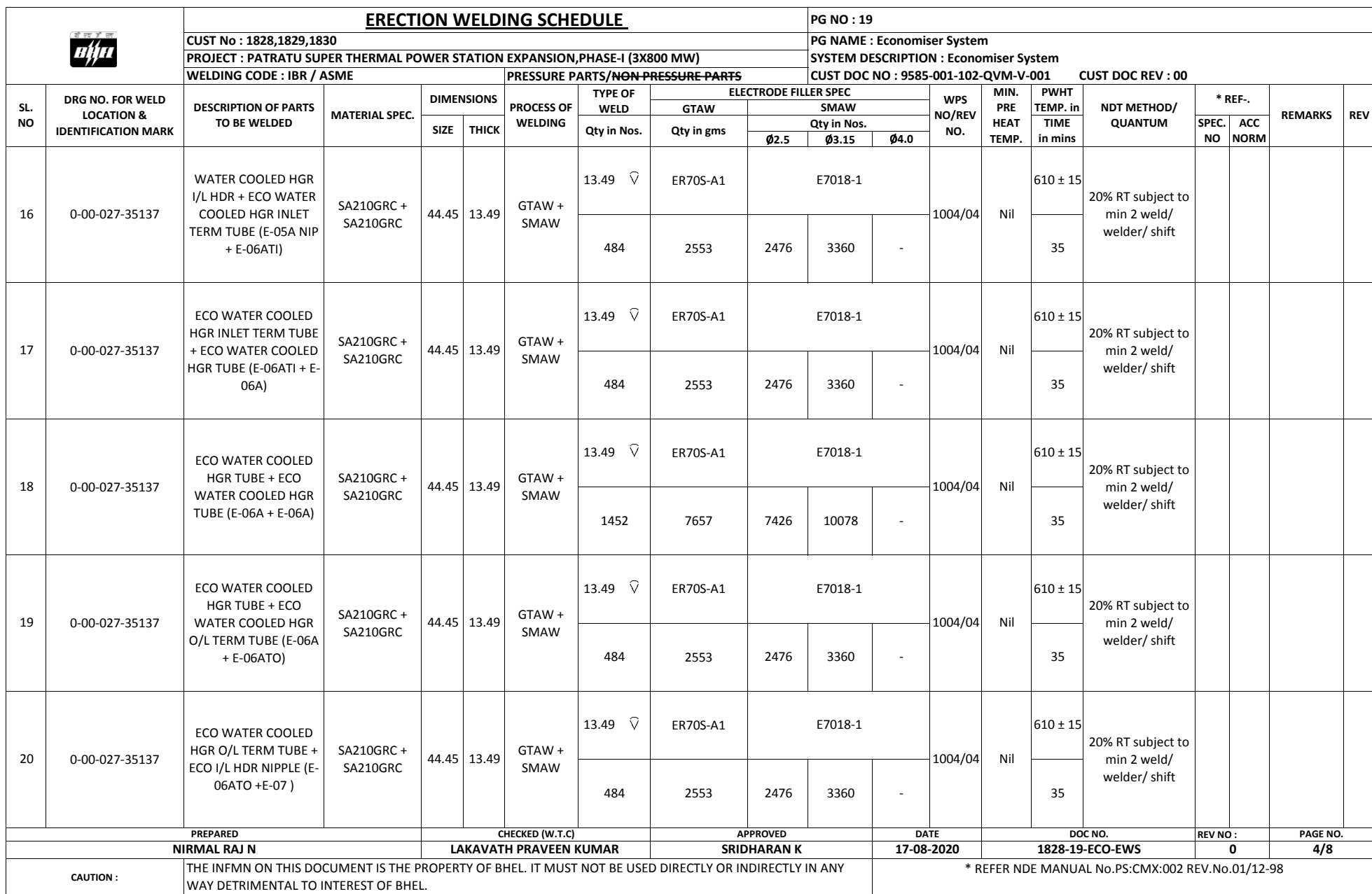
CUST DOC NO : 9585-001-102-QVM-V-001


CUST DOC REV : 00

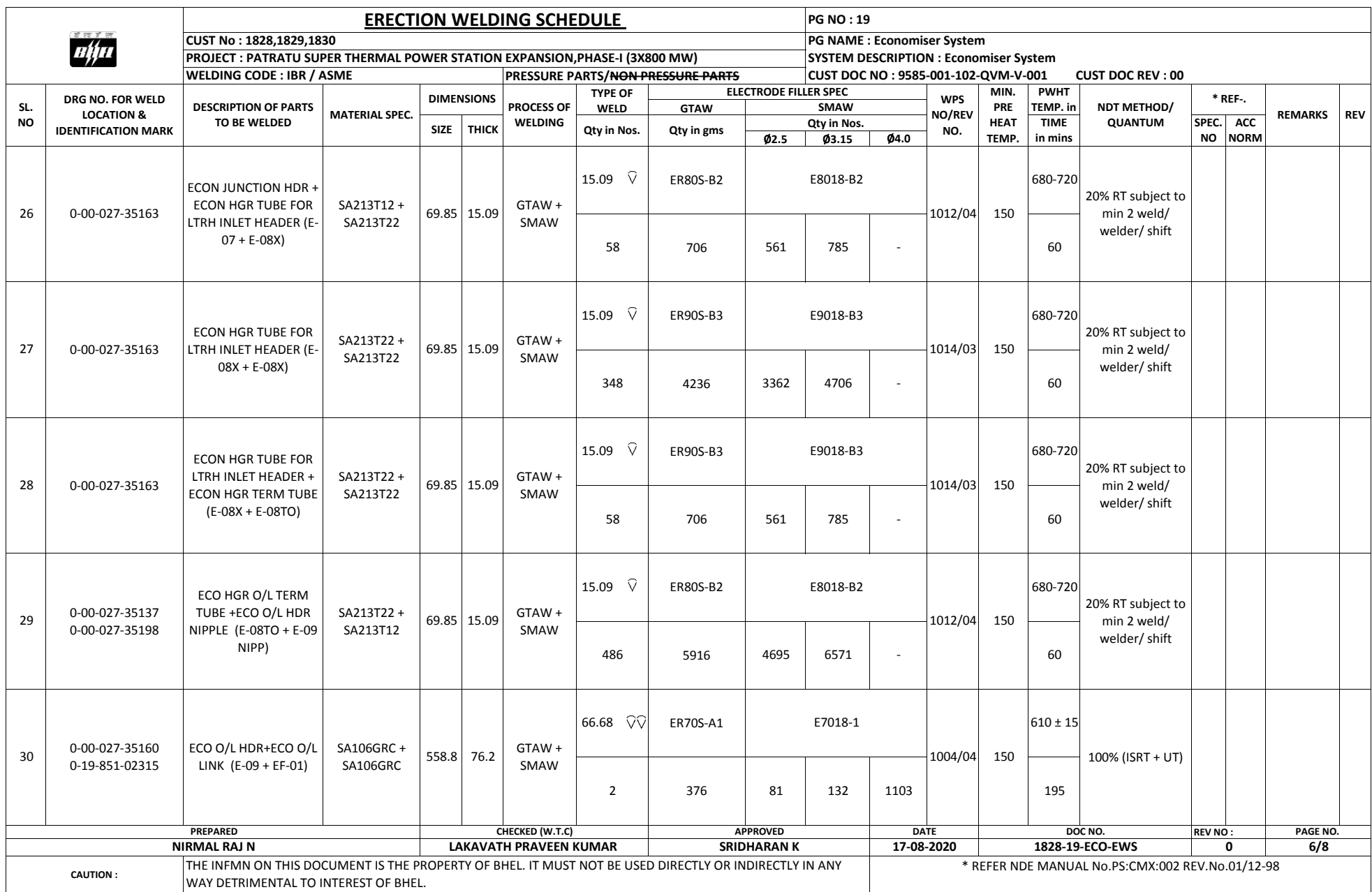
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW									
									Qty in Nos.									
									Ø2.5	Ø3.15					Ø4.0			
36	0-00-027-35160	ECO WW I/L LINK+FURN SIDE I/L HDRS (EF-03 + F-16 L&R)	SA106GRC + SA234WPC	558.8	76.2	GTAW + SMAW	66.68 	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)			
	2	376	81	132	1103	195												
37		GAMMA PLUG	SA105 + SA106GRC			SMAW	7 	-	E7018			1101/01	150	Nil	100% LPI or MPI			
	18	-	5	-	-													
38		GAMMA PLUG	SA105 + SA106GRC			SMAW	7 	-	E7018			1101/01	150	Nil	100% LPI or MPI			
	24	-	7	-	-													
39		GAMMA PLUG	SA105 + SA106GRC			SMAW	7 	-	E7018			1101/01	100	Nil	100% LPI or MPI			
	6	-	2	-	-													
PREPARED				CHECKED (W.T.C)				APPROVED			DATE	DOC NO.			REV NO :		PAGE NO.	
NIRMAL RAJ N				LAKAVATH PRAVEEN KUMAR				SRIDHARAN K			17-08-2020	1828-19-ECO-EWS			0		8/8	
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.						* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98										







		ERECTION WELDING SCHEDULE										PG NO : 19							
		CUST No : 1828,1829,1830										PG NAME : Economiser System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Economiser System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 00							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW										
									Qty in gms	Qty in Nos.									
										Ø2.5	Ø3.15					Ø4.0			
21	0-00-027-35137	ECO JN. HDR NIPPLE +ECO LWR HGR TUBE (E-07 NIPPLE + E-08L)	SA213T12 + SA213T22	69.85	15.09	GTAW + SMAW	15.09 ∇	ER80S-B2	E8018-B2			1012/04	150	680-720	20% RT subject to min 2 weld/ welder/ shift				
							428	5210	4135	5787	-		60						
22	0-00-027-35137	ECO LWR HGR TUBE +ECO HGR TUBE (LTRH LWR ASSY) (E-08L + E-08LI/R-04L HANGER)	SA213T22 + SA213T22	69.85	15.09	GTAW + SMAW	15.09 ∇	ER90S-B3	E9018-B3			1014/03	150	680-720	20% RT subject to min 2 weld/ welder/ shift				
							428	5210	4135	5787	-		60						
23	0-00-027-35137	ECO INTER HGR TUBE (LTRH LWR ASSY)+ECO INTER HGR TUBE (LTRH LWR INTER ASSY) (R-04L HGR + E-08I/R-04LI HGR)	SA213T22 + SA213T22	69.85	15.09	GTAW + SMAW	15.09 ∇	ER90S-B3	E9018-B3			1014/03	150	680-720	20% RT subject to min 2 weld/ welder/ shift				
							1712	20838	16539	23147	-		60						
24	0-00-027-35137	ECO INTER HGR TUBE (LTRH UPR ASSY)+ECO UPR HGR TUBE (E-08I/R-04U HGR + E-08U)	SA213T22 + SA213T22	69.85	15.09	GTAW + SMAW	15.09 ∇	ER90S-B3	E9018-B3			1014/03	150	680-720	20% RT subject to min 2 weld/ welder/ shift				
							428	5210	4135	5787	-		60						
25	0-00-027-35137 0-00-027-35198	ECO UPR HGR TUBE +ECO HGR O/L TERM TUBE (E-08U + E-08TO)	SA213T22 + SA213T22	69.85	15.09	GTAW + SMAW	15.09 ∇	ER90S-B3	E9018-B3			1014/03	150	680-720	20% RT subject to min 2 weld/ welder/ shift				
							428	5210	4135	5787	-		60						
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
NIRMAL RAJ N				LAKAVATH PRAVEEN KUMAR				SRIDHARAN K				17-08-2020		1828-19-ECO-EWS		0		5/8	
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.										* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98							





ERECTION WELDING SCHEDULE

PG NO : 19

CUST No : 1828,1829,1830

PG NAME : Economiser System

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)

SYSTEM DESCRIPTION : Economiser System


WELDING CODE : IBR / ASME

PRESSURE PARTS/~~NON-PRESSURE PARTS~~


CUST DOC NO : 9585-001-102-OVM-V-001


CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 00


SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.		REMARKS	REV
				SIZE	THICK		Qty in Nos.	GTAW	SMAW									
								Qty in gms	Qty in Nos.									
									Ø2.5	Ø3.15					Ø4.0			
31	0-00-027-35160 0-19-851-02315	ECO O/L LINK+ECO O/L LINK (EF-01 + EF-01)	SA234WPC + SA106GRC	558.8	76.2	GTAW + SMAW	66.68 ☑☑	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)			
8	1504	321	526	4411	195													
32	0-00-027-35160 0-19-851-02315	ECO O/L LINK+ECO O/L LINK (EF-01 + EF-01)	SA106GRC + SA106GRC	558.8	76.2	GTAW + SMAW	66.68 ☑☑	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)			
6	1128	241	394	3308	195													
33	0-00-027-35160 0-19-851-02315	ECO O/L LINK+ECO MIXING LINE (EF-01 + EF-02)	SA106GRC + SA234WPC	558.8	76.2	GTAW + SMAW	66.68 ☑☑	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)			
2	376	81	132	1103	195													
34	0-00-027-35160	ECO MIXING LINE+ECO WW I/L LINK (EF-02 + EF-03)	SA234WPC + SA106GRC	558.8	76.2	GTAW + SMAW	66.68 ☑☑	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)			
2	376	81	132	1103	195													
35	0-00-027-35160	ECO WW I/L LINK+ECO WW I/L LINK (EF-03 + EF-03)	SA106GRC + SA234WPC	558.8	76.2	GTAW + SMAW	66.68 ☑☑	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)			
2	376	81	132	1103	195													
PREPARED				CHECKED (W.T.C)			APPROVED			DATE		DOC NO.			REV NO :		PAGE NO.	
NIRMAL RAJ N				LAKAVATH PRAVEEN KUMAR			SRIDHARAN K			17-08-2020		1828-19-ECO-EWS			0		7/8	
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.							* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98									


		ERECTION WELDING SCHEDULE										PG NO : 19							
		CUST No : 1828,1829,1830										PG NAME : Economiser System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Economiser System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 00							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15	Ø4.0								
36	0-00-027-35160	ECO WW I/L LINK+FURN SIDE I/L HDRS (EF-03 + F-16 L&R)	SA106GRC + SA234WPC	558.8	76.2	GTAW + SMAW	66.68 ∩	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)				
						2	376	81	132	1103			195						
37		GAMMA PLUG	SA105 + SA106GRC			SMAW	7 ∇	-	E7018			1101/01	150	Nil	100% LPI or MPI				
						18	-	5	-	-									
38		GAMMA PLUG	SA105 + SA106GRC			SMAW	7 ∇	-	E7018			1101/01	150	Nil	100% LPI or MPI				
						24	-	7	-	-									
39		GAMMA PLUG	SA105 + SA106GRC			SMAW	7 ∇	-	E7018			1101/01	100	Nil	100% LPI or MPI				
						6	-	2	-	-									
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
NIRMAL RAJ N				LAKAVATH PRAVEEN KUMAR				SRIDHARAN K				17-08-2020		1828-19-ECO-EWS		0		8/8	
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.										* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98							

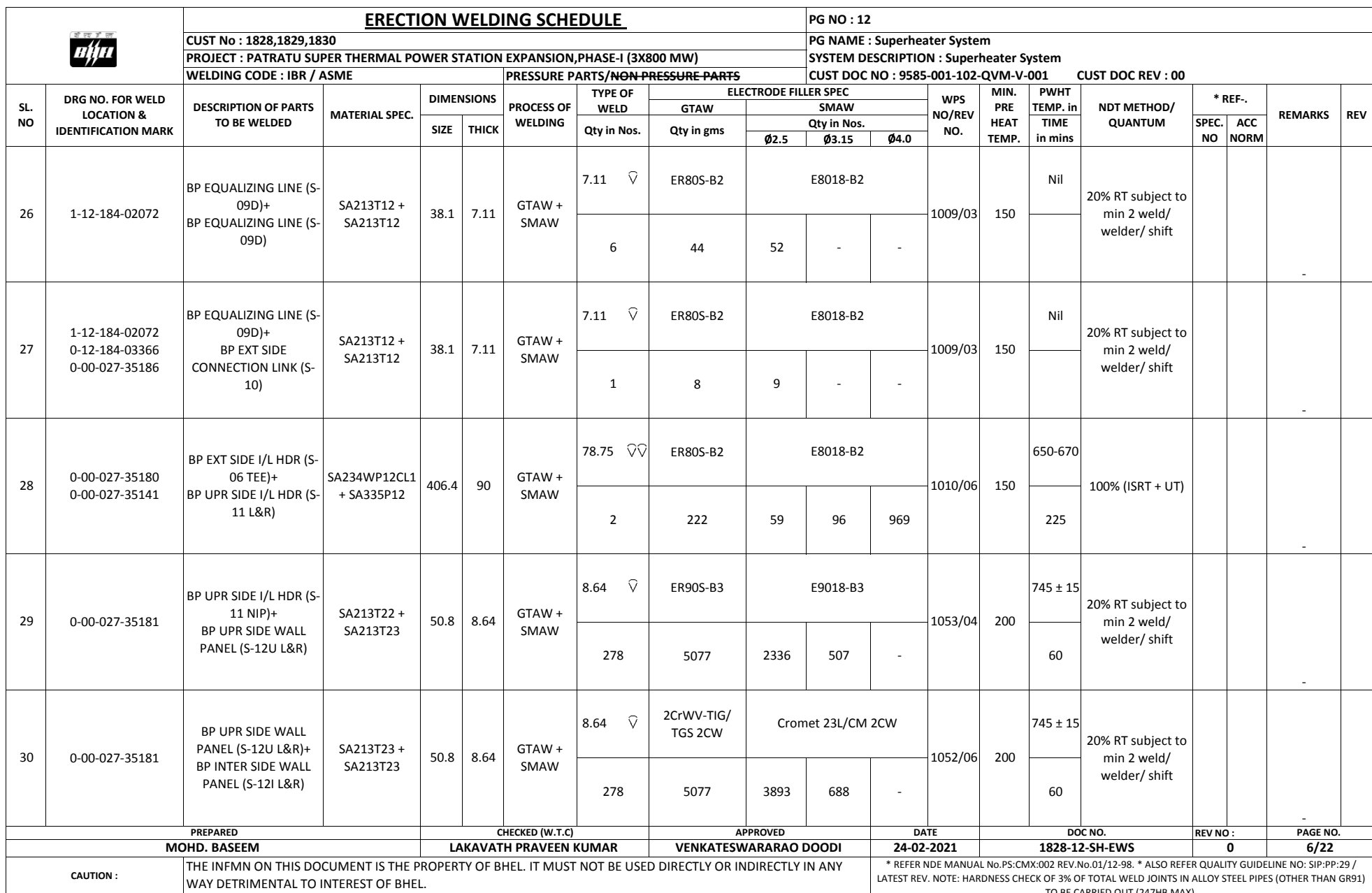
		ERECTION WELDING SCHEDULE										PG NO : 12							
		CUST No : 1828,1829,1830										PG NAME : Superheater System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Superheater System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON-PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 00							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP. in °C	PWHT TEMP. in °C	NDT METHOD/ QUANTUM	* REF.-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW						SPEC. NO	ACC NORM REF.			
							Qty in Nos.		Qty in gms	Qty in Nos.			Ø2.5						Ø3.15
01	0-00-027-35157 0-00-027-35140	SEPARATOR (F-31 NOZZLE)+ SH CONNECTING PIPE (S-01)	SA182F22CL3 + SA335P12	273	50	GTAW + SMAW	43.75 ∩∩	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT			-	
							8	666	157	257	1020		125						
02	1-12-850-02049 TO 1-12-850-02056	SH CONN. PIPE (S-01)+ SH CONN. PIPE (S-01)	SA335P12 + SA234WP12CL1	273	50	GTAW + SMAW	43.75 ∩∩	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT			-	
							18	1497	353	578	2295		125						
03	1-12-850-02049 TO 1-12-850-02056	SH CONN. PIPE (S-01)+ SH CONN. PIPE (S-01)	SA335P12 + SA335P12	273	50	GTAW + SMAW	43.75 ∩∩	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT			-	
							8	666	157	257	1020		125						
04	0-00-027-35140 0-00-027-35158	SH CONN. PIPE (S-01)+ SH FURNACE ROOF I/L HDR (S-02 TEE)	SA335P12 + SA234WP22CL1	273	50	GTAW + SMAW	43.75 ∩∩	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT			-	
							8	666	157	257	1020		125						
05	0-00-027-35142	SH FURNACE ROOF I/L HEADER (S-02 NIP)+ SH FURN ROOF PANEL (S-03)	SA213T22 + SA213T23	54	8.13	GTAW + SMAW	8.13 ∩	ER90S-B3	E9018-B3			1053/04	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			-	
							214	4353	1983	309	-		60						
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.			REV NO :		PAGE NO.	
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				VENKATESWARARAO DOODI			24-02-2021		1828-12-SH-EWS			0		1/22	
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		ERECTION WELDING SCHEDULE										PG NO : 12									
		CUST No : 1828,1829,1830										PG NAME : Superheater System									
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Superheater System									
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001					CUST DOC REV : 00				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC					WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW			SPEC. NO					ACC NORM				
									Qty in Nos.	Qty in gms	Qty in Nos.										
								Ø2.5	Ø3.15	Ø4.0											
06	0-00-027-35142	SH FURNACE ROOF I/L HEADER (S-02 NIP)+ SH FURN ROOF PANEL (S-03)	SA213T22 + SA213T23	50.8	8.64	GTAW + SMAW	8.64 ∇	ER90S-B3	E9018-B3			1053/04	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift				-		
							2	37	17	4	-			60							
07	0-00-027-35142 0-11-791-04507	SH FURN ROOF PANEL LOOSE TUBE (S-03)+ SH FURN ROOF PANEL (S-03)	SA213T23 + SA213T23	54	8.13	GTAW + SMAW	8.13 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift				-		
							32	651	495	63	-			60							
08	0-00-027-35142 0-11-791-04507	SH FURN ROOF PANEL LOOSE TUBE (S-03)+ SH FURN ROOF PANEL (S-03)	SA213T23 + SA213T23	50.8	8.64	GTAW + SMAW	8.64 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift				-		
							2	37	29	5	-			60							
09	0-00-027-35142 0-11-991-04583	SH FURN ROOF PANEL (S-03)+ SH FURN ROOF TUBES (S-04A)	SA213T23 + SA213T23	60.3	10.16	GTAW + SMAW	10.16 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift				-		
							216	4633	3501	1111	-			60							
10	0-00-027-35142 0-11-991-04583	SH FURN ROOF TUBE (S-04A)+ SH FURN ROOF TUBES (S-04B)	SA213T23 + SA213T23	60.3	10.16	GTAW + SMAW	10.16 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift				-		
							216	4633	3501	1111	-			60							
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.		
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				VENKATESWARARAO DOODI				24-02-2021		1828-12-SH-EWS			0		2/22		
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		ERECTION WELDING SCHEDULE										PG NO : 12									
		CUST No : 1828,1829,1830										PG NAME : Superheater System									
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Superheater System									
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001					CUST DOC REV : 00				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC					WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
SIZE	THICK	Qty in Nos.	Qty in gms	GTAW	SMAW																
				Qty in Nos.																	
								Ø2.5	Ø3.15	Ø4.0											
11	0-00-027-35142 0-10-291-01842	SH FURN ROOF TUBES (S-04B)+ SH FURN ROOF O/L HDR (S-05 NIP)	SA213T23 + SA213T23	60.3	10.16	GTAW + SMAW	10.16 ∇	2CrWV-TIG/ TGS 2CW		Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift				-	
							216	4633	3501	1111	-	60									
12	0-00-027-35180 0-10-291-01842	SH FURN ROOF O/L HDR ELBOW (S-05 ELBOW)+ BP EXT SIDE I/L HDR (S-06 TEE)	SA234WP22CL1 + SA234WP12CL1	457.2	100	GTAW + SMAW	87.50 ∇∇	ER80S-B2		E8018-B2			1012/04	150	680-720	100% (ISRT + UT)				-	
							2	251	66	108	1304	250									
13	0-00-027-35180	BP EXT SIDE I/L HDR (S-06 NIP)+ BP EXT SIDE WALL PANEL (S-07 L&R)	SA213T22 + SA213T23	44.45	7.62	GTAW + SMAW	7.62 ∇	ER90S-B3		E9018-B3			1053/04	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift				-	
							172	2775	1968	-	-	60									
14	0-00-027-35180	BP EXT SIDE WALL PANEL (S-07 L&R)+ BP EXT SIDE WALL TUBE+OPENING (S-07 L&R)	SA213T23 + SA213T23	44.45	7.62	GTAW + SMAW	7.62 ∇	2CrWV-TIG/ TGS 2CW		Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift				-	
							82	1323	1564	-	-	60									
15	0-00-027-35180	BP EXT SIDE WALL PANEL (S-07 L&R)+ BP EXT SIDE FLOOR PANEL (S-08 L&R)	SA213T23 + SA213T23	44.45	7.62	GTAW + SMAW	7.62 ∇	2CrWV-TIG/ TGS 2CW		Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift				-	
							172	2775	3280	-	-	60									
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.		
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				VENKATESWARARAO DOODI				24-02-2021		1828-12-SH-EWS			0		3/22		
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		ERECTION WELDING SCHEDULE							PG NO : 12											
		CUST No : 1828,1829,1830							PG NAME : Superheater System											
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)							SYSTEM DESCRIPTION : Superheater System											
		WELDING CODE : IBR / ASME				PRESSURE PARTS/ NON -PRESSURE PARTS			CUST DOC NO : 9585-001-102-QVM-V-001					CUST DOC REV : 00						
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC					WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW			SPEC. NO					ACC NORM			
									Qty in Nos.	Qty in gms	Qty in Nos.									
								Ø2.5	Ø3.15	Ø4.0										
16	0-00-027-35180 0-00-027-35226	BP EXT SIDE FLOOR PANEL (S-08 L&R)+ BP EXT SIDE FLOOR PANEL (S-08TOA & S-08TOB)	SA213T23 + SA213T23	44.45	7.62	GTAW + SMAW	7.62 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift				-	
							172	2775	3280	-	-			60						
17	0-00-027-35180 0-00-027-35226	BP EXT SIDE FLOOR PANEL (S-08TOA & S-08TOB) BP EXT SIDE O/L TERM TUBES (S-08TO)	SA213T23 + SA213T23	44.45	7.62	GTAW + SMAW	7.62 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift				-	
							172	2775	3280	-	-			60						
18	0-00-027-35180 0-00-027-35226	BP EXT SIDE O/L TERM TUBES (S-08TO)+ BP EXT SIDE FLOOR O/L HDR (S-09NIP)	SA213T23 + SA213T23	44.45	7.62	GTAW + SMAW	7.62 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift				-	
							172	2775	3280	-	-			60						
19	0-00-027-35180 0-10-284-01877	BP EXT SIDE FLOOR O/L HDR (S-09)+ SC FURN ARCH SUPPT I/L HDR (S-09A TEE)	SA335P22 + SA234WP12CL1	457.2	115	GTAW + SMAW	100.62 ∇∇	ER80S-B2	E8018-B2			1012/04	150	680-720	100% (ISRT + UT)				-	
							1	114	33	54	796			290						
20	0-00-027-35186	SC FURN ARCH SUPPT I/L HDR (S-09A NOZZLE)+ SC FURN ARCH SUPPT LINK (S-09B)	SA182F12CL2 + SA335P12	168.3	47.6	GTAW + SMAW	41.65 ∇∇	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT				-	
							20	786	242	396	1205			120						
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.	
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				VENKATESWARARAO DOODI				24-02-2021		1828-12-SH-EWS			0		4/22	
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		ERECTION WELDING SCHEDULE							PG NO : 12										
		CUST No : 1828,1829,1830							PG NAME : Superheater System										
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)							SYSTEM DESCRIPTION : Superheater System										
		WELDING CODE : IBR / ASME				PRESSURE PARTS/ NON -PRESSURE PARTS			CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 00										
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.	Qty in gms	Qty in Nos.								
											Ø2.5					Ø3.15	Ø4.0		
21	0-00-027-35186	SC FURN ARCH SUPT LINK (S-09B)+ SC FURN ARCH SUPPT O/L HDR (S-09C NOZZLE)	SA335P12 + SA182F12CL2	168.3	47.6	GTAW + SMAW	41.65 ∇∇	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT				
							20	786	242	396	1205		120					-	
22	0-00-027-35186	SC FURN ARCH SUPT O/L HDR (S-09C)+ BP EXT SIDE CONNECTING LINK (S-10)	SA234WP12CL1 + SA335P12	323.9	70	GTAW + SMAW	61.25 ∇∇	ER80S-B2	E8018-B2			1010/06	150	650-670	100% (ISRT + UT)				
							2	181	47	77	512		175					-	
23	0-12-184-03366	BP EXT SIDE CONN. LINK (S-10)+ BP EXT SIDE CONN. LINK (S-10)	SA234WP12CL1 + SA335P12	323.9	70	GTAW + SMAW	61.25 ∇∇	ER80S-B2	E8018-B2			1010/06	150	650-670	100% (ISRT + UT)				
							7	631	163	267	1791		175					-	
24	0-12-184-03366 0-10-185-01874	BP EXT SIDE CONN. LINK (S-10)+ BP LWR FRONT HDR (S-14)	SA335P12 + SA335P22	323.9	70	GTAW + SMAW	61.25 ∇∇	ER80S-B2	E8018-B2			1012/04	150	680-720	100% (ISRT + UT)				
							2	181	47	77	512		175					-	
25	0-00-027-35186 1-12-184-02072 0-10-284-01877	BP EXT SIDE FLOOR O/L HDR (S-09)+ BP EQUALIZING LINE (S-09D)	SA213T22 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ∇	ER80S-B2	E8018-B2			1011/01	150	Nil	20% RT subject to min 2 weld/ welder/ shift				
							1	8	9	-	-							-	
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				VENKATESWARARAO DOODI				24-02-2021		1828-12-SH-EWS		0		5/22	
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.						* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98. * ALSO REFER QUALITY GUIDELINE NO: SIP:PP:29 / LATEST REV. NOTE: HARDNESS CHECK OF 3% OF TOTAL WELD JOINTS IN ALLOY STEEL PIPES (OTHER THAN GR91) TO BE CARRIED OUT (247HB MAX).											





ERECTION WELDING SCHEDULE

CUST No : 1828,1829,1830

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)

WELDING CODE : IBR / ASME

PG NO : 12

PG NAME : Superheater System

SYSTEM DESCRIPTION : Superheater System

CUST DOC NO : 9585-001-102-OVM-V-001

CUST DOC REV : 00

SL. NO		DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD		ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.		REMARKS	REV
					SIZE	THICK		GTAW	SMAW			SPEC. NO					ACC NORM			
									Qty in Nos.											
									Ø2.5	Ø3.15	Ø4.0									
31	0-00-027-35181	BP INTER SIDE WALL PANEL (S-12I L&R)+ BP LWR SIDE WALL PANEL (S-12L L&R)	SA213T23 + SA213T23	50.8	8.64	GTAW + SMAW	8.64	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			-		
							278	5077	3893	688	-		60							
32	0-00-027-35181	BP LWR SIDE WALL PANEL (S-12L L&R)+ BP LWR SIDE WALL OPENING (S-12L L&R)	SA213T23 + SA213T23	50.8	8.64	GTAW + SMAW	8.64	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			-		
							40	731	561	99	-		60							
33	0-00-027-35181	BP LOWER SIDE HDRS (S-13NIP L&R)+ LOOSE TUBES (S-13LT L&R)	SA213T23 + SA213T23	54	9.14	GTAW + SMAW	9.14	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			-		
							12	233	178	39	-		60							
34	0-00-027-35181	BP LOWER SIDE HDRS (S-13NIP L&R)+ LOOSE TUBES (S-13LT L&R)	SA213T23 + SA213T23	50.8	8.64	GTAW + SMAW	8.64	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			-		
							20	366	281	50	-		60							
35	0-00-027-35181	BP LWR SIDE WALL PANEL (S-12L L&R)+ BP LOWER SIDE HDRS (S-13 L&R/LT)	SA213T23 + SA213T23	50.8	8.64	GTAW + SMAW	8.64	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			-		
							278	5077	3893	688	-		60							

PREPARED

CHECKED (W.T.C)

APPROVED

DATE _____

DOC NO.

	REV NO :
--	----------

PAGE NO.

MOHD. BASEEM

LAKAVATH PRAVEEN KUMAR

VENKATESWARARAO DOODI

24-02-2021

1828-12-SH-EWS


0


7/22


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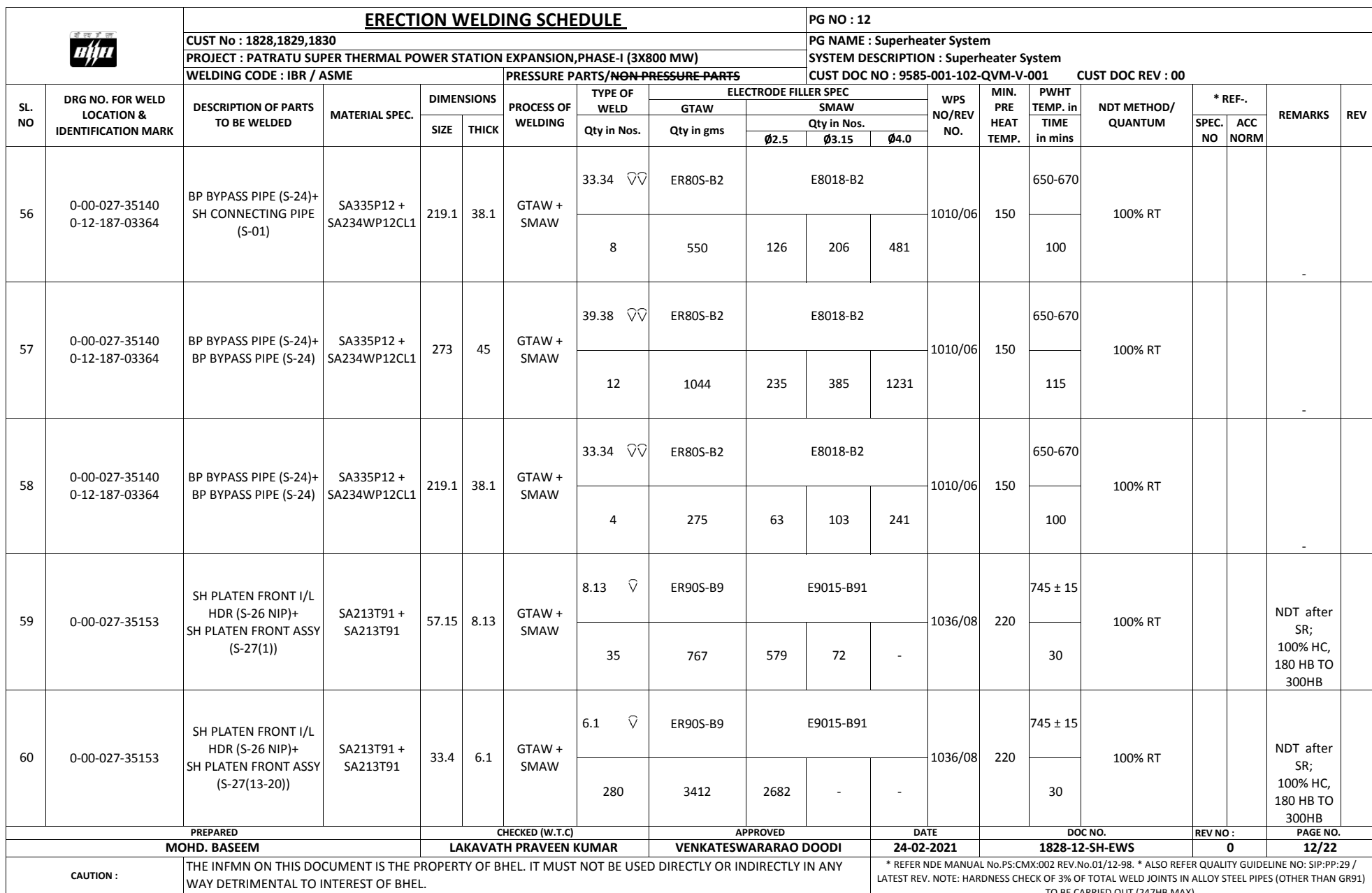
* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98. * ALSO REFER QUALITY GUIDELINE NO: SIP:PP:29 / LATEST REV. NOTE: HARDNESS CHECK OF 3% OF TOTAL WELD JOINTS IN ALLOY STEEL PIPES (OTHER THAN GR9) TO BE CARRIED OUT (247HB MAX).

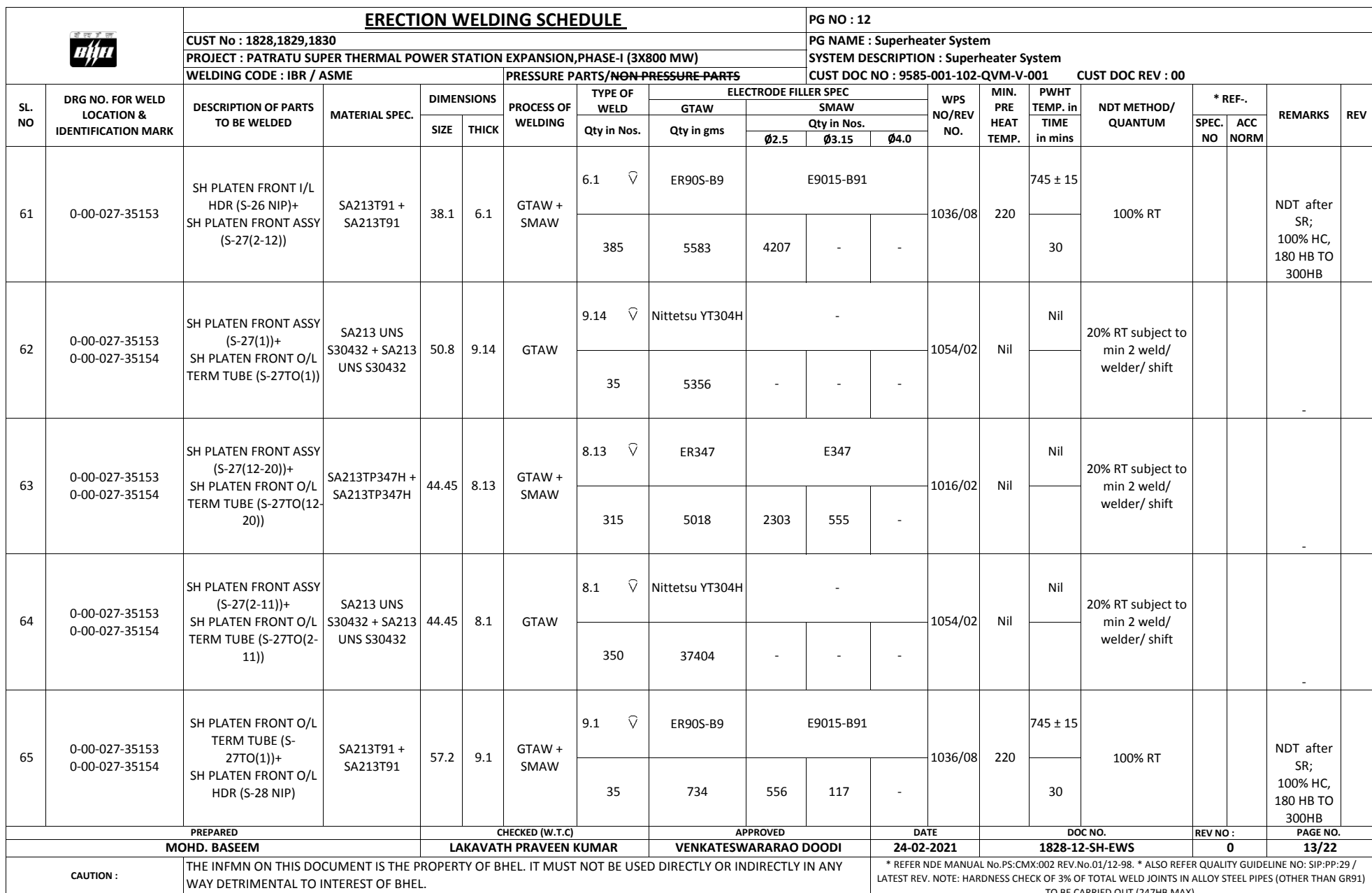
		ERECTION WELDING SCHEDULE										PG NO : 12									
		CUST No : 1828,1829,1830										PG NAME : Superheater System									
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Superheater System									
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001					CUST DOC REV : 00				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC					WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW												
									Qty in Nos.												
								Ø2.5	Ø3.15	Ø4.0							SPEC. NO	ACC NORM			
36	0-00-027-35181	BP LWR FRONT HDR (S-14 NIP)+ BP LOWER FRONT WALL PANEL (S-15L)	SA213T23 + SA213T23	54	9.14	GTAW + SMAW	9.14 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift						
							216	4179	3187	702	-										60
37	0-00-027-35181	BP LWR FRONT HDR (S-14 NIP)+ LOOSE TUBES (S-14LT)	SA213T23 + SA213T23	54	9.14	GTAW + SMAW	9.14 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift						
							8	155	119	26	-										60
38	0-00-027-35181	BP LWR FRONT WALL PANEL (S-15L)+ BP UPPER FRONT WALL PANEL (S-15U)	SA213T23 + SA213T23	54	9.14	GTAW + SMAW	9.14 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift						
							216	4179	3187	702	-										60
39	0-00-027-35181	BP UPR FRONT WALL PANEL (S-15U)+ BP FRONT SCREEN TUBES (S-16)	SA213T23 + SA213T23	54	9.14	GTAW + SMAW	9.14 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift						
							216	4179	3187	702	-										60
40	0-00-027-35181	BP FRONT SCREEN TUBES (S-16)+ BP FRONT SCREEN TUBES (S-16)	SA213T23 + SA213T23	54	9.14	GTAW + SMAW	9.14 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift						
							216	4179	3187	702	-										60
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.		
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				VENKATESWARARAO DOODI				24-02-2021		1828-12-SH-EWS			0		8/22		
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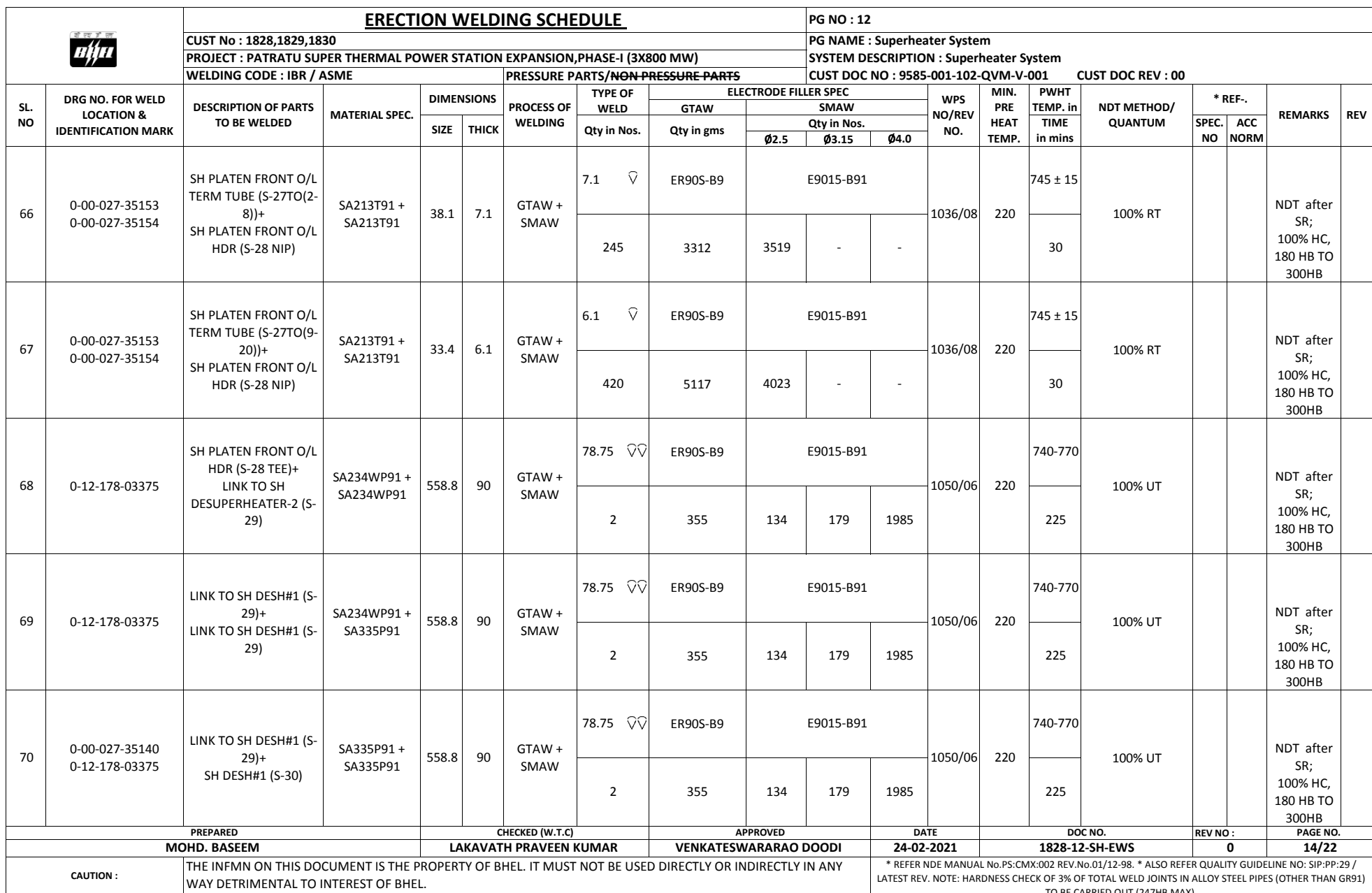
		ERECTION WELDING SCHEDULE										PG NO : 12									
		CUST No : 1828,1829,1830										PG NAME : Superheater System									
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Superheater System									
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001					CUST DOC REV : 00				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV		
SIZE	THICK	Qty in Nos.	Qty in gms	GTAW	SMAW			SPEC. NO	ACC NORM												
					Qty in Nos.																
							Ø2.5	Ø3.15	Ø4.0												
41	0-00-027-35181	BP FRONT SCREEN TUBES (S-16)+ BP FRONT O/L HDR (S-22 NIP)	SA213T23 + SA213T23	54	9.14	GTAW + SMAW	9.14 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift						
							216	4179	3187	702	-			60				-			
42	0-00-027-35181	BP FRONT O/L HDR (S-22 NIP)+ BP ROOF PANEL (S-21)	SA213T23 + SA213T23	54	9.14	GTAW + SMAW	9.14 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift						
							216	4179	3187	702	-			60				-			
43	0-00-027-35181	BP ROOF PANEL (S-21)+ BP UPPER REAR WALL PANEL (S-20U)	SA213T23 + SA213T23	54	9.14	GTAW + SMAW	9.14 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift						
							216	4179	3187	702	-			60				-			
44	0-00-027-35181	BP UPR REAR WALL PANEL (S-20U)+ BP INTER REAR WALL PANEL (S-20I)	SA213T23 + SA213T23	54	9.14	GTAW + SMAW	9.14 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift						
							216	4179	3187	702	-			60				-			
45	0-00-027-35181	BP INTER REAR WALL PANEL (S-20I)+ BP LOWER REAR WALL PANEL (S-20L)	SA213T23 + SA213T23	54	9.14	GTAW + SMAW	9.14 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift						
							216	4179	3187	702	-			60				-			
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.			
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				VENKATESWARARAO DOODI				24-02-2021		1828-12-SH-EWS		0		9/22			
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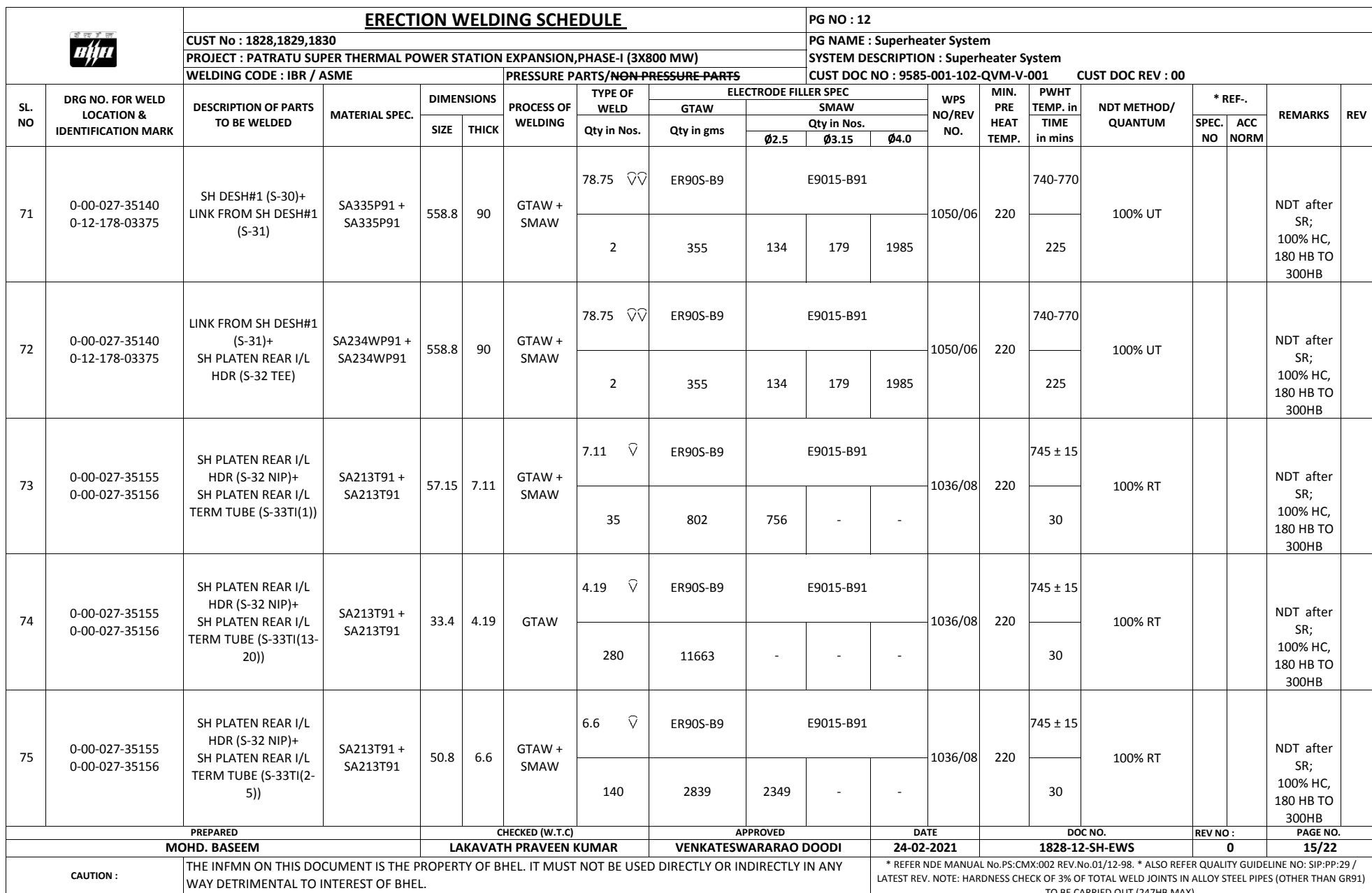
		ERECTION WELDING SCHEDULE							PG NO : 12											
		CUST No : 1828,1829,1830							PG NAME : Superheater System											
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		WELDING CODE : IBR / ASME				PRESSURE PARTS/ NON PRESSURE PARTS			CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 00											
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC					WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW			SPEC. NO					ACC NORM			
									Qty in Nos.	Qty in gms	Qty in Nos.									
											Ø2.5							Ø3.15		
46	0-00-027-35181	BP LWR REAR HDR (S-17 NIP)+ LOOSE TUBES (S-17LT)	SA213T23 + SA213T23	54	9.14	GTAW + SMAW	9.14 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift					
							4	78	60	13	-									
47	0-00-027-35181	BP LWR REAR WALL (S-20L)+ BP LWR REAR HDR (S-17 NIPP)	SA213T23 + SA213T23	54	9.14	GTAW + SMAW	9.14 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift					
							216	4179	3187	702	-									
48	0-00-027-35181	BP LWR FRONT HDR (S-14)+ BP LWR SIDE HDRS (S-13 ELBOW L&R)	SA335P91 + SA234WP91	406.4	90	GTAW + SMAW	78.75 ∇∇	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB		
							2	222	98	130	1357									
49	0-00-027-35181	BP LWR SIDE HDRS (S-13 ELBOW L&R)+ BP LWR REAR HDR (S-17)	SA234WP91 + SA335P91	406.4	90	GTAW + SMAW	78.75 ∇∇	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB		
							2	222	98	130	1357									
50	0-00-027-35141 0-12-852-03373	BP FRONT O/L HDR (S-22)+ LINK FROM BP FRONT O/L HDR (S-25A)	SA335P22 + SA335P12	457.2	95	GTAW + SMAW	83.12 ∇∇	ER80S-B2	E8018-B2			1012/04	150	680-720	100% (ISRT + UT)					
							2	259	66	108	1210									
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.	
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				VENKATESWARARAO DOODI				24-02-2021		1828-12-SH-EWS			0		10/22	
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SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW							SPEC. NO	ACC NORM			
									Qty in Nos.	Qty in gms	Qty in Nos.									
											Ø2.5									Ø3.15
51	0-12-852-03373	LINK FROM BP FRNT O/L HDR (S-25A)+ LINK FROM BP FRNT O/L HDR (S-25A)	SA335P12 + SA335P12	457.2	90	GTAW + SMAW	78.75 ∇∇	ER80S-B2	E8018-B2			1010/06	150	650-670	100% (ISRT + UT)					
							2	267	66	108	1119			225						
52	0-12-852-03373 0-12-852-03374	LINK FROM BP FRNT O/L HDR (S-25A)+ LINK TO PLATEN SH (S-25B REDUCER)	SA335P12 + SA234WP12CL1	457.2	90	GTAW + SMAW	78.75 ∇∇	ER80S-B2	E8018-B2			1010/06	150	650-670	100% (ISRT + UT)					
							2	267	66	108	1119			225						
53	0-12-852-03374	LINK TO PLATEN SH (S-25B)+ LINK TO PLATEN SH (S-25B)	SA234WP12CL1 + SA335P12	508	100	GTAW + SMAW	87.50 ∇∇	ER80S-B2	E8018-B2			1010/06	150	650-670	100% (ISRT + UT)					
							2	296	73	120	1482			250						
54	0-12-852-03374	LINK TO PLATEN SH (S-25B)+ SH PLATEN FRONT I/L HDR (S-26 TEE)	SA335P12 + SA234WP22CL1	508	100	GTAW + SMAW	87.50 ∇∇	ER80S-B2	E8018-B2			1012/04	150	680-720	100% (ISRT + UT)					
							2	296	73	120	1482			250						
55	0-00-027-35140 0-12-852-03374 0-12-187-03364	BP BYPASS PIPE (S-24)+ LINK TO SH PLATEN (S-25B)	SA335P12 + SA335P12	273	45	GTAW + SMAW	39.38 ∇∇	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT					
							2	174	40	65	206			115						
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.		
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				VENKATESWARARAO DOODI				24-02-2021		1828-12-SH-EWS		0		11/22		
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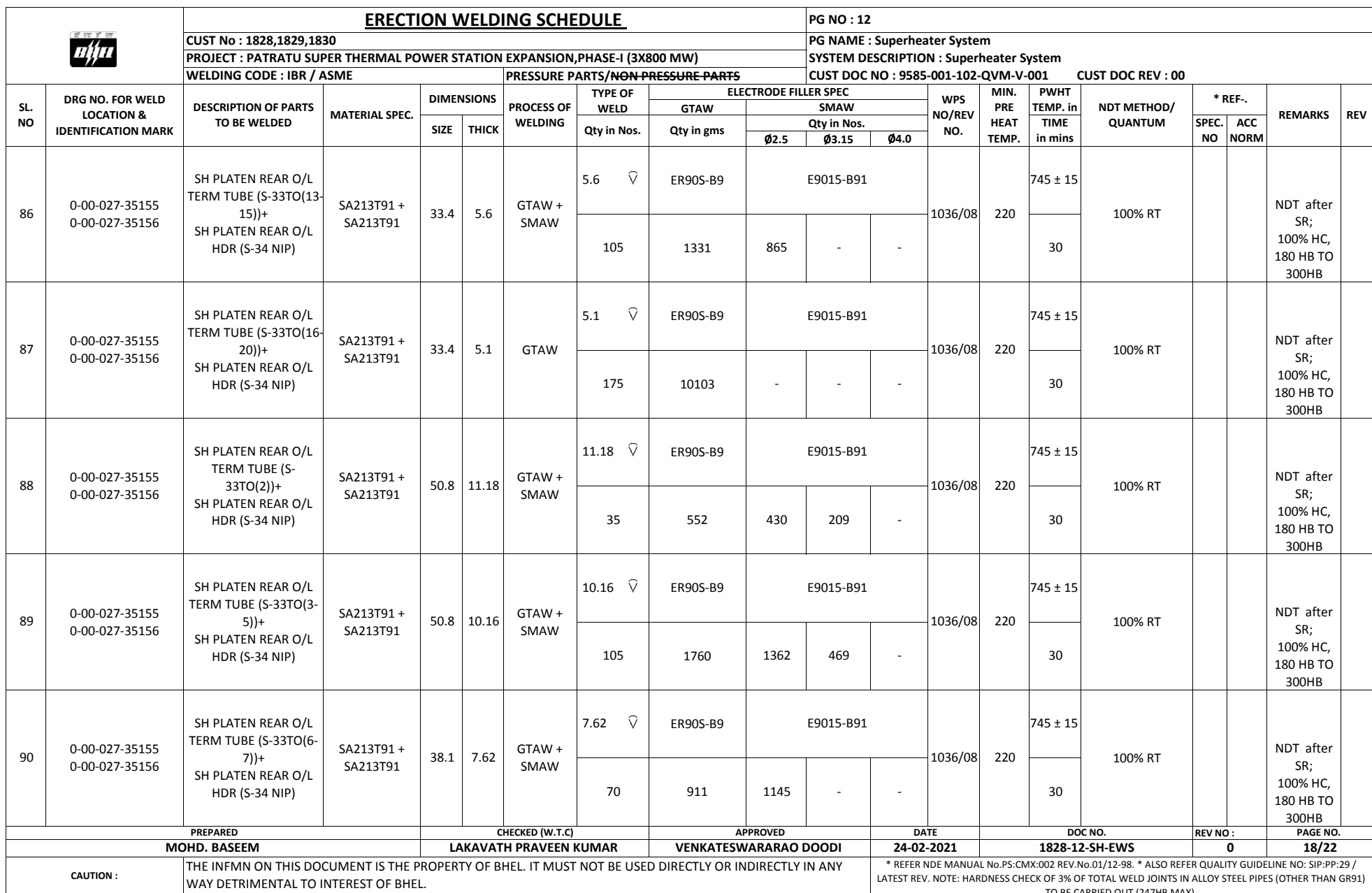








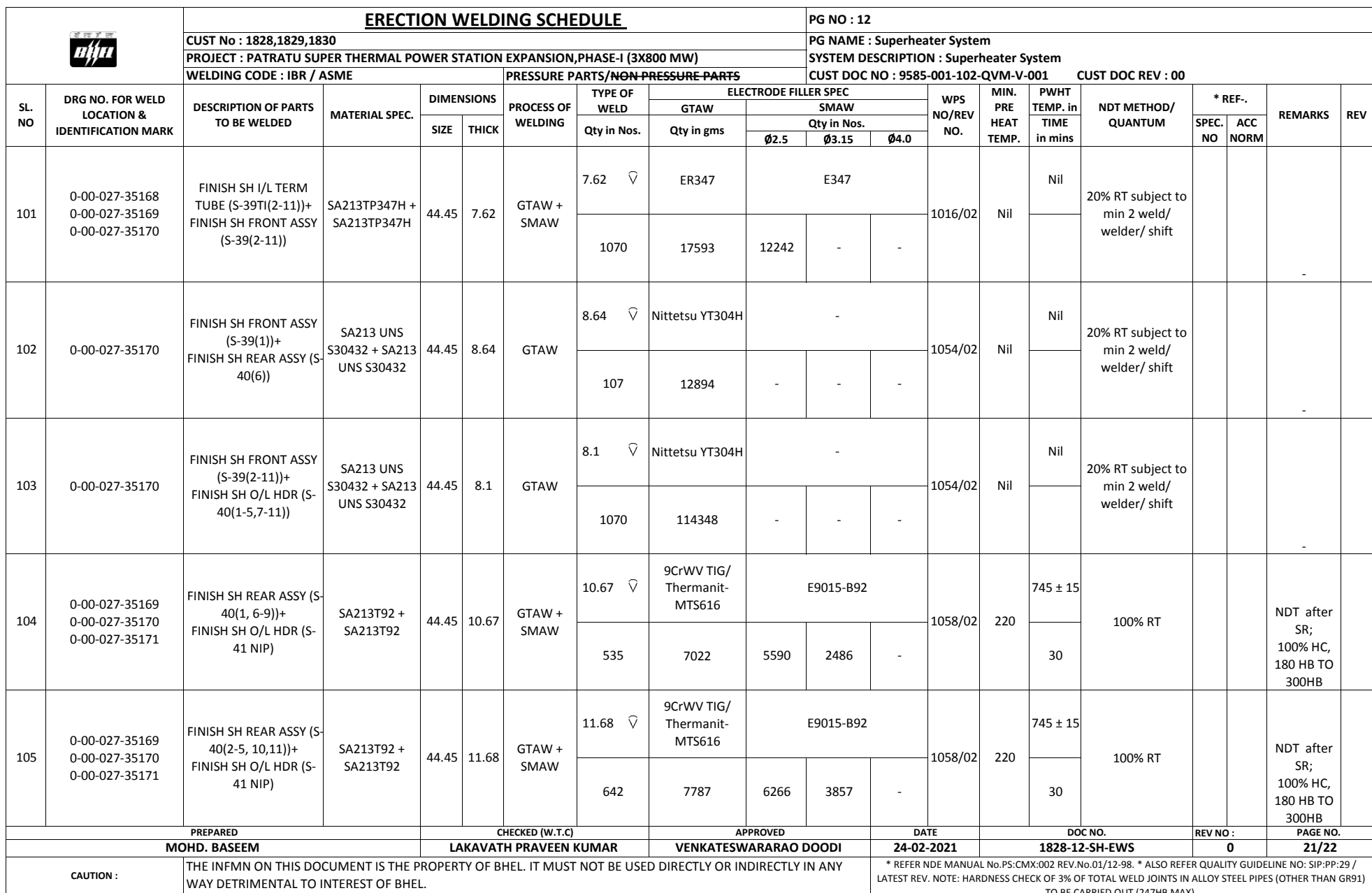
		ERECTION WELDING SCHEDULE										PG NO : 12							
		CUST No : 1828,1829,1830										PG NAME : Superheater System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Superheater System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 00							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.	Qty in gms	Qty in Nos.								
											Ø2.5					Ø3.15	Ø4.0		
76	0-00-027-35155 0-00-027-35156	SH PLATEN REAR I/L HDR (S-32 NIP)+ SH PLATEN REAR I/L TERM TUBE (S-33TI(6-12))	SA213T91 + SA213T91	38.1	5.08	GTAW	5.08 ∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB	
							245	16026	-	-	-			30					
77	0-00-027-35155 0-00-027-35156	SH PLATEN REAR ASSY (S-33TI(13-20))+ SH PLATEN REAR O/L TERM TUBE (S-33(2-5))	SA213T91 + SA182F91	33.4	4.19	GTAW	4.19 ∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB	
							280	11663	-	-	-			30					
78	0-00-027-35155 0-00-027-35156	SH PLATEN REAR ASSY (S-33TI(6-12))+ SH PLATEN REAR O/L TERM TUBE (S-33(6-12))	SA213T91 + SA182F91	38.1	5.08	GTAW	5.08 ∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB	
							245	16026	-	-	-			30					
79	0-00-027-35155 0-00-027-35156	SH PLATEN REAR I/L TERM TUBE (S-33TI(1))+ SH PLATEN REAR ASSY (S-33(1))	SA213T91 + SA182F91	57.15	7.11	GTAW + SMAW	7.11 ∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB	
							35	802	756	-	-			30					
80	0-00-027-35155 0-00-027-35156	SH PLATEN REAR I/L TERM TUBE (S-33TI(2-5))+ SH PLATEN REAR ASSY (S-33(2-5))	SA213T91 + SA182F91	50.8	6.6	GTAW + SMAW	6.6 ∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB	
							140	2839	2349	-	-			30					
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				VENKATESWARARAO DOODI				24-02-2021		1828-12-SH-EWS		0		16/22	
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				SIZE	THICK			GTAW		SMAW									
								Qty in gms	Qty in Nos.							Ø2.5	Ø3.15		
81	0-00-027-35155 0-00-027-35156	SH PLATEN REAR ASSY (S-33(1))+ SH PLATEN REAR O/L TERM TUBE (S-33TO(1))	SA213 UNS S30432 + SA213 UNS S30432	50.8	8.64	GTAW	8.64 ▽	Nittetsu YT304H	-			1054/02	Nil	Nil	20% RT subject to min 2 weld/ welder/ shift				-
							35	4820	-	-	-								
82	0-00-027-35155 0-00-027-35156	SH PLATEN REAR ASSY (S-33(2-5))+ SH PLATEN REAR O/L TERM TUBE (S-33TO(2-5))	SA213 UNS S30432 + SA213 UNS S30432	44.45	8.1	GTAW	8.1 ▽	Nittetsu YT304H	-			1054/02	Nil	Nil	20% RT subject to min 2 weld/ welder/ shift				-
							140	14962	-	-	-								
83	0-00-027-35155 0-00-027-35156	SH PLATEN REAR ASSY (S-33(6-8))+ SH PLATEN REAR O/L TERM TUBE (S-33TO(6-8))	SA213 UNS S30432 + SA213 UNS S30432	44.45	7.6	GTAW	7.6 ▽	Nittetsu YT304H	-			1054/02	Nil	Nil	20% RT subject to min 2 weld/ welder/ shift				-
							105	9976	-	-	-								
84	0-00-027-35155 0-00-027-35156	SH PLATEN REAR ASSY (S-33(9-20))+ SH PLATEN REAR O/L TERM TUBE (S-33TO(9-20))	SA213TP347H + SA213TP347H	44.45	7.62	GTAW + SMAW	7.62 ▽	ER347	E347			1016/02	Nil	Nil	20% RT subject to min 2 weld/ welder/ shift				-
							420	6906	4805	-	-								
85	0-00-027-35155 0-00-027-35156	SH PLATEN REAR O/L TERM TUBE (S-33TO(1))+ SH PLATEN REAR O/L HDR (S-34 NIP)	SA213T91 + SA213T91	57	11	GTAW + SMAW	11 ▽	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB	
							35	665	508	219	-			30					
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				VENKATESWARARAO DOODI				24-02-2021		1828-12-SH-EWS		0		17/22	
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.						* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98. * ALSO REFER QUALITY GUIDELINE NO: SIP:PP:29 / LATEST REV. NOTE: HARDNESS CHECK OF 3% OF TOTAL WELD JOINTS IN ALLOY STEEL PIPES (OTHER THAN GR91) TO BE CARRIED OUT (247HB MAX).											



		ERECTION WELDING SCHEDULE										PG NO : 12							
		CUST No : 1828,1829,1830										PG NAME : Superheater System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Superheater System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 00							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW							SPEC. NO	ACC NORM		
									Qty in gms	Qty in Nos.									
										Ø2.5	Ø3.15								
91	0-00-027-35155 0-00-027-35156	SH PLATEN REAR O/L TERM TUBE (S-33TO(8-12)))+ SH PLATEN REAR O/L HDR (S-34 NIP)	SA213T91 + SA213T91	38.1	6.6	GTAW + SMAW	6.6 ∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB	
							175	2452	2202	-	-		30						
92	0-00-027-35155 0-12-179-03386	SH PLATEN REAR O/L HDR (S-34 TEE)+ LINK FROM SH DESUPERHEATER#2 (S-35)	SA182F92 + SA234WP91	508	120	GTAW + SMAW	105.00 ∇∇	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB	
							2	265	122	162	2704		300						
93	0-12-179-03386	LINK FROM SH DESH#2 (S-35)+ LINK FROM SH DESH#2 (S-35)	SA234WP91 + SA335P91	558.8	100	GTAW + SMAW	87.50 ∇∇	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB	
							4	679	268	357	4646		250						
94	0-12-179-03386	LINK FROM SH DESH#2 (S-35)+ SH DESUPERHEATER#2 (S-36)	SA335P91 + SA335P91	558.8	100	GTAW + SMAW	87.50 ∇∇	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB	
							2	340	134	179	2323		250						
95	0-12-179-03385	SH DESH#2 (S-36)+ LINK TO FINISH SH (S-37)	SA335P91 + SA335P91	558.8	100	GTAW + SMAW	87.50 ∇∇	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB	
							2	340	134	179	2323		250						
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				VENKATESWARARAO DOODI				24-02-2021		1828-12-SH-EWS		0		19/22	
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.										* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98. * ALSO REFER QUALITY GUIDELINE NO: SIP:PP:29 / LATEST REV. NOTE: HARDNESS CHECK OF 3% OF TOTAL WELD JOINTS IN ALLOY STEEL PIPES (OTHER THAN GR91) TO BE CARRIED OUT (247HB MAX).							

		ERECTION WELDING SCHEDULE										PG NO : 12								
		CUST No : 1828,1829,1830										PG NAME : Superheater System								
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Superheater System								
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001			CUST DOC REV : 00					
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC					WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW			SPEC. NO					ACC NORM			
									Qty in gms	Qty in Nos.										
										Ø2.5	Ø3.15							Ø4.0		
96	0-12-179-03385	LINK TO FINISH SH (S-37)+ FINISH SH I/L HDR (S-38 TEE)	SA335P91 + SA234WP91	558.8	100	GTAW + SMAW	87.50 ∇∇	ER90S-B9	E9015-B91			1050/06	220	740-770	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB		
							2	340	134	179	2323									
97	0-00-027-35168 0-00-027-35169 0-00-027-35170	FINISH SH I/L HDR (S-38 NIP)+ FINISH SH I/L TERM TUBE (S-39TI(1))	SA213T91 + SA213T91	50.8	10.67	GTAW + SMAW	10.67 ∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB		
							107	1740	1350	555	-			30						
98	0-00-027-35168 0-00-027-35169 0-00-027-35170	FINISH SH I/L HDR (S-38 NIP)+ FINISH SH I/L TERM TUBE (S-39TI(2-4,7-10))	SA213T91 + SA213T91	44.45	10.67	GTAW + SMAW	10.67 ∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB		
							749	9831	7826	3480	-			30						
99	0-00-027-35168 0-00-027-35169 0-00-027-35170	FINISH SH I/L HDR (S-38 NIP)+ FINISH SH I/L TERM TUBE (S-39TI(5,6,11))	SA213T91 + SA213T91	44.45	11.7	GTAW + SMAW	11.7 ∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB		
							321	3887	3129	1938	-			30						
100	0-00-027-35168 0-00-027-35169 0-00-027-35170	FINISH SH I/L TERM TUBE (S-39TI(1))+ FINISH SH FRONT ASSY (S-39(1))	SA213TP347H + SA213TP347H	44.45	8.13	GTAW + SMAW	8.13 ∇	ER347	E347			1016/02	Nil	Nil	20% RT subject to min 2 weld/ welder/ shift					
							107	1705	783	189	-									
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.		
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				VENKATESWARARAO DOODI				24-02-2021		1828-12-SH-EWS		0		20/22		
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		ERECTION WELDING SCHEDULE										PG NO : 12									
		CUST No : 1828,1829,1830										PG NAME : Superheater System									
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Superheater System									
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001					CUST DOC REV : 00				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV		
				SIZE	THICK			GTAW		SMAW											
								Qty in gms	Qty in Nos.							Ø2.5	Ø3.15			Ø4.0	
106	0-00-027-35146 0-10-135-01876	SC FURN ARCH SUPPT I/L HDR (S-09A)+ SC SPACER TUBE (S-44)	SA213T22 + SA213T22	48.3	7.62	GTAW + SMAW	7.62 ∇	ER90S-B3	E9018-B3			1013/02	150	Nil	20% RT subject to min 2 weld/ welder/ shift						
							6	61	75	-	-							-			
107	0-00-027-35145 0-00-027-35146 0-00-027-35147	SC SPACER TUBE (S-44)+ SC SPACER TUBE (S-44)	SA213 UNS S30432 + SA213 UNS S30432	57.15	8.64	GTAW	8.64 ∇	Nittetsu YT304H	-			1054/02	Nil	Nil	20% RT subject to min 2 weld/ welder/ shift						
							55	8521	-	-	-							-			
108	0-00-027-34760 0-00-027-35146	SC SPACER TUBE (S-44)+ SH PLATEN REAR I/L HDR (S-32)	SA213T91 + SA213T91	48.3	7.62	GTAW + SMAW	7.62 ∇	ER90S-B9	E9015-B91			1036/08	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB			
							6	109	125	-	-			30							
109		GAMMA PLUG	SA335P12 + SA182F22CL3			SMAW	7 ∇	-	E8018-B2			1102/01	200	Nil	100% LPI or MPI						
							133	-	34	-	-							-			
110		GAMMA PLUG	SA335P22 + SA182F22CL3			SMAW	7 ∇	-	E9018-B3			1103/01	200	Nil	100% LPI or MPI						
							5	-	2	-	-							-			
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.			
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				VENKATESWARARAO DOODI				24-02-2021		1828-12-SH-EWS		0		22/22			
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SUMMARY LIST FOR SITE ELECTRODES**CUST NO : 1828,1829,1830****PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)****PG NO : 12****PG NAME : Superheater System****SYSTEM DESCRIPTION : Superheater System**


SL NO	TYPE OF ELECTRODE/ROD	SIZE AND QTY (Nos)			GTAW ROD WT (gm)
		Ø 2.5	Ø 3.15	Ø 4.0	
1	ER80S-B2				15203
2	ER90S-B3				18455
3	2CrWV-TIG/ TGS 2CW				128391
4	ER90S-B9				178664
5	Nittetsu YT304H				312422
6	ER347				46833
7	9CrWV TIG/ Thermanit-MTS616				22214
8	E8018-B2	3953	6215	33330	
9	E9018-B3	9572	1230	0	
10	Cromet 23L/CM 2CW	105689	19068	0	
11	E9015-B91	63564	13905	40437	
12	E347	30200	1116	0	
13	E9015-B92	17784	9515	0	


NOTES :


1. RESERVE 50% ADDED.
2. QUANTITY GIVEN IS PER BOILER
3. THIS FIELD WELDING SCHEDULE IS FOR REFERENCE PURPOSE ONLY


EWS DOC ID : 1828-12-SH-EWS REV : 0**PREPARED BY : MOHD. BASEEM****CHECKED BY : LAKAVATH PRAVEEN KUMAR****APPROVED BY : VENKATESWARARAO DOODI****DATE : 24-02-2021**


		ERECTION WELDING SCHEDULE							PG NO : 07										
		CUST No : 1828,1829,1830							PG NAME : Circulation System										
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)							SYSTEM DESCRIPTION : Circulation System										
		WELDING CODE : IBR / ASME				PRESSURE PARTS/ NON PRESSURE PARTS			CUST DOC NO : 9585-001-102-QVM-V-001				CUST DOC REV : 02						
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP. in °C	PWHT TEMP. in °C	NDT METHOD/ QUANTUM	* REF.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW						SPEC. NO	ACC NORM REF.			
							Qty in Nos.		Qty in gms	Ø2.5			Ø3.15						Ø4.0
01	0-00-027-35149	F-01(Furn Lwr Front Inlet Hdr) + F-16(Furn Lwr Side Inlet Hdr)	SA106GRC + SA234WPC	406.4	80	GTAW + SMAW	70.00 ☑☑	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT+UT) 100% MPI/LPI			-	01
							2	237	59	96	818			200					
02	0-00-027-35149	F-07(Furn Lwr Rear Inlet Hdr) + F-16(Furn Lwr Side Inlet Hdr)	SA106GRC + SA234WPC	406.4	80	GTAW + SMAW	70.00 ☑☑	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT+UT) 100% MPI/LPI			-	01
							2	237	59	96	818			200					
03	0-00-027-35149	F-01(Furn Lwr Front Inlet Hdr) + F-02TI(Furn Lwr Front Spiral Inlet Terminal Tube)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ☑	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							284	2064	2454	-	-								
04	0-00-027-35149	F-07(Furn Lwr Rear Inlet Hdr) + F-08TI(Furn Rear Spiral Inlet Term Tube)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ☑	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							284	2064	2454	-	-								
05	0-00-027-35185 0-00-027-35148	F-02TI(Furn Lwr Front Spiral Inlet Terminal Tube) + F-02L(Furn Lwr Front Spiral Wall Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ☑	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							272	2054	3878	-	-								
PREPARED				CHECKED (W.T.C)			APPROVED			DATE		DOC NO.			REV NO :		PAGE NO.		
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR			NIRMAL RAJ N			22-10-2021		1828-07-CIR-EWS			3		1/17		
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		ERECTION WELDING SCHEDULE										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15					Ø4.0				
06	0-00-027-35185 0-00-027-35148	F-08TI(Furn Rear Spiral Inlet Term Tube) + F-08L(Furn Lwr Rear Spiral Wall Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							272	2054	3878	-	-								
07	0-00-027-35185 0-00-027-35148	F-02TI(Furn Lwr Front Spiral Inlet Terminal Tube) + F-08L(Furn Lwr Rear Spiral Wall Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							3	23	43	-	-								
08	0-00-027-35185 0-00-027-35148	F-08TI(Furn Rear Spiral Inlet Term Tube) + F-02L(Furn Lwr Front Spiral Wall Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							3	23	43	-	-								
09	0-00-027-35184 0-00-027-35148	F-02TI(Furn Lwr Front Spiral Inlet Terminal Tube) + F-17L(L&R)(Furn Lwr Side Spiral Wall)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							18	136	257	-	-								
10	0-00-027-35184 0-00-027-35148	F-08TI(Furn Rear Spiral Inlet Term Tube) + F-17L(L&R)(Furn Lwr Side Spiral Wall)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							18	136	257	-	-								
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.		REV NO :		PAGE NO.		
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N			22-10-2021		1828-07-CIR-EWS		3		2/17		
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		ERECTION WELDING SCHEDULE										PG NO : 07								
		CUST No : 1828,1829,1830										PG NAME : Circulation System								
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System								
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001				CUST DOC REV : 02				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
SIZE	THICK	Qty in Nos.	Qty in gms	GTAW	SMAW															
				Qty in Nos.																
								Ø2.5	Ø3.15	Ø4.0						SPEC. NO	ACC NORM			
11	0-00-027-35185	F-02L(Furn Lwr Front Spiral Wall Panel) + F-02L(Furn Lwr Front Spiral Wall Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift				-	00
							339	2560	4833	-	-									
12	0-00-027-35185	F-08L(Furn Lwr Rear Spiral Wall Panel) + F-08L(Furn Lwr Rear Spiral Wall Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift				-	00
							339	2560	4833	-	-									
13	0-00-027-35185	F-02L(Furn Lwr Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift				-	00
							417	3149	5945	-	-									
14	0-00-027-35185	F-08L(Furn Lwr Rear Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift				-	00
							417	3149	5945	-	-									
15	0-00-027-35183	F-02U(Furn Upper Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift				-	00
							163	1231	2324	-	-									
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.		
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				22-10-2021		1828-07-CIR-EWS		3		3/17		
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		ERECTION WELDING SCHEDULE										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON-PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in gms	Qty in Nos.									
								Ø2.5	Ø3.15	Ø4.0					SPEC. NO	ACC NORM			
16	0-00-027-35183	F-08U(Furn Upper Rear Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							163	1231	2324	-	-								
17	0-00-027-35184	F-17L(L&R)(Furn Lwr Side Spiral Wall) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							828	6253	11803	-	-								
18	0-00-027-35182	F-17U(L&R)(Furn Lwr Side Spiral Wall) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							324	2447	4619	-	-								
19	0-00-027-35167	F-02X(Furn Upper Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							51	386	727	-	-								
20	0-00-027-35167	F-02X(Furn Upper Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA182F12CL2	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							2	16	29	-	-								
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.		REV NO :		PAGE NO.		
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N			22-10-2021		1828-07-CIR-EWS		3		4/17		
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		ERECTION WELDING SCHEDULE										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW							SPEC. NO	ACC NORM		
									Qty in gms	Qty in Nos.									
										Ø2.5	Ø3.15								
21	0-00-027-35167	F-08X(Furn Upper Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇ 51	ER80S-B2 386	E8018-B2 727 - -			1009/03	150	Nil 	20% RT subject to min 2 weld/ welder/ shift			-	00
22	0-00-027-35167	F-08X(Furn Upper Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA182F12CL2	42.4	8.8	GTAW + SMAW	8.8 ∇ 2	ER80S-B2 16	E8018-B2 29 - -			1009/03	150	Nil 	20% RT subject to min 2 weld/ welder/ shift			-	00
23	0-00-027-35166	F-17X(L&R)(Furn Lwr Side Spiral Wall) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇ 110	ER80S-B2 831	E8018-B2 1568 - -			1009/03	150	Nil 	20% RT subject to min 2 weld/ welder/ shift			-	00
24	0-00-027-35166	F-17X(L&R)(Furn Lwr Side Spiral Wall) + CORNERTUBES	SA213T12 + SA182F12CL2	42.4	8.8	GTAW + SMAW	8.8 ∇ 4	ER80S-B2 31	E8018-B2 58 - -			1009/03	150	Nil 	20% RT subject to min 2 weld/ welder/ shift			-	00
25	0-00-027-35185 0-00-027-35172 0-00-027-35175	F-02L(Furn Lwr Front Spiral Wall Panel) + F-WB(Furn Burner panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇ 142	ER80S-B2 1073	E8018-B2 2025 - -			1009/03	150	Nil 	20% RT subject to min 2 weld/ welder/ shift			-	00
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				22-10-2021		1828-07-CIR-EWS		3		5/17	
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		<u>ERECTION WELDING SCHEDULE</u>										PG NO : 07								
		CUST No : 1828,1829,1830										PG NAME : Circulation System								
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System								
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02								
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC					WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV
				SIZE	THICK			GTAW	SMAW											
									Qty in Nos.											
									Ø2.5	Ø3.15	Ø4.0									
26	0-00-027-35185 0-00-027-35172 0-00-027-35175	F-08L(Furn Lwr Rear Spiral Wall Panel) + F-WB(Furn Burner panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
						142	1073	2025	-	-										
27	0-00-027-35182 0-00-027-35172 0-00-027-35175	F-17U(L&R)(Furn Lwr Side Spiral Wall) + F-WB(Furn Burner panels)/L-OFA (Corner Sofa panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
						1854	14000	26428	-	-										
28	0-00-027-35183 0-00-027-35172 0-00-027-35175	F-02U(Furn Upper Front Spiral Wall Panel) + F-WB(Furn Burner panels)/L-OFA (Corner Sofa panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
						920	6947	13114	-	-										
29	0-00-027-35183 0-00-027-35172 0-00-027-35175	F-08U(Furn Upper Rear Spiral Wall Panel) + F-WB(Furn Burner panels)/L-OFA (Corner Sofa panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
						920	6947	13114	-	-										
30	0-00-027-35184 0-00-027-35172 0-00-027-35175	F-17L(L&R)(Furn Lwr Side Spiral Wall)+ F-WB(Furn Burner panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
						270	2039	3849	-	-										
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.	
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				22-10-2021		1828-07-CIR-EWS			3		6/17	
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		ERECTION WELDING SCHEDULE										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001				CUST DOC REV : 02			
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15					Ø4.0				
31	0-00-027-35183 0-00-027-35167	F-02U(Furn Upper Front Spiral Wall Panel) + F-02X(Furn Front Spiral Wall To Vert Transition Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							115	869	1640	-	-								
32	0-00-027-35183 0-00-027-35167	F-08U(Furn Upper Rear Spiral Wall Panel) + F-08X(Furn Rear Spiral To Vert Transition Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							115	869	1640	-	-								
33	0-00-027-35182 0-00-027-35166	F-17U(L&R)(Furn Upper Side Spiral Wall Panel) + F-17X(L&R)(Furn Side Spiral to Vert Transition Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							226	1707	3222	-	-								
34	0-00-027-35183 0-00-027-35174	F-02U(Furn Upper Front Spiral Wall Panel) + H-OFA(Furn SOFA panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							184	1390	2623	-	-								
35	0-00-027-35183 0-00-027-35174	F-08U(Furn Upper Rear Spiral Wall Panel) + H-OFA(Furn SOFA panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							184	1390	2623	-	-								
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.			REV NO :		PAGE NO.	
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N			22-10-2021		1828-07-CIR-EWS			3		7/17	
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		<u>ERECTION WELDING SCHEDULE</u>										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15					Ø4.0				
36	0-00-027-35182 0-00-027-35174	F-17U(L&R)(Furn Upper Side Spiral Wall Panel) + H-OFA(Furn SOFA panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							368	2779	5246	-	-								
37	0-00-027-35166	F-17X(L&R)(Furn Upper Side Spiral Wall Transition) + F-17TO(L&R)(Furn Side Spiral Outlet Term Tube)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							280	2035	2419	-	-								
38	0-00-027-35167	F-02X(Furn Upper Front Spiral Wall Transition) + F-02TO(Furn Front Spiral Outlet Terminal Tube)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							144	1047	1244	-	-								
39	0-00-027-35167	F-08X(Furn Upper Rear Spiral Wall Transition) + F-08TO(Furn Rear Spiral Outlet Term Tube)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							144	1047	1244	-	-								
40	0-00-027-35166	F-17TO(L&R)(Furn Side Spiral Outlet Term Tube) + F-18(L&R)(Furn Intern Side Hdr)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							280	2035	2419	-	-								
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.		REV NO :		PAGE NO.		
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N			22-10-2021		1828-07-CIR-EWS		3		8/17		
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		ERECTION WELDING SCHEDULE										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001			CUST DOC REV : 02				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15	Ø4.0								
41	0-00-027-35167	F-02TO(Furn Front Spiral Outlet Terminal Tube) + F-03(Furn Interm Front Hdr)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							144	1047	1244	-	-								
42	0-00-027-35167	F-08TO(Furn Rear Spiral Outlet Term Tube) + F-09(Furn Interm Rear Hdr)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							144	1047	1244	-	-								
43	0-00-027-35166	F-18(L&R)(Furn Interm Side Hdr) + F-19TI(L&R)(Furn Side Vert Inlet Term Tube)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-3 only	03
							840	5670	4139	-	-			60					
44	0-00-027-35167	F-03(Furn Interm Front Hdr) + F-04TI(Furn Front Vertical Inlet Terminal Tube)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-3 only	03
							432	2916	2129	-	-			60					
45	0-00-027-35167	F-09(Furn Interm Rear Hdr) + F-10TI(Furn Rear Vertical Inlet Terminal Tube)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-3 only	03
							432	2916	2129	-	-			60					
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				22-10-2021		1828-07-CIR-EWS		3		9/17	
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.							* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98. * ALSO REFER QUALITY GUIDELINE NO: SIP:PP-29 / LATEST REV. AND SIP:PP-31 / LATEST REV. NOTE: HARDNESS CHECK OF 3% OF TOTAL WELD JOINTS IN ALLOY STEEL PIPES (OTHER THAN GR91) TO BE CARRIED OUT (260 HV MAX).										


		ERECTION WELDING SCHEDULE										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15	Ø4.0								
46	0-00-027-35166	F-19TI(L&R)(Furn Side Vert Inlet Term Tube) + F-17X(L&R)(Furn Side Spiral to Vert Transition Panel)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							840	5670	4139	-	-			60					
47	0-00-027-35167	F-04TI(Furn Front Vertical Inlet Terminal Tube) + F-02X(Furn Front Spiral Wall To Vert Transition Panel)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							432	2916	2129	-	-			60					
48	0-00-027-35167	F-10TI(Furn Rear Vertical Inlet Terminal Tube) + F-08X(Furn Rear Spiral To Vert Transition Panel)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							432	2916	2129	-	-			60					
49	0-00-027-35167 0-00-027-35179	F-02X(Furn Front Spiral Wall To Vert Transition Panel) + F-04L (FURN FRONT LOWER VERT WALL PANEL)	SA213T22 + SA213T22	38.1	8.13	GTAW + SMAW	8.13 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							432	2865	4775	-	-			60					
50	0-00-027-35179	F-04L (FURN FRONT LOWER VERT WALL PANEL) + F-04U(Furn Upper Front Vertical Wall Panel	SA213T22 + SA213T22	38.1	8.13	GTAW + SMAW	8.13 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							432	2865	4775	-	-			60					
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				22-10-2021		1828-07-CIR-EWS		3		10/17	
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		ERECTION WELDING SCHEDULE										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001			CUST DOC REV : 02				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW										
									Qty in gms	Qty in Nos.									
										Ø2.5	Ø3.15					Ø4.0			
51	0-00-027-35179 0-00-027-35159	F-04U(Furn Upper Front Vertical Wall Panel) + F-05(Furn Upper Front Outlet Hdr)	SA213T23 + SA213T22	38.1	8.13	GTAW + SMAW	8.13 ▽	ER90S-B3	E9018-B3			1053/04	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							432	5400	4775	-	-		60						
52	0-00-027-35167 0-00-027-35179	F-08X(Furn Rear Spiral To Vert Transition Panel) + F-11(Furn rear arch)	SA213T22 + SA213T22	38.1	8.13	GTAW + SMAW	8.13 ▽	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							432	2865	4775	-	-		60						
53	0-00-027-35144 0-00-027-35179	F-11(Furn rear arch) + F-12(Furn screen tubes)	SA213T22 + SA213T23	38.1	8.13	GTAW + SMAW	8.13 ▽	ER90S-B3	E9018-B3			1053/04	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							288	3600	3184	-	-		60						
54	0-00-027-35144 0-00-027-35179	F-11(Furn rear arch) + F-13(Furn Hgr tubes)	SA213T22 + SA213T22	38.1	8.13	GTAW + SMAW	8.13 ▽	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							144	955	1592	-	-		60						
55	0-00-027-35144 0-00-027-35179	F-12(Furn screen tubes) + F-14(Furn Upper Rear outlet Hdr)	SA213T23 + SA213T23	38.1	8.13	GTAW + SMAW	8.13 ▽	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							288	3600	5306	-	-		60						
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				22-10-2021		1828-07-CIR-EWS		3		11/17	
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		ERECTION WELDING SCHEDULE										PG NO : 07									
		CUST No : 1828,1829,1830										PG NAME : Circulation System									
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System									
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON-PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001					CUST DOC REV : 02				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC					WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW			SPEC. NO					ACC NORM				
									Qty in Nos.	Qty in gms	Qty in Nos.										
											Ø2.5							Ø3.15			Ø4.0
56	0-00-027-35144 0-00-027-35179	F-13(Furn Hgr tubes) + F-14(Furn Upper Rear outlet Hdr)	SA213T23 + SA213T23	63.5	12.7	GTAW + SMAW	12.7 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01		
							144	2955	2242	1608	-			60							
57	0-00-027-35166 0-00-027-35179	F-17X(L&R)(Furn Side Spiral to Vert Transition Panel) + F-19L(L&R)(Furn Side Lower Vert Wall Panel)	SA213T22 + SA213T22	38.1	9.5	GTAW + SMAW	9.5 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01		
							840	4855	12422	-	-			60							
58	0-00-027-35179	F-19L(L&R)(Furn Side Lower Vert Wall Panel) + F-19U(L&R)(Furn Upper Side Vert Wall Panel)	SA213T22 + SA213T22	38.1	9.5	GTAW + SMAW	9.5 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01		
							840	4855	12422	-	-			60							
59	0-00-027-35179 0-00-027-35159	F-19U(L&R)(Furn Upper Side Vert Wall Panel) + F-20(L&R)(Furn Upper Side Outlet Hdrs)	SA213T22 + SA213T22	38.1	9.5	GTAW + SMAW	9.5 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01		
							840	4855	12422	-	-			60							
60	0-00-027-35159	F-05(Furn Upper Front Outlet Hdr) + F-06(Front Riser pipes)	SA182F12CL2 + SA335P12	219.1	40	GTAW + SMAW	35.00 ∇∇	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01		
							4	270	63	103	261			100							
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.		
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				22-10-2021		1828-07-CIR-EWS			3		12/17		
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		<u>ERECTION WELDING SCHEDULE</u>										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in gms	Qty in Nos.									
								Ø2.5	Ø3.15	Ø4.0					SPEC. NO	ACC NORM			
61	1-07-318-01205 TO 1-07-318-01208	F-06(Front Riser pipes) + F-06(Front Riser pipes)	SA335P12 + SA335P12	219.1	40	GTAW + SMAW	35.00 ∩∩	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01
							10		673	158	258			651					
62	0-00-027-35157 0-00-027-35140	F-06(Front Riser pipes) + F-31(Separator)	SA335P12 + SA182F22CL3	219.1	40	GTAW + SMAW	35.00 ∩∩	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT 100% MPI/LPI			-	01
							4		270	63	103			261					
63	0-00-027-35159	F-14(Furn Upper Rear outlet Hdr) + F-15(Rear Riser Pipes)	SA182F22CL3 + SA335P12	219.1	40	GTAW + SMAW	35.00 ∩∩	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT 100% MPI/LPI			-	01
							4		270	63	103			261					
64	1-07-316-01201 TO 1-07-316-01201	F-15(Rear Riser Pipes) + F-15(Rear Riser Pipes)	SA335P12 + SA335P12	219.1	40	GTAW + SMAW	35.00 ∩∩	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01
							16		1077	252	412			1042					
65	0-00-027-35157 0-00-027-35140	F-15(Rear Riser Pipes) + F-31(Separator)	SA335P12 + SA182F22CL3	219.1	40	GTAW + SMAW	35.00 ∩∩	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT 100% MPI/LPI			-	01
							4		270	63	103			261					
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.		REV NO :		PAGE NO.		
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N			22-10-2021		1828-07-CIR-EWS		3		13/17		
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		ERECTION WELDING SCHEDULE										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001		CUST DOC REV : 02					
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW										
									Qty in gms	Qty in Nos.									
										Ø2.5	Ø3.15					Ø4.0			
66	0-00-027-35159	F-20(Furn Upper Side Outlet Hdrs) + F-21(Side Riser Pipes)	SA182F12CL2 + SA335P12	219.1	40	GTAW + SMAW	35.00 ♡♡	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01
							8	539	126	206	521			100					
67	1-07-315-01209 TO 1-07-315-01216	F-21(Side Riser Pipes) + F-21(Side Riser Pipes)	SA335P12 + SA335P12	219.1	40	GTAW + SMAW	35.00 ♡♡	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01
							25	1682	393	644	1628			100					
68	0-00-027-35157 0-00-027-35140	F-21(Side Riser Pipes) + F-31(Separator)	SA335P12 + SA182F22CL3	219.1	40	GTAW + SMAW	35.00 ♡♡	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT 100% MPI/LPI			-	01
							8	539	126	206	521			100					
69	0-00-027-35157	F-31(Separator) + F-32(Link To Separator Storage Tank)	SA182F22CL3 + SA335P12	355.6	65	GTAW + SMAW	56.88 ♡♡	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT 100% MPI/LPI			-	01
							4	432	102	168	1030			165					
70	0-07-102-02064	F-32(Link To Separator Storage Tank) + F-32(Link To Separator Storage Tank)	SA335P12 + SA234WP12CL1	355.6	65	GTAW + SMAW	56.88 ♡♡	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01
							4	432	102	168	1030			165					
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				22-10-2021		1828-07-CIR-EWS		3		14/17	
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		<u>ERECTION WELDING SCHEDULE</u>										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15					Ø4.0				
71	0-00-027-35157	F-32(Link To Separator Storage Tank) + F-33(Storage tank)	SA335P12 + SA182F22CL3	355.6	65	GTAW + SMAW	56.88 ∩∩	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT 100% MPI/LPI			-	01
							4	432	102	168	1030			165					
72	0-00-027-35157	F-33(Storage tank)+ F-49(Furn Downcomer To Connecting sphere)	SA182F22CL3 + SA335P12	406.4	70	GTAW + SMAW	61.25 ∩∩	ER80S-B2	E8018-B2			1012/04	150	680-720	100% (ISRT+UT) 100% MPI/LPI			-	01
							2	253	59	96	673			175					
73	0-00-027-35157	F-49(Furn Downcomer To Connecting sphere) + F-50(Furn Connecting Sphere)	SA335P12 + SA182F12CL2	406.4	70	GTAW + SMAW	61.25 ∩∩	ER80S-B2	E8018-B2			1010/06	150	650-670	100% (ISRT+UT) 100% MPI/LPI			-	01
							2	253	59	96	673			175					
74	0-00-027-35157	F-33(Storage tank) + F-34(SEPARATOR STORAGE TANK VENT LINK)	SA182F22CL3 + SA335P12	88.9	16	GTAW + SMAW	14.00 ∩∩	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT			-	00
							2	58	13	21	4			60					
75	1-07-217-01242	F-34(SEPARATOR STORAGE TANK VENT LINK)+ F-34(SEPARATOR STORAGE TANK VENT LINK	SA234WP22CL1 + SA335P12	88.9	16	GTAW + SMAW	14.00 ∩∩	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT			-	00
							2	58	13	21	4			60					
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.		REV NO :		PAGE NO.		
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N			22-10-2021		1828-07-CIR-EWS		3		15/17		
CAUTION :		THE INFNM ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.										* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98. * ALSO REFER QUALITY GUIDELINE NO: SIP:PP:29 / LATEST REV. AND SIP:PP:31 / LATEST REV. NOTE: HARDNESS CHECK OF 3% OF TOTAL WELD JOINTS IN ALLOY STEEL PIPES (OTHER THAN GR91) TO BE CARRIED OUT (260 HV MAX).							

		<u>ERECTION WELDING SCHEDULE</u>										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON-PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15					Ø4.0				
76	1-07-217-01242 0-00-027-35157	F-34(SEPARATOR STORAGE TANK VENT LINK) + S-01(SH Connecting Pipe)	SA335P12 + SA335P12	88.9	16	GTAW + SMAW	14.00 ∩∩	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT			-	00
						1	29	7	11	2		60							
77	0-00-027-35167	F-03 (FURN FRONT INTERM HDR INSPECTION NOZZLE) + FLAT END COVER	SA182F12CL2 + SA182F12CL2	168.3	39.7	GTAW + SMAW	34.74 ∩∩	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01
						2	91	25	40	92		100							
78	0-00-027-35167	F-09 (FURN REAR INTERM HDR INSPECTION NOZZLE) + FLAT END COVER	SA182F12CL2 + SA182F12CL2	168.3	39.7	GTAW + SMAW	34.74 ∩∩	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01
						2	91	25	40	92		100							
79	0-00-027-35166	F-18 (FURN INTERM HDR INSPECTION NOZZLE) + FLAT END COVER	SA182F12CL2 + SA182F12CL2	168.3	39.7	GTAW + SMAW	34.74 ∩∩	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01
						4	182	49	80	184		100							
80		GAMMA PLUG	SA105 + SA106GRC			SMAW	7 ▽	-	E7018			1101/01	Nil	Nil	100% LPI or MPI			FILLET WELD	00
						4	-	2	-	-									
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.			REV NO :		PAGE NO.	
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N			22-10-2021		1828-07-CIR-EWS			3		16/17	
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		ERECTION WELDING SCHEDULE										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15					Ø4.0				
81		GAMMA PLUG	SA335P12 + SA182F22CL3			SMAW	7 	-	E8018-B2			1102/01	200	Nil	100% LPI or MPI			FILLET WELD	00
							99	-	25	-	-								
82	0-00-027-35166	F-18(L&R)(Furn Interm Side Hdr) + F-19TI(L&R)(Furn Side Vert Inlet Term Tube)	SA213T12 + SA213T22	33.4	5.6	GTAW + SMAW	5.6 	ER90S-B3	E9018-B3			1095/00	150	Nil	30% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-1 & 2 only	03
							840	5670	4139	-	-								
83	0-00-027-35167	F-03(Furn Interm Front Hdr) + F-04TI(Furn Front Vertical Inlet Terminal Tube)	SA213T12 + SA213T22	33.4	5.6	GTAW + SMAW	5.6 	ER90S-B3	E9018-B3			1095/00	150	Nil	30% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-1 & 2 only	03
							432	2916	2129	-	-								
84	0-00-027-35167	F-09(Furn Interm Rear Hdr) + F-10TI(Furn Rear Vertical Inet Terminal Tube)	SA213T12 + SA213T22	33.4	5.6	GTAW + SMAW	5.6 	ER90S-B3	E9018-B3			1095/00	150	Nil	30% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-1 & 2 only	03
							432	2916	2129	-	-								
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				22-10-2021		1828-07-CIR-EWS		3		17/17	
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SUMMARY LIST FOR SITE ELECTRODES

CUST NO : 1828,1829,1830

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)

PG NO : 07

PG NAME : <i>Circulation System</i>
SYSTEM DESCRIPTION : <i>Circulation System</i>

SYSTEM DESCRIPTION : Circulation System			

[illegible]

NOTES :

1. RESERVE 50% ADDED.
2. QUANTITY GIVEN IS PER BOILER
3. THIS FIELD WELDING SCHEDULE IS FOR REFERENCE PURPOSE ONLY

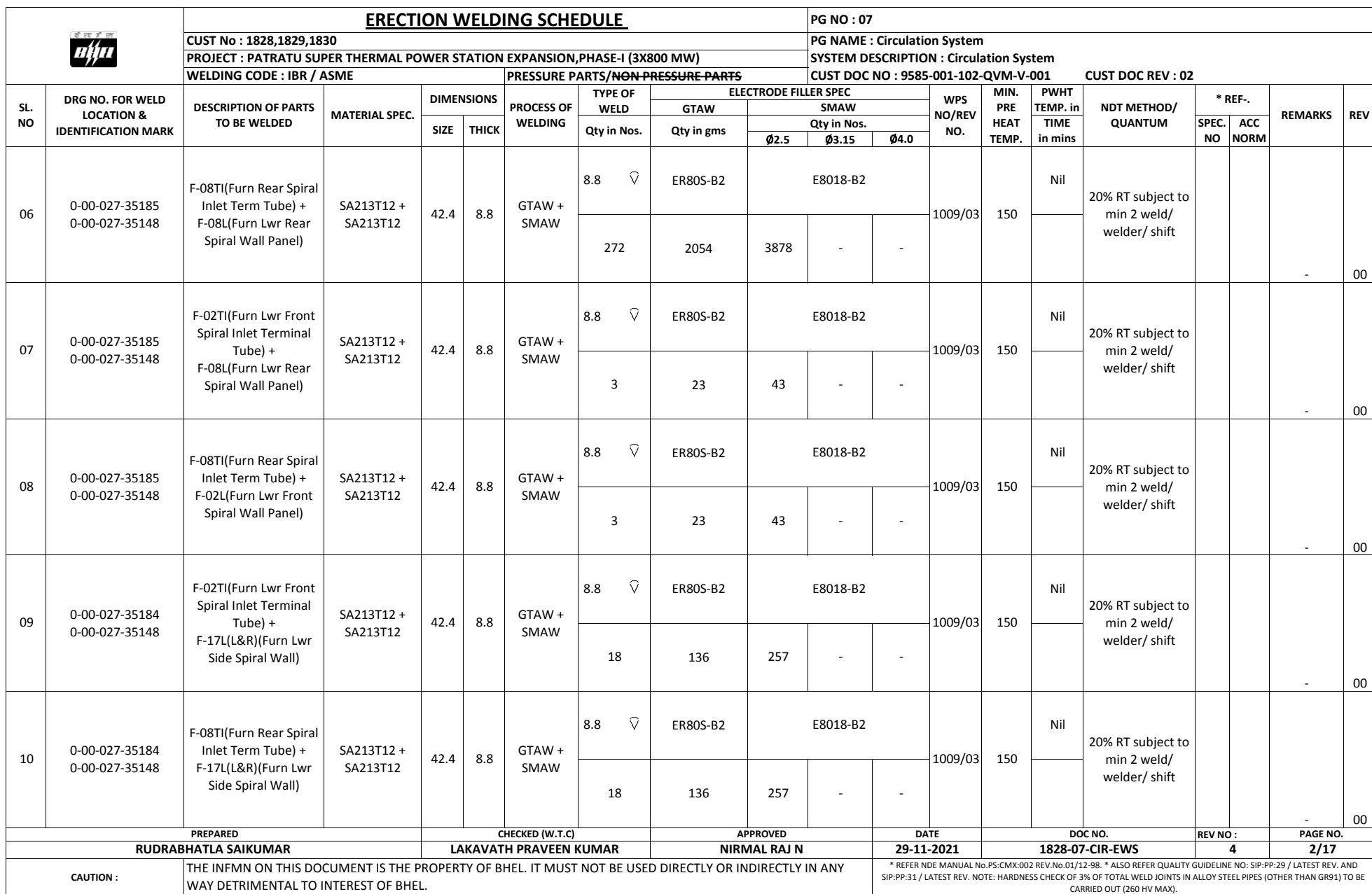
EWS DOC ID : 1828-07-CIR-EWS REV : 3


PREPARED BY : RUDRABHATLA SAIKUMAR


CHECKED BY : LAKAVATH PRAVEEN KUMAR

APPROVED BY : NIRMAL RAJ N

DATE : 22-10-2021



		ERECTION WELDING SCHEDULE										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001		CUST DOC REV : 02					
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15	Ø4.0								
11	0-00-027-35185	F-02L(Furn Lwr Front Spiral Wall Panel) + F-02L(Furn Lwr Front Spiral Wall Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
						339	2560	4833	-	-									
12	0-00-027-35185	F-08L(Furn Lwr Rear Spiral Wall Panel) + F-08L(Furn Lwr Rear Spiral Wall Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
						339	2560	4833	-	-									
13	0-00-027-35185	F-02L(Furn Lwr Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
						417	3149	5945	-	-									
14	0-00-027-35185	F-08L(Furn Lwr Rear Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
						417	3149	5945	-	-									
15	0-00-027-35183	F-02U(Furn Upper Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
						163	1231	2324	-	-									
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				29-11-2021		1828-07-CIR-EWS		4		3/17	
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		ERECTION WELDING SCHEDULE										PG NO : 07									
		CUST No : 1828,1829,1830										PG NAME : Circulation System									
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System									
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001					CUST DOC REV : 02				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC					WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW			SPEC. NO					ACC NORM				
									Qty in gms	Qty in Nos.											
										Ø2.5	Ø3.15							Ø4.0			
16	0-00-027-35183	F-08U(Furn Upper Rear Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00		
							163	1231	2324	-	-										
17	0-00-027-35184	F-17L(L&R)(Furn Lwr Side Spiral Wall) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00		
							828	6253	11803	-	-										
18	0-00-027-35182	F-17U(L&R)(Furn Lwr Side Spiral Wall) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00		
							324	2447	4619	-	-										
19	0-00-027-35167	F-02X(Furn Upper Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00		
							51	386	727	-	-										
20	0-00-027-35167	F-02X(Furn Upper Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA182F12CL2	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00		
							2	16	29	-	-										
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.		
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				29-11-2021		1828-07-CIR-EWS			4		4/17		
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ERECTION WELDING SCHEDULE

PG NO : 07

CUST No : 1828,1829,1830

PG NAME : Circulation System

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)






SYSTEM DESCRIPTION : Circulation System

WELDING CODE : IBR / ASME

PRESSURE PARTS/~~NON-PRESSURE PARTS~~

CUST DOC NO : 9585-001-102-QVM-V-001

CUST DOC REV : 02

SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15					Ø4.0				
21	0-00-027-35167	F-08X(Furn Upper Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							51	386	727	-	-								
22	0-00-027-35167	F-08X(Furn Upper Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA182F12CL2	42.4	8.8	GTAW + SMAW	8.8 	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							2	16	29	-	-								
23	0-00-027-35166	F-17X(L&R)(Furn Lwr Side Spiral Wall) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							110	831	1568	-	-								
24	0-00-027-35166	F-17X(L&R)(Furn Lwr Side Spiral Wall) + CORNERTUBES	SA213T12 + SA182F12CL2	42.4	8.8	GTAW + SMAW	8.8 	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							4	31	58	-	-								
25	0-00-027-35185 0-00-027-35172 0-00-027-35175	F-02L(Furn Lwr Front Spiral Wall Panel) + F-WB(Furn Burner panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							142	1073	2025	-	-								

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DATE

DOC NO.

REV NO :

PAGE NO.

RUDRABHATLA SAIKUMAR

LAKAVATH PRAVEEN KUMAR

NIRMAL RAJ N

29-11-2021

1828-07-CIR-EWS

4

5/17

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ERECTION WELDING SCHEDULE

PG NO : 07

CUST No : 1828,1829,1830

PG NAME : Circulation System

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)






SYSTEM DESCRIPTION : Circulation System

WELDING CODE : IBR / ASME

~~PRESSURE PARTS/NON-PRESSURE PARTS~~

CUST DOC NO : 9585-001-102-QVM-V-001

CUST DOC REV : 02

SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15					Ø4.0				
26	0-00-027-35185 0-00-027-35172 0-00-027-35175	F-08L(Furn Lwr Rear Spiral Wall Panel) + F-WB(Furn Burner panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							142	1073	2025	-	-								
27	0-00-027-35182 0-00-027-35172 0-00-027-35175	F-17U(L&R)(Furn Lwr Side Spiral Wall) + F-WB(Furn Burner panels)/L-OFA (Corner Sofa panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							1854	14000	26428	-	-								
28	0-00-027-35183 0-00-027-35172 0-00-027-35175	F-02U(Furn Upper Front Spiral Wall Panel) + F-WB(Furn Burner panels)/L-OFA (Corner Sofa panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							920	6947	13114	-	-								
29	0-00-027-35183 0-00-027-35172 0-00-027-35175	F-08U(Furn Upper Rear Spiral Wall Panel) + F-WB(Furn Burner panels)/L-OFA (Corner Sofa panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							920	6947	13114	-	-								
30	0-00-027-35184 0-00-027-35172 0-00-027-35175	F-17L(L&R)(Furn Lwr Side Spiral Wall)+ F-WB(Furn Burner panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							270	2039	3849	-	-								

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DOC NO.

REV NO :

PAGE NO.

RUDRABHATLA SAIKUMAR

LAKAVATH PRAVEEN KUMAR

NIRMAL RAJ N

29-11-2021

1828-07-CIR-EWS


4


6/17

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* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98. * ALSO REFER QUALITY GUIDELINE NO: SIP:PP:29 / LATEST REV. AND SIP:PP:31 / LATEST REV. NOTE: HARDNESS CHECK OF 3% OF TOTAL WELD JOINTS IN ALLOY STEEL PIPES (OTHER THAN GR91) TO BE CARRIED OUT (260 HV MAX).

		ERECTION WELDING SCHEDULE										PG NO : 07								
		CUST No : 1828,1829,1830										PG NAME : Circulation System								
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System								
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02								
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW							SPEC. NO	ACC NORM			
									Qty in Nos.	Qty in gms	Qty in Nos.									
											Ø2.5									Ø3.15
31	0-00-027-35183 0-00-027-35167	F-02U(Furn Upper Front Spiral Wall Panel) + F-02X(Furn Front Spiral Wall To Vert Transition Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
							115	869	1640	-	-									
32	0-00-027-35183 0-00-027-35167	F-08U(Furn Upper Rear Spiral Wall Panel) + F-08X(Furn Rear Spiral To Vert Transition Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
							115	869	1640	-	-									
33	0-00-027-35182 0-00-027-35166	F-17U(L&R)(Furn Upper Side Spiral Wall Panel) + F-17X(L&R)(Furn Side Spiral to Vert Transition Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
							226	1707	3222	-	-									
34	0-00-027-35183 0-00-027-35174	F-02U(Furn Upper Front Spiral Wall Panel) + H-OFA(Furn SOFA panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
							184	1390	2623	-	-									
35	0-00-027-35183 0-00-027-35174	F-08U(Furn Upper Rear Spiral Wall Panel) + H-OFA(Furn SOFA panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
							184	1390	2623	-	-									
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.		
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				29-11-2021		1828-07-CIR-EWS		4		7/17		
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SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC					WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW			SPEC. NO					ACC NORM				
									Qty in gms	Qty in Nos.											
										Ø2.5	Ø3.15							Ø4.0			
36	0-00-027-35182 0-00-027-35174	F-17U(L&R)(Furn Upper Side Spiral Wall Panel) + H-OFA(Furn SOFA panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00		
							368	2779	5246	-	-										
37	0-00-027-35166	F-17X(L&R)(Furn Upper Side Spiral Wall Transition) + F-17TO(L&R)(Furn Side Spiral Outlet Term Tube)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00		
							280	2035	2419	-	-										
38	0-00-027-35167	F-02X(Furn Upper Front Spiral Wall Transition) + F-02TO(Furn Front Spiral Outlet Terminal Tube)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00		
							144	1047	1244	-	-										
39	0-00-027-35167	F-08X(Furn Upper Rear Spiral Wall Transition) + F-08TO(Furn Rear Spiral Outlet Term Tube)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00		
							144	1047	1244	-	-										
40	0-00-027-35166	F-17TO(L&R)(Furn Side Spiral Outlet Term Tube) + F-18(L&R)(Furn Interm Side Hdr)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00		
							280	2035	2419	-	-										
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ERECTION WELDING SCHEDULE

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PG NAME : Circulation System

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)






SYSTEM DESCRIPTION : Circulation System

WELDING CODE : IBR / ASME

PRESSURE PARTS/~~NON-PRESSURE PARTS~~

CUST DOC NO : 9585-001-102-QVM-V-001

CUST DOC REV : 02

SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
							Qty in Nos.												
							Ø2.5		Ø3.15	Ø4.0									
41	0-00-027-35167	F-02TO(Furn Front Spiral Outlet Terminal Tube) + F-03(Furn Interm Front Hdr)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							144	1047	1244	-	-								
42	0-00-027-35167	F-08TO(Furn Rear Spiral Outlet Term Tube) + F-09(Furn Interm Rear Hdr)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							144	1047	1244	-	-								
43	0-00-027-35166	F-18(L&R)(Furn Interm Side Hdr) + F-19TI(L&R)(Furn Side Vert Inlet Term Tube)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-3 only	03
							840	5670	4139	-	-		60						
44	0-00-027-35167	F-03(Furn Interm Front Hdr) + F-04TI(Furn Front Vertical Inlet Terminal Tube)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-3 only	03
							432	2916	2129	-	-		60						
45	0-00-027-35167	F-09(Furn Interm Rear Hdr) + F-10TI(Furn Rear Vertical Inlet Terminal Tube)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-3 only	03
							432	2916	2129	-	-		60						

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				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15	Ø4.0								
46	0-00-027-35166	F-19TI(L&R)(Furn Side Vert Inlet Term Tube) + F-17X(L&R)(Furn Side Spiral to Vert Transition Panel)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 √	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							840	5670	4139	-	-			60					
47	0-00-027-35167	F-04TI(Furn Front Vertical Inlet Terminal Tube) + F-02X(Furn Front Spiral Wall To Vert Transition Panel)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 √	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							432	2916	2129	-	-			60					
48	0-00-027-35167	F-10TI(Furn Rear Vertical Inet Terminal Tube) + F-08X(Furn Rear Spiral To Vert Transition Panel)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 √	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							432	2916	2129	-	-			60					
49	0-00-027-35167 0-00-027-35179	F-02X(Furn Front Spiral Wall To Vert Transition Panel) + F-04L (FURN FRONT LOWER VERT WALL PANEL)	SA213T22 + SA213T22	38.1	8.13	GTAW + SMAW	8.13 √	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							432	2865	4775	-	-			60					
50	0-00-027-35179	F-04L (FURN FRONT LOWER VERT WALL PANEL) + F-04U(Furn Upper Front Vertical Wall Panel	SA213T22 + SA213T22	38.1	8.13	GTAW + SMAW	8.13 √	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							432	2865	4775	-	-			60					
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				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15	Ø4.0								
51	0-00-027-35179 0-00-027-35159	F-04U(Furn Upper Front Vertical Wall Panel) + F-05(Furn Upper Front Outlet Hdr)	SA213T23 + SA213T22	38.1	8.13	GTAW + SMAW	8.13 ∇	ER90S-B3	E9018-B3			1053/04	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
						432	5400	4775	-	-		60							
52	0-00-027-35167 0-00-027-35179	F-08X(Furn Rear Spiral To Vert Transition Panel) + F-11(Furn rear arch)	SA213T22 + SA213T22	38.1	8.13	GTAW + SMAW	8.13 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							432	2865	4775	-	-		60						
53	0-00-027-35144 0-00-027-35179	F-11(Furn rear arch) + F-12(Furn screen tubes)	SA213T22 + SA213T23	38.1	8.13	GTAW + SMAW	8.13 ∇	ER90S-B3	E9018-B3			1053/04	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							288	3600	3184	-	-		60						
54	0-00-027-35144 0-00-027-35179	F-11(Furn rear arch) + F-13(Furn Hgr tubes)	SA213T22 + SA213T22	38.1	8.13	GTAW + SMAW	8.13 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							144	955	1592	-	-		60						
55	0-00-027-35144 0-00-027-35179	F-12(Furn screen tubes) + F-14(Furn Upper Rear outlet Hdr)	SA213T23 + SA213T23	38.1	8.13	GTAW + SMAW	8.13 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							288	3600	5306	-	-		60						
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				SIZE	THICK			GTAW		SMAW							SPEC. NO	ACC NORM			
							Qty in Nos.	Qty in gms	Qty in Nos.												
									Ø2.5	Ø3.15	Ø4.0										
56	0-00-027-35144 0-00-027-35179	F-13(Furn Hgr tubes) + F-14(Furn Upper Rear outlet Hdr)	SA213T23 + SA213T23	63.5	12.7	GTAW + SMAW	12.7 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01		
							144	2955	2242	1608	-			60							
57	0-00-027-35166 0-00-027-35179	F-17X(L&R)(Furn Side Spiral to Vert Transition Panel) + F-19L(L&R)(Furn Side Lower Vert Wall Panel)	SA213T22 + SA213T22	38.1	9.5	GTAW + SMAW	9.5 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01		
							840	4855	12422	-	-			60							
58	0-00-027-35179	F-19L(L&R)(Furn Side Lower Vert Wall Panel) + F-19U(L&R)(Furn Upper Side Vert Wall Panel)	SA213T22 + SA213T22	38.1	9.5	GTAW + SMAW	9.5 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01		
							840	4855	12422	-	-			60							
59	0-00-027-35179 0-00-027-35159	F-19U(L&R)(Furn Upper Side Vert Wall Panel) + F-20(L&R)(Furn Upper Side Outlet Hdrs)	SA213T22 + SA213T22	38.1	9.5	GTAW + SMAW	9.5 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	04		
							850	4913	12570	-	-			60							
60	0-00-027-35159	F-05(Furn Upper Front Outlet Hdr) + F-06(Front Riser pipes)	SA182F12CL2 + SA335P12	219.1	40	GTAW + SMAW	35.00 ∇∇	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01		
							4	270	63	103	261			100							
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.		
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				29-11-2021		1828-07-CIR-EWS			4		12/17		
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ERECTION WELDING SCHEDULE

PG NO : 07

CUST No : 1828,1829,1830

PG NAME : Circulation System

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)






SYSTEM DESCRIPTION : Circulation System

WELDING CODE : IBR / ASME

PRESSURE PARTS/~~NON-PRESSURE PARTS~~

CUST DOC NO : 9585-001-102-QVM-V-001

CUST DOC REV : 02

SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15					Ø4.0				
61	1-07-318-01205 TO 1-07-318-01208	F-06(Front Riser pipes) + F-06(Front Riser pipes)	SA335P12 + SA335P12	219.1	40	GTAW + SMAW	35.00 	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01
10	673	158	258	651	100														
62	0-00-027-35157 0-00-027-35140	F-06(Front Riser pipes) + F-31(Separator)	SA335P12 + SA182F22CL3	219.1	40	GTAW + SMAW	35.00 	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT 100% MPI/LPI			-	01
4	270	63	103	261	100														
63	0-00-027-35159	F-14(Furn Upper Rear outlet Hdr) + F-15(Rear Riser Pipes)	SA182F22CL3 + SA335P12	219.1	40	GTAW + SMAW	35.00 	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT 100% MPI/LPI			-	01
4	270	63	103	261	100														
64	1-07-316-01201 TO 1-07-316-01201	F-15(Rear Riser Pipes) + F-15(Rear Riser Pipes)	SA335P12 + SA335P12	219.1	40	GTAW + SMAW	35.00 	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01
16	1077	252	412	1042	100														
65	0-00-027-35157 0-00-027-35140	F-15(Rear Riser Pipes) + F-31(Separator)	SA335P12 + SA182F22CL3	219.1	40	GTAW + SMAW	35.00 	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT 100% MPI/LPI			-	01
4	270	63	103	261	100														

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APPROVED

DATE

DOC NO.

REV NO :

PAGE NO.

RUDRABHATLA SAIKUMAR

LAKAVATH PRAVEEN KUMAR

NIRMAL RAJ N

29-11-2021

1828-07-CIR-EWS

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13/17

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ERECTION WELDING SCHEDULE

PG NO : 07

CUST No : 1828,1829,1830

PG NAME : Circulation System

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)






SYSTEM DESCRIPTION : Circulation System

WELDING CODE : IBR / ASME

PRESSURE PARTS/~~NON~~-PRESSURE PARTS

CUST DOC NO : 9585-001-102-QVM-V-001

CUST DOC REV : 02

SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15					Ø4.0				
66	0-00-027-35159	F-20(Furn Upper Side Outlet Hdrs) + F-21(Side Riser Pipes)	SA182F12CL2 + SA335P12	219.1	40	GTAW + SMAW	35.00 	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01
							8	539	126	206	521		100						
67	1-07-315-01209 TO 1-07-315-01216	F-21(Side Riser Pipes) + F-21(Side Riser Pipes)	SA335P12 + SA335P12	219.1	40	GTAW + SMAW	35.00 	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01
							25	1682	393	644	1628		100						
68	0-00-027-35157 0-00-027-35140	F-21(Side Riser Pipes) + F-31(Separator)	SA335P12 + SA182F22CL3	219.1	40	GTAW + SMAW	35.00 	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT 100% MPI/LPI			-	01
							8	539	126	206	521		100						
69	0-00-027-35157	F-31(Separator) + F-32(Link To Separator Storage Tank)	SA182F22CL3 + SA335P12	355.6	65	GTAW + SMAW	56.88 	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT 100% MPI/LPI			-	01
							4	432	102	168	1030		165						
70	0-07-102-02064	F-32(Link To Separator Storage Tank) + F-32(Link To Separator Storage Tank)	SA335P12 + SA234WP12CL1	355.6	65	GTAW + SMAW	56.88 	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01
							4	432	102	168	1030		165						

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APPROVED

DATE _____

DOC NO.

REV NO :

PAGE NO.

RUDRABHATLA SAIKUMAR

LAKAVATH PRAVEEN KUMAR

NIRMAL RAJ N

29-11-2021

1828-07-CIR-EWS


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		ERECTION WELDING SCHEDULE										PG NO : 07									
		CUST No : 1828,1829,1830										PG NAME : Circulation System									
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System									
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001					CUST DOC REV : 02				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC					WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW			SPEC. NO					ACC NORM				
									Qty in gms	Qty in Nos.											
										Ø2.5	Ø3.15							Ø4.0			
71	0-00-027-35157	F-32(Link To Separator Storage Tank) + F-33(Storage tank)	SA335P12 + SA182F22CL3	355.6	65	GTAW + SMAW	56.88 ∇∇	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT 100% MPI/LPI			-	01		
							4	432	102	168	1030			165							
72	0-00-027-35157	F-33(Storage tank)+ F-49(Furn Downcomer To Connecting sphere)	SA182F22CL3 + SA335P12	406.4	70	GTAW + SMAW	61.25 ∇∇	ER80S-B2	E8018-B2			1012/04	150	680-720	100% (ISRT+UT) 100% MPI/LPI			-	01		
							2	253	59	96	673			175							
73	0-00-027-35157	F-49(Furn Downcomer To Connecting sphere) + F-50(Furn Connecting Sphere)	SA335P12 + SA182F12CL2	406.4	70	GTAW + SMAW	61.25 ∇∇	ER80S-B2	E8018-B2			1010/06	150	650-670	100% (ISRT+UT) 100% MPI/LPI			-	01		
							2	253	59	96	673			175							
74	0-00-027-35157	F-33(Storage tank) + F-34(SEPARATOR STORAGE TANK VENT LINK)	SA182F22CL3 + SA335P12	88.9	16	GTAW + SMAW	14.00 ∇∇	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT			-	00		
							2	58	13	21	4			60							
75	1-07-217-01242	F-34(SEPARATOR STORAGE TANK VENT LINK)+ F-34(SEPARATOR STORAGE TANK VENT LINK	SA234WP22CL1 + SA335P12	88.9	16	GTAW + SMAW	14.00 ∇∇	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT			-	00		
							2	58	13	21	4			60							
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.		
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				29-11-2021		1828-07-CIR-EWS			4		15/17		
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		ERECTION WELDING SCHEDULE										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001		CUST DOC REV : 02					
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15	Ø4.0								
81		GAMMA PLUG	SA335P12 + SA182F22CL3			SMAW	7 	-	E8018-B2			1102/01	200	Nil	100% LPI or MPI			FILLET WELD	00
							99	-	25	-	-								
82	0-00-027-35166	F-18(L&R)(Furn Interm Side Hdr) + F-19TI(L&R)(Furn Side Vert Inlet Term Tube)	SA213T12 + SA213T22	33.4	5.6	GTAW + SMAW	5.6 	ER80S-B2	E8018-B2			1011/01	150	Nil	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-1 & 2 only	03
							840	5665	4152	-	-								
83	0-00-027-35167	F-03(Furn Interm Front Hdr) + F-04TI(Furn Front Vertical Inlet Terminal Tube)	SA213T12 + SA213T22	33.4	5.6	GTAW + SMAW	5.6 	ER80S-B2	E8018-B2			1011/01	150	Nil	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-1 & 2 only	03
							432	2913	2136	-	-								
84	0-00-027-35167	F-09(Furn Interm Rear Hdr) + F-10TI(Furn Rear Vertical Inlet Terminal Tube)	SA213T12 + SA213T22	33.4	5.6	GTAW + SMAW	5.6 	ER80S-B2	E8018-B2			1011/01	150	Nil	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-1 & 2 only	03
							432	2913	2136	-	-								
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
RUDRABHATLA SAIKUMAR				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				29-11-2021		1828-07-CIR-EWS		4		17/17	
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SUMMARY LIST FOR SITE ELECTRODES

CUST NO : 1828,1829,1830

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)

PG NO : 07

PG NAME : Circulation System

SYSTEM DESCRIPTION : Circulation System

[illegible]

NOTES :

1. RESERVE 50% ADDED.
2. QUANTITY GIVEN IS PER BOILER
3. THIS FIELD WELDING SCHEDULE IS FOR REFERENCE PURPOSE ONLY


EWS DOC ID : 1828-07-CIR-EWS REV : 4


PREPARED BY : RUDRABHATLA SAIKUMAR


CHECKED BY : LAKAVATH PRAVEEN KUMAR


APPROVED BY : NIRMAL RAJ N


DATE : 29-11-2021


		ERECTION WELDING SCHEDULE										PG NO : 07								
		CUST No : 1828,1829,1830										PG NAME : Circulation System								
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System								
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001			CUST DOC REV : 02					
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC					WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW			SPEC. NO					ACC NORM			
									Qty in gms	Qty in Nos.										
										Ø2.5	Ø3.15							Ø4.0		
06	0-00-027-35185 0-00-027-35148	F-08TI(Furn Rear Spiral Inlet Term Tube) + F-08L(Furn Lwr Rear Spiral Wall Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
							272	2054	3878	-	-									
07	0-00-027-35185 0-00-027-35148	F-02TI(Furn Lwr Front Spiral Inlet Terminal Tube) + F-08L(Furn Lwr Rear Spiral Wall Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
							3	23	43	-	-									
08	0-00-027-35185 0-00-027-35148	F-08TI(Furn Rear Spiral Inlet Term Tube) + F-02L(Furn Lwr Front Spiral Wall Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
							3	23	43	-	-									
09	0-00-027-35184 0-00-027-35148	F-02TI(Furn Lwr Front Spiral Inlet Terminal Tube) + F-17L(L&R)(Furn Lwr Side Spiral Wall)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
							18	136	257	-	-									
10	0-00-027-35184 0-00-027-35148	F-08TI(Furn Rear Spiral Inlet Term Tube) + F-17L(L&R)(Furn Lwr Side Spiral Wall)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
							18	136	257	-	-									
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.		
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				30-11-2021		1828-07-CIR-EWS		5		2/17		
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		ERECTION WELDING SCHEDULE										PG NO : 07																	
		CUST No : 1828,1829,1830										PG NAME : Circulation System																	
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System																	
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02																	
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV											
				SIZE	THICK			GTAW	SMAW																				
									Qty in Nos.																				
									Ø2.5	Ø3.15					Ø4.0														
11	0-00-027-35185	F-02L(Furn Lwr Front Spiral Wall Panel) + F-02L(Furn Lwr Front Spiral Wall Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00										
							339	2560	4833	-	-																		
12	0-00-027-35185	F-08L(Furn Lwr Rear Spiral Wall Panel) + F-08L(Furn Lwr Rear Spiral Wall Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00										
							339	2560	4833	-	-																		
13	0-00-027-35185	F-02L(Furn Lwr Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00										
							417	3149	5945	-	-																		
14	0-00-027-35185	F-08L(Furn Lwr Rear Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00										
							417	3149	5945	-	-																		
15	0-00-027-35183	F-02U(Furn Upper Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00										
							163	1231	2324	-	-																		
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.		REV NO :		PAGE NO.												
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N			30-11-2021		1828-07-CIR-EWS		5		3/17												
CAUTION :										THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.										* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98. * ALSO REFER QUALITY GUIDELINE NO: SIP:PP:29 / LATEST REV. AND SIP:PP:31 / LATEST REV. NOTE: HARDNESS CHECK OF 3% OF TOTAL WELD JOINTS IN ALLOY STEEL PIPES (OTHER THAN GR91) TO BE CARRIED OUT (260 HV MAX).									


		ERECTION WELDING SCHEDULE										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001			CUST DOC REV : 02				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW										
									Qty in gms	Qty in Nos.									
										Ø2.5	Ø3.15					Ø4.0			
16	0-00-027-35183	F-08U(Furn Upper Rear Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							163	1231	2324	-	-								
17	0-00-027-35184	F-17L(L&R)(Furn Lwr Side Spiral Wall) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							828	6253	11803	-	-								
18	0-00-027-35182	F-17U(L&R)(Furn Lwr Side Spiral Wall) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							324	2447	4619	-	-								
19	0-00-027-35167	F-02X(Furn Upper Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							51	386	727	-	-								
20	0-00-027-35167	F-02X(Furn Upper Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA182F12CL2	42.4	8.8	GTAW + SMAW	8.8 ∇	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							2	16	29	-	-								
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				30-11-2021		1828-07-CIR-EWS		5		4/17	
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.										* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98. * ALSO REFER QUALITY GUIDELINE NO: SIP-PP:29 / LATEST REV. AND SIP-PP:31 / LATEST REV. NOTE: HARDNESS CHECK OF 3% OF TOTAL WELD JOINTS IN ALLOY STEEL PIPES (OTHER THAN GR91) TO BE CARRIED OUT (260 HV MAX).							


		ERECTION WELDING SCHEDULE										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON-PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15					Ø4.0				
21	0-00-027-35167	F-08X(Furn Upper Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							51	386	727	-	-								
22	0-00-027-35167	F-08X(Furn Upper Front Spiral Wall Panel) + CORNERTUBES	SA213T12 + SA182F12CL2	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							2	16	29	-	-								
23	0-00-027-35166	F-17X(L&R)(Furn Lwr Side Spiral Wall) + CORNERTUBES	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							110	831	1568	-	-								
24	0-00-027-35166	F-17X(L&R)(Furn Lwr Side Spiral Wall) + CORNERTUBES	SA213T12 + SA182F12CL2	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							4	31	58	-	-								
25	0-00-027-35185 0-00-027-35172 0-00-027-35175	F-02L(Furn Lwr Front Spiral Wall Panel) + F-WB(Furn Burner panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							142	1073	2025	-	-								
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.		REV NO :		PAGE NO.		
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N			30-11-2021		1828-07-CIR-EWS		5		5/17		
CAUTION : THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.										* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98. * ALSO REFER QUALITY GUIDELINE NO: SIP:PP:29 / LATEST REV. AND SIP:PP:31 / LATEST REV. NOTE: HARDNESS CHECK OF 3% OF TOTAL WELD JOINTS IN ALLOY STEEL PIPES (OTHER THAN GR91) TO BE CARRIED OUT (260 HV MAX).									


		ERECTION WELDING SCHEDULE							PG NO : 07										
		CUST No : 1828,1829,1830							PG NAME : Circulation System										
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)							SYSTEM DESCRIPTION : Circulation System										
		WELDING CODE : IBR / ASME				PRESSURE PARTS/ NON PRESSURE PARTS			CUST DOC NO : 9585-001-102-QVM-V-001			CUST DOC REV : 02							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV
				SIZE	THICK			GTAW	SMAW							SPEC. NO	ACC NORM		
									Qty in gms	Qty in Nos.									
										Ø2.5	Ø3.15								
26	0-00-027-35185 0-00-027-35172 0-00-027-35175	F-08L(Furn Lwr Rear Spiral Wall Panel) + F-WB(Furn Burner panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							142	1073	2025	-	-								
27	0-00-027-35182 0-00-027-35172 0-00-027-35175	F-17U(L&R)(Furn Lwr Side Spiral Wall) + F-WB(Furn Burner panels)/L-OFA (Corner Sofa panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							1854	14000	26428	-	-								
28	0-00-027-35183 0-00-027-35172 0-00-027-35175	F-02U(Furn Upper Front Spiral Wall Panel) + F-WB(Furn Burner panels)/L-OFA (Corner Sofa panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							920	6947	13114	-	-								
29	0-00-027-35183 0-00-027-35172 0-00-027-35175	F-08U(Furn Upper Rear Spiral Wall Panel) + F-WB(Furn Burner panels)/L-OFA (Corner Sofa panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							920	6947	13114	-	-								
30	0-00-027-35184 0-00-027-35172 0-00-027-35175	F-17L(L&R)(Furn Lwr Side Spiral Wall)+ F-WB(Furn Burner panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							270	2039	3849	-	-								
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				30-11-2021		1828-07-CIR-EWS		5		6/17	
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		ERECTION WELDING SCHEDULE										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
								Ø2.5	Ø3.15	Ø4.0					SPEC. NO	ACC NORM			
31	0-00-027-35183 0-00-027-35167	F-02U(Furn Upper Front Spiral Wall Panel) + F-02X(Furn Front Spiral Wall To Vert Transition Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2		1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
							115	869	1640	-									-
32	0-00-027-35183 0-00-027-35167	F-08U(Furn Upper Rear Spiral Wall Panel) + F-08X(Furn Rear Spiral To Vert Transition Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2		1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
							115	869	1640	-									-
33	0-00-027-35182 0-00-027-35166	F-17U(L&R)(Furn Upper Side Spiral Wall Panel) + F-17X(L&R)(Furn Side Spiral to Vert Transition Panel)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2		1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
							226	1707	3222	-									-
34	0-00-027-35183 0-00-027-35174	F-02U(Furn Upper Front Spiral Wall Panel) + H-OFA(Furn SOFA panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2		1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
							184	1390	2623	-									-
35	0-00-027-35183 0-00-027-35174	F-08U(Furn Upper Rear Spiral Wall Panel) + H-OFA(Furn SOFA panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2		1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00	
							184	1390	2623	-									-
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.		REV NO :		PAGE NO.		
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N			30-11-2021		1828-07-CIR-EWS		5		7/17		
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		ERECTION WELDING SCHEDULE										PG NO : 07																	
		CUST No : 1828,1829,1830										PG NAME : Circulation System																	
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System																	
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02																	
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV											
				SIZE	THICK			GTAW	SMAW																				
									Qty in Nos.																				
									Ø2.5	Ø3.15					Ø4.0														
36	0-00-027-35182 0-00-027-35174	F-17U(L&R)(Furn Upper Side Spiral Wall Panel) + H-OFA(Furn SOFA panels)	SA213T12 + SA213T12	42.4	8.8	GTAW + SMAW	8.8 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00										
							368	2779	5246	-	-																		
37	0-00-027-35166	F-17X(L&R)(Furn Upper Side Spiral Wall Transition) + F-17TO(L&R)(Furn Side Spiral Outlet Term Tube)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00										
							280	2035	2419	-	-																		
38	0-00-027-35167	F-02X(Furn Upper Front Spiral Wall Transition) + F-02TO(Furn Front Spiral Outlet Terminal Tube)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00										
							144	1047	1244	-	-																		
39	0-00-027-35167	F-08X(Furn Upper Rear Spiral Wall Transition) + F-08TO(Furn Rear Spiral Outlet Term Tube)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00										
							144	1047	1244	-	-																		
40	0-00-027-35166	F-17TO(L&R)(Furn Side Spiral Outlet Term Tube) + F-18(L&R)(Furn Intern Side Hdr)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00										
							280	2035	2419	-	-																		
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.		REV NO :		PAGE NO.												
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N			30-11-2021		1828-07-CIR-EWS		5		8/17												
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		<u>ERECTION WELDING SCHEDULE</u>										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in gms	Qty in Nos.									
								Ø2.5	Ø3.15	Ø4.0					SPEC. NO	ACC NORM			
41	0-00-027-35167	F-02TO(Furn Front Spiral Outlet Terminal Tube) + F-03(Furn Interm Front Hdr)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							144		1047	1244	-								
42	0-00-027-35167	F-08TO(Furn Rear Spiral Outlet Term Tube) + F-09(Furn Interm Rear Hdr)	SA213T12 + SA213T12	38.1	7.11	GTAW + SMAW	7.11 ▽	ER80S-B2	E8018-B2			1009/03	150	Nil	20% RT subject to min 2 weld/ welder/ shift			-	00
							144		1047	1244	-								
43	0-00-027-35166	F-18(L&R)(Furn Interm Side Hdr) + F-19TI(L&R)(Furn Side Vert Inlet Term Tube)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 ▽	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-3 only	03
							840		5670	4139	-			-					
44	0-00-027-35167	F-03(Furn Interm Front Hdr) + F-04TI(Furn Front Vertical Inlet Terminal Tube)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 ▽	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-3 only	03
							432		2916	2129	-			-					
45	0-00-027-35167	F-09(Furn Interm Rear Hdr) + F-10TI(Furn Rear Vertical Inet Terminal Tube)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 ▽	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-3 only	03
							432		2916	2129	-			-					
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.		REV NO :		PAGE NO.		
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N			30-11-2021		1828-07-CIR-EWS		5		9/17		
CAUTION :		THE INFMN ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.										* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98. * ALSO REFER QUALITY GUIDELINE NO: SIP:PP:29 / LATEST REV. AND SIP:PP:31 / LATEST REV. NOTE: HARDNESS CHECK OF 3% OF TOTAL WELD JOINTS IN ALLOY STEEL PIPES (OTHER THAN GR91) TO BE CARRIED OUT (260 HV MAX).							


		<u>ERECTION WELDING SCHEDULE</u>										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.	Qty in gms					Ø2.5	Ø3.15			Ø4.0
46	0-00-027-35166	F-19TI(L&R)(Furn Side Vert Inlet Term Tube) + F-17X(L&R)(Furn Side Spiral to Vert Transition Panel)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 ▽	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							840	5670	4139	-	-			60					
47	0-00-027-35167	F-04TI(Furn Front Vertical Inlet Terminal Tube) + F-02X(Furn Front Spiral Wall To Vert Transition Panel)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 ▽	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							432	2916	2129	-	-			60					
48	0-00-027-35167	F-10TI(Furn Rear Vertical Inlet Terminal Tube) + F-08X(Furn Rear Spiral To Vert Transition Panel)	SA213T22 + SA213T22	33.4	5.59	GTAW + SMAW	5.59 ▽	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							432	2916	2129	-	-			60					
49	0-00-027-35167 0-00-027-35179	F-02X(Furn Front Spiral Wall To Vert Transition Panel) + F-04L (FURN FRONT LOWER VERT WALL PANEL)	SA213T22 + SA213T22	38.1	8.13	GTAW + SMAW	8.13 ▽	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							432	2865	4775	-	-			60					
50	0-00-027-35179	F-04L (FURN FRONT LOWER VERT WALL PANEL) + F-04U(Furn Upper Front Vertical Wall Panel	SA213T22 + SA213T22	38.1	8.13	GTAW + SMAW	8.13 ▽	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01
							432	2865	4775	-	-			60					
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.		REV NO :		PAGE NO.		
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N			30-11-2021		1828-07-CIR-EWS		5		10/17		
CAUTION :		THE INFNM ON THIS DOCUMENT IS THE PROPERTY OF BHEL. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO INTEREST OF BHEL.										* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98. * ALSO REFER QUALITY GUIDELINE NO: SIP:PP:29 / LATEST REV. AND SIP:PP:31 / LATEST REV. NOTE: HARDNESS CHECK OF 3% OF TOTAL WELD JOINTS IN ALLOY STEEL PIPES (OTHER THAN GR91) TO BE CARRIED OUT (260 HV MAX).							






		ERECTION WELDING SCHEDULE										PG NO : 07									
		CUST No : 1828,1829,1830										PG NAME : Circulation System									
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System									
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001					CUST DOC REV : 02				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV		
				SIZE	THICK			GTAW	SMAW												
									Qty in gms	Qty in Nos.											
										Ø2.5	Ø3.15					Ø4.0					
51	0-00-027-35179 0-00-027-35159	F-04U(Furn Upper Front Vertical Wall Panel) + F-05(Furn Upper Front Outlet Hdr)	SA213T23 + SA213T22	38.1	8.13	GTAW + SMAW	8.13 ▽	ER90S-B3	E9018-B3			1053/04	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01		
							432	5400	4775	-	-		60								
52	0-00-027-35167 0-00-027-35179	F-08X(Furn Rear Spiral To Vert Transition Panel) + F-11(Furn rear arch)	SA213T22 + SA213T22	38.1	8.13	GTAW + SMAW	8.13 ▽	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01		
							432	2865	4775	-	-		60								
53	0-00-027-35144 0-00-027-35179	F-11(Furn rear arch) + F-12(Furn screen tubes)	SA213T22 + SA213T23	38.1	8.13	GTAW + SMAW	8.13 ▽	ER90S-B3	E9018-B3			1053/04	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01		
							288	3600	3184	-	-		60								
54	0-00-027-35144 0-00-027-35179	F-11(Furn rear arch) + F-13(Furn Hgr tubes)	SA213T22 + SA213T22	38.1	8.13	GTAW + SMAW	8.13 ▽	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01		
							144	955	1592	-	-		60								
55	0-00-027-35144 0-00-027-35179	F-12(Furn screen tubes) + F-14(Furn Upper Rear outlet Hdr)	SA213T23 + SA213T23	38.1	8.13	GTAW + SMAW	8.13 ▽	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01		
							288	3600	5306	-	-		60								
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.			
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				30-11-2021		1828-07-CIR-EWS		5		11/17			
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		ERECTION WELDING SCHEDULE										PG NO : 07									
		CUST No : 1828,1829,1830										PG NAME : Circulation System									
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System									
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001					CUST DOC REV : 02				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC					WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW			SPEC. NO					ACC NORM				
									Qty in Nos.	Qty in gms	Qty in Nos.										
											Ø2.5							Ø3.15			Ø4.0
56	0-00-027-35144 0-00-027-35179	F-13(Furn Hgr tubes) + F-14(Furn Upper Rear outlet Hdr)	SA213T23 + SA213T23	63.5	12.7	GTAW + SMAW	12.7 ∇	2CrWV-TIG/ TGS 2CW	Cromet 23L/CM 2CW			1052/06	200	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01		
							144	2955	2242	1608	-			60							
57	0-00-027-35166 0-00-027-35179	F-17X(L&R)(Furn Side Spiral to Vert Transition Panel) + F-19L(L&R)(Furn Side Lower Vert Wall Panel)	SA213T22 + SA213T22	38.1	9.5	GTAW + SMAW	9.5 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01		
							840	4855	12422	-	-			60							
58	0-00-027-35179	F-19L(L&R)(Furn Side Lower Vert Wall Panel) + F-19U(L&R)(Furn Upper Side Vert Wall Panel)	SA213T22 + SA213T22	38.1	9.5	GTAW + SMAW	9.5 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	01		
							840	4855	12422	-	-			60							
59	0-00-027-35179 0-00-027-35159	F-19U(L&R)(Furn Upper Side Vert Wall Panel) + F-20(L&R)(Furn Upper Side Outlet Hdrs)	SA213T22 + SA213T22	38.1	9.5	GTAW + SMAW	9.5 ∇	ER90S-B3	E9018-B3			1084/00	200	740 ± 10	20% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX)	04		
							850	4913	12570	-	-			60							
60	0-00-027-35159	F-05(Furn Upper Front Outlet Hdr) + F-06(Front Riser pipes)	SA182F12CL2 + SA335P12	219.1	40	GTAW + SMAW	35.00 ∇∇	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01		
							4	270	63	103	261			100							
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.		
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				30-11-2021		1828-07-CIR-EWS			5		12/17		
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		<u>ERECTION WELDING SCHEDULE</u>										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in gms	Qty in Nos.									
								Ø2.5	Ø3.15	Ø4.0					SPEC. NO	ACC NORM			
61	1-07-318-01205 TO 1-07-318-01208	F-06(Front Riser pipes) + F-06(Front Riser pipes)	SA335P12 + SA335P12	219.1	40	GTAW + SMAW	35.00 ∩∩	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01
							10		673	158	258			651					
62	0-00-027-35157 0-00-027-35140	F-06(Front Riser pipes) + F-31(Separator)	SA335P12 + SA182F22CL3	219.1	40	GTAW + SMAW	35.00 ∩∩	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT 100% MPI/LPI			-	01
							4		270	63	103			261					
63	0-00-027-35159	F-14(Furn Upper Rear outlet Hdr) + F-15(Rear Riser Pipes)	SA182F22CL3 + SA335P12	219.1	40	GTAW + SMAW	35.00 ∩∩	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT 100% MPI/LPI			-	01
							4		270	63	103			261					
64	1-07-316-01201 TO 1-07-316-01201	F-15(Rear Riser Pipes) + F-15(Rear Riser Pipes)	SA335P12 + SA335P12	219.1	40	GTAW + SMAW	35.00 ∩∩	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01
							16		1077	252	412			1042					
65	0-00-027-35157 0-00-027-35140	F-15(Rear Riser Pipes) + F-31(Separator)	SA335P12 + SA182F22CL3	219.1	40	GTAW + SMAW	35.00 ∩∩	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT 100% MPI/LPI			-	01
							4		270	63	103			261					
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.		REV NO :		PAGE NO.		
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N			30-11-2021		1828-07-CIR-EWS		5		13/17		
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		<u>ERECTION WELDING SCHEDULE</u>										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON-PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001 CUST DOC REV : 02							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD Qty in Nos.	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in gms	Qty in Nos.									
								Ø2.5	Ø3.15	Ø4.0					SPEC. NO	ACC NORM			
71	0-00-027-35157	F-32(Link To Separator Storage Tank) + F-33(Storage tank)	SA335P12 + SA182F22CL3	355.6	65	GTAW + SMAW	56.88 ∇∇	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT 100% MPI/LPI			-	01
							4	432	102	168	1030			165					
72	0-00-027-35157	F-33(Storage tank)+ F-49(Furn Downcomer To Connecting sphere)	SA182F22CL3 + SA335P12	406.4	70	GTAW + SMAW	61.25 ∇∇	ER80S-B2	E8018-B2			1012/04	150	680-720	100% (ISRT+UT) 100% MPI/LPI			-	01
							2	253	59	96	673			175					
73	0-00-027-35157	F-49(Furn Downcomer To Connecting sphere) + F-50(Furn Connecting Sphere)	SA335P12 + SA182F12CL2	406.4	70	GTAW + SMAW	61.25 ∇∇	ER80S-B2	E8018-B2			1010/06	150	650-670	100% (ISRT+UT) 100% MPI/LPI			-	01
							2	253	59	96	673			175					
74	0-00-027-35157	F-33(Storage tank) + F-34(SEPARATOR STORAGE TANK VENT LINK)	SA182F22CL3 + SA335P12	88.9	16	GTAW + SMAW	14.00 ∇∇	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT			-	00
							2	58	13	21	4			60					
75	1-07-217-01242	F-34(SEPARATOR STORAGE TANK VENT LINK)+ F-34(SEPARATOR STORAGE TANK VENT LINK	SA234WP22CL1 + SA335P12	88.9	16	GTAW + SMAW	14.00 ∇∇	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT			-	00
							2	58	13	21	4			60					
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.		REV NO :		PAGE NO.		
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N			30-11-2021		1828-07-CIR-EWS		5		15/17		
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		ERECTION WELDING SCHEDULE						PG NO : 07												
		CUST No : 1828,1829,1830						PG NAME : Circulation System												
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)						SYSTEM DESCRIPTION : Circulation System												
		WELDING CODE : IBR / ASME				PRESSURE PARTS/ NON PRESSURE PARTS		CUST DOC NO : 9585-001-102-QVM-V-001					CUST DOC REV : 02							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW							SPEC. NO	ACC NORM			
							Qty in Nos.		Qty in gms	Qty in Nos.										
										Ø2.5	Ø3.15									Ø4.0
76	1-07-217-01242 0-00-027-35157	F-34(SEPARATOR STORAGE TANK VENT LINK) + S-01(SH Connecting Pipe)	SA335P12 + SA335P12	88.9	16	GTAW + SMAW	14.00 ∇∇	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT			-	00	
							1	29	7	11	2			60						
77	0-00-027-35167	F-03 (FURN FRONT INTERM HDR INSPECTION NOZZLE) + FLAT END COVER	SA182F12CL2 + SA182F12CL2	168.3	39.7	GTAW + SMAW	34.74 ∇∇	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01	
							2	91	25	40	92			100						
78	0-00-027-35167	F-09 (FURN REAR INTERM HDR INSPECTION NOZZLE) + FLAT END COVER	SA182F12CL2 + SA182F12CL2	168.3	39.7	GTAW + SMAW	34.74 ∇∇	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01	
							2	91	25	40	92			100						
79	0-00-027-35166	F-18 (FURN INTERM HDR INSPECTION NOZZLE) + FLAT END COVER	SA182F12CL2 + SA182F12CL2	168.3	39.7	GTAW + SMAW	34.74 ∇∇	ER80S-B2	E8018-B2			1010/06	150	650-670	100% RT 100% MPI/LPI			-	01	
							4	182	49	80	184			100						
80		GAMMA PLUG	SA105 + SA106GRC			SMAW	7 ∇	-	E7018			1101/01	Nil	Nil	100% LPI or MPI			FILLET WELD	00	
							4	-	2	-	-									
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.	
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				30-11-2021		1828-07-CIR-EWS			5		16/17	
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		ERECTION WELDING SCHEDULE										PG NO : 07							
		CUST No : 1828,1829,1830										PG NAME : Circulation System							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Circulation System							
		WELDING CODE : IBR / ASME					PRESSURE PARTS/ NON PRESSURE PARTS					CUST DOC NO : 9585-001-102-QVM-V-001			CUST DOC REV : 02				
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW										
									Qty in Nos.										
									Ø2.5	Ø3.15					Ø4.0				
81		GAMMA PLUG	SA335P12 + SA182F22CL3			SMAW	7 	-	E8018-B2			1102/01	200	Nil	100% LPI or MPI			FILLET WELD	00
							99	-	25	-	-								
82	0-00-027-35166	F-18(L&R)(Furn Interm Side Hdr) + F-19TI(L&R)(Furn Side Vert Inlet Term Tube)	SA213T12 + SA213T22	33.4	5.6	GTAW + SMAW	5.6 	ER90S-B3	E9018-B3			1095/00	150	Nil	30% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-1 & 2 only	05
							840	5670	4139	-	-								
83	0-00-027-35167	F-03(Furn Interm Front Hdr) + F-04TI(Furn Front Vertical Inlet Terminal Tube)	SA213T12 + SA213T22	33.4	5.6	GTAW + SMAW	5.6 	ER90S-B3	E9018-B3			1095/00	150	Nil	30% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-1 & 2 only	05
							432	2916	2129	-	-								
84	0-00-027-35167	F-09(Furn Interm Rear Hdr) + F-10TI(Furn Rear Vertical Inet Terminal Tube)	SA213T12 + SA213T22	33.4	5.6	GTAW + SMAW	5.6 	ER90S-B3	E9018-B3			1095/00	150	Nil	30% RT subject to min 2 weld/ welder/ shift			100% HC, 260HV (MAX) Applicable for Unit-1 & 2 only	05
							432	2916	2129	-	-								
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
MOHD. BASEEM				LAKAVATH PRAVEEN KUMAR				NIRMAL RAJ N				30-11-2021		1828-07-CIR-EWS		5		17/17	
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SUMMARY LIST FOR SITE ELECTRODES

CUST NO : 1828,1829,1830

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)

PG NO : 07

PG NAME : Circulation System

SYSTEM DESCRIPTION : Circulation System

[illegible]

NOTES :

1. RESERVE 50% ADDED.
2. QUANTITY GIVEN IS PER BOILER
3. THIS FIELD WELDING SCHEDULE IS FOR REFERENCE PURPOSE ONLY












EWS DOC ID : 1828-07-CIR-EWS REV : 5

PREPARED BY : MOHD. BASEEM

CHECKED BY : LAKAVATH PRAVEEN KUMAR

APPROVED BY : NIRMAL RAJ N

DATE : 30-11-2021

		ERECTION WELDING SCHEDULE										PG NO : 24							
		CUST No : 1828,1829,1830										PG NAME : Boiler Integral Piping and Fittings							
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Start up system							
		WELDING CODE : IBR					PRESSURE PARTS/ NON -PRESSURE PARTS					CUST DOC NO : - CUST DOC REV : -							
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW						SPEC. NO	ACC NORM			
							Qty in Nos.		Qty in gms	Qty in Nos.									
								Ø2.5	Ø3.15	Ø4.0									
11	0-24-808-01063	PIPE + ELBOW (F-61A, F-61B, F-61C)	SA106GrC + SA234WPC	406.5	55	GTAW + SMAW	55 	ER70S-A1	E7018-1		1004/04	100	610 ± 15	100% RT				1	
							4	527	117	192			1147						140
12	0-24-808-01063	PIPE + VALVE (F-61A, F-61B, F-61C)	SA106GrC + SA216WCC	406.5	55	GTAW + SMAW	55 	ER70S-A1	E7018-1		1004/04	100	610 ± 15	100% RT				1	
							2	264	59	96			574						140
13	0-24-808-01063	PIPE + VALVE (F-61A, F-61B, F-61C)	SA106GrC + SA105	406.5	55	GTAW + SMAW	55 	ER70S-A1	E7018-1		1004/04	100	610 ± 15	100% RT				1	
							2	264	59	96			574						140
14	0-24-808-01063	PIPE + PIPE (F-61A, F-61B, F-61C)	SA106GrC + SA106GrC	406.5	55	GTAW + SMAW	55 	ER70S-A1	E7018-1		1004/04	100	610 ± 15	100% RT				1	
							1	132	30	48			287						140
15	0-24-808-01063	PIPE + STUB (E-04-03) (F-61A, F-61B, F-61C)	SA106GrC + SA105	406.5	55	GTAW + SMAW	55 	ER70S-A1	E7018-1		1004/04	100	610 ± 15	100% RT				1	
							1	132	30	48			287						140
16	0-24-805-01060	PIPE + PIPE (F51,F52,F53)	SA106GrC + SA106GrC	508	80	GTAW + SMAW	80 	ER70S-A1	E7018-1		1004/04	150	610 ± 15	100% (ISRT + UT)				1	
							1	155	37	60			649						200
17	0-24-805-01060	PIPE + ELBOW (F51,F52,F53)	SA106GrC + SA234WPC	508	80	GTAW + SMAW	80 	ER70S-A1	E7018-1		1004/04	150	610 ± 15	100% (ISRT + UT)				1	
							4	617	146	239			2596						200
18	0-24-805-01060	PIPE + VALVE (F51,F52,F53)	SA106GrC + SA216WCC	508	80	GTAW + SMAW	80 	ER70S-A1	E7018-1		1004/04	150	610 ± 15	100% (ISRT + UT)				1	
							4	617	146	239			2596						200
19	0-24-805-01060	PIPE + NOZZLE (F51,F52,F53)	SA106GrC + SA182F12CL2	508	80	GTAW + SMAW	80 	ER70S-A1	E7018-A1		1018/05	150	650-670	100% (ISRT + UT)				1	
							1	155	37	60			649						200
20	0-24-805-01060	PIPE + NOZZLE (F51,F52,F53)	SA106GrC + SA105	508	80	GTAW + SMAW	80 	ER70S-A1	E7018-1		1004/04	150	610 ± 15	100% (ISRT + UT)				1	
							1	155	37	60			649						200
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.		REV NO :		PAGE NO.	
R Gopinath								GUNASEKARAN V				22-02-2022		1828-24-STU-EWS		1		2/3	
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ERECTION WELDING SCHEDULE

PG NO : 24

CUST No : 1828,1829,1830

PG NAME : Boiler Integral Piping and Fittings

PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)

SYSTEM DESCRIPTION : Start up system

WELDING CODE : IBR

PRESSURE PARTS/~~NON-PRESSURE PARTS~~

CUST DOC NO : -

CUST DOC REV : -

SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP.	PWHIT TEMP. in TIME in mins	NDT METHOD/ QUANTUM	* REF.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW											
									Qty in Nos.	Qty in gms	Qty in Nos.									
											Ø2.5					Ø3.15	Ø4.0			
21	0-24-807-01062	PIPE + PIPE (F-59A,F-59B,F-59C)	SA106GrC + SA105	558.8	76.2	GTAW + SMAW	76.2	▽▽	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)				1
							2	360	81	132	1349	195								
22	0-24-807-01062	PIPE + ELBOW (F-59A,F-59B,F-59C)	SA106GrC + SA234WPC	558.8	76.2	GTAW + SMAW	76.2	▽▽	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)				1
							3	539	121	197	2024	195								
23	0-24-807-01062	PIPE + VALVE (F-59A,F-59B,F-59C)	SA106GrC + SA216WCC	558.8	76.2	GTAW + SMAW	76.2	▽▽	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)				1
							4	719	161	263	2698	195								
24	0-24-807-01062	PIPE + NOZZLE (F-57) (F-59A,F-59B,F-59C)	SA106GrC + SA105	558.8	76.2	GTAW + SMAW	76.2	▽▽	ER70S-A1	E7018-1			1004/04	150	610 ± 15	100% (ISRT + UT)				1
							1	180	41	66	675	195								
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.	
R Gopinath								GUNASEKARAN V				22-02-2022		1828-24-STU-EWS			1		3/3	
CAUTION :										* REFER NDE MANUAL No.PS:CMX:002 REV.No.01/12-98										
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SUMMARY LIST FOR SITE ELECTRODES**CUST NO : 1828,1829,1830****PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)****PG NO : 24****PG NAME : Boiler Integral Piping and Fittings****SYSTEM DESCRIPTION : Start up system**

SL NO	TYPE OF ELECTRODE/ROD	SIZE AND QTY (Nos)			GTAW ROD WT (gm)
		Ø 2.5	Ø 3.15	Ø 4.0	
1	ER70S-A1				12074
2	E7018-1	2704	4413	41562	
3	E7018-A1	84	135	1170	











NOTES :

1. RESERVE 25% ADDED.
2. QUANTITY GIVEN IS PER BOILER.
3. THIS FIELD WELDING SCHEDULE IS FOR REFERENCE PURPOSE ONLY.











EWS DOC ID : 1828-24-STU-EWS REV : 1**PREPARED BY : R Gopinath****CHECKED BY :****APPROVED BY : GUNASEKARAN V****DATE : 22-02-2022**

		ERECTION WELDING SCHEDULE							PG NO : 24											
		CUST No : 1828,1829,1830							PG NAME : Boiler Integral Piping and Fittings											
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)							SYSTEM DESCRIPTION : Boiler Trim piping											
		WELDING CODE : IBR				PRESSURE PARTS/ NON PRESSURE PARTS				CUST DOC NO : -		CUST DOC REV : -								
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP. in °C	PWHY TEMP. in °C	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV		
				SIZE	THICK			GTAW	SMAW											
							Qty in Nos.		Qty in gms	Qty in Nos.			Ø2.5		Ø3.15	Ø4.0				
1	0-00-047-16618 0-00-047-16619 0-00-047-16620 0-00-047-16621 0-00-047-16622	PIPE+PIPE(OR)BEN D	SA335P22 + SA335P22	48.3	10.16	GTAW + SMAW	10.16 	ER90S-B3	E9018-B3			1014/03	150	680-720	20% RT subject to min 2 weld/ welder/ shift					
							115	982	836	363	-			30						
2	0-00-047-16618 0-00-047-16619 0-00-047-16620 0-00-047-16621 0-00-047-16622	PIPE+VALVE	SA335P22 + SA182F22	48.3	10.16	SMAW	12 	-	E9018-B3			1020/01	150	Nil	100% LPI or MPI					
							32	-	-	49	63									
3	0-00-047-16618 0-00-047-16619 0-00-047-16620 0-00-047-16621 0-00-047-16622	PIPE+ STUB	SA335P22 + SA182F12CL2	49	10.25	SMAW	12 	-	E8018-B2			1107/02	150	Nil	100% LPI or MPI					
							8	-	-	13	16									
4	0-00-047-16627	PIPE+BEND	SA106GRC + SA106GRC	60.3	11.07	GTAW + SMAW	11.07 	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift					
							16	188	150	79	-									
5	0-00-047-16627	PIPE+VALVE(OR)TE E	SA106GRC + SA105	60.3	11.07	SMAW	13 	-	E7018-1			1021/02	Nil	Nil	10% LPI or MPI					
							7	-	-	13	21									
6	0-00-047-16627	PIPE+REDUCER	SA106GRC + SA105	60.3	11.07	GTAW + SMAW	11.07 	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift					
							1	12	10	5	-									
7	0-00-047-16627	REDUCER+PIPE	SA105 + SA106GRC	88.9	15.24	GTAW + SMAW	15.24 	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT					
							1	28	7	11	3									
8	0-00-047-16626	PIPE+ELL	SA106GRC + SA106GRC	168.3	26	GTAW + SMAW	26 	ER70S-A1	E7018-1			1004/04	100	610 ± 15	100% RT					
							2	106	25	40	57			65						
9	0-00-047-16626	PIPE+ELL(OR)PWS	SA106GRC + SA106GRC	168.3	26	GTAW + SMAW	26 	ER70S-A1	E7018-1			1004/04	100	610 ± 15	100% RT					
							4	212	49	80	113			65						
10	0-00-047-16626	PIPE+VALVE	SA106GRC + SA216WCC	168.3	26	GTAW + SMAW	26 	ER70S-A1	E7018-1			1004/04	100	610 ± 15	100% RT					
							3	159	37	60	85			65						
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.			REV NO :		PAGE NO.		
C.GEETHANJALI				C.MANIKANDAN				R Gopinath			08.12.2022		1828-24-TRP-EWS			0		1/9		
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



		ERECTION WELDING SCHEDULE								PG NO : 24									
		CUST No : 1828,1829,1830								PG NAME : Boiler Integral Piping and Fittings									
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)								SYSTEM DESCRIPTION : Boiler Trim piping									
		WELDING CODE : IBR				PRESSURE PARTS/NON PRESSURE PARTS				CUST DOC NO : - CUST DOC REV : -									
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP. in °C	PWHT TEMP. in °C	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW				TIME in mins		SPEC. NO	ACC NORM DEC			
							Qty in Nos.		Qty in gms	Qty in Nos.									
								Ø2.5	Ø3.15	Ø4.0									
11	0-00-047-16628	PIPE+ STUB	SA335P22 + SA182F12CL2	73	14.02	GTAW + SMAW	14.02 ▽	ER80S-B2	E8018-B2		1012/04	150	680-720	20% RT subject to min 2 weld/ welder/ shift					
							1	14	11	12			-						60
12	0-00-047-16628	PIPE+BEND	SA335P22 + SA335P22	73	14.02	GTAW + SMAW	14.02 ▽	ER90S-B3	E9018-B3		1014/03	150	680-720	20% RT subject to min 2 weld/ welder/ shift					
							10	139	108	119			-						60
13	0-00-047-16628	PIPE+VALVE	SA335P22 + SA217WC9	73	14.02	GTAW + SMAW	14.02 ▽	ER90S-B3	E9018-B3		1014/03	150	680-720	20% RT subject to min 2 weld/ welder/ shift					
							4	56	43	48			-						60
14	0-00-047-16629	STUB+PIPE	SA182F91 + SA335P91	88.9	15.24	GTAW + SMAW	15.24 ☐	ER90S-B9	E9015-B91		1036/09	220	745 ± 15	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB		
							1	28	11	15			5						60
15	0-00-047-16629	PIPE+BEND	SA335P91 + SA335P91	88.9	15.24	GTAW + SMAW	15.24 ☐	ER90S-B9	E9015-B91		1036/09	220	745 ± 15	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB		
							4	111	43	57			17						60
16	0-00-047-16629	PIPE+VALVE	SA335P91 + SA217C12A	88.9	15.24	GTAW + SMAW	15.24 ☐	ER90S-B9	E9015-B91		1036/09	220	745 ± 15	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB		
							4	111	43	57			17						60
17	0-00-047-16631	STUB +PIPE	SA105 + SA106GRC	33.4	9.09	SMAW	10 ▽	-	E7018-1		1021/02	Nil	Nil	10% LPI or MPI					
							1	-	-	3			-						
18	0-00-047-16631 0-00-047-16632	PIPE+BEND	SA106GRC + SA106GRC	33.4	9.09	GTAW + SMAW	9.09 ▽	ER70S-A1	E7018-1		1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift					
							19	87	227	-			-						
19	0-00-047-16631 0-00-047-16632 0-00-047-16726 0-00-047-16731 0-00-047-16733	PIPE(OR)BEND+VALVE	SA106GRC + SA105	33.4	9.09	SMAW	10 ▽	-	E7018-1		1021/02	Nil	Nil	10% LPI or MPI					
							24	-	-	55			-						
20	0-00-047-16633	PIPE+NOZZLE(OR)ELL	SA106GRB + SA106GRB	73	14.02	GTAW + SMAW	14.02 ▽	ER70S-A1	E7018-1		1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift					
							5	70	54	60			-						
PREPARED				CHECKED (W.T.C)				APPROVED			DATE		DOC NO.			REV NO :		PAGE NO.	
C.GEETHANJALI				C.MANIKANDAN				R Gopinath			08.12.2022		1828-24-TRP-EWS			0		2/9	
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		ERECTION WELDING SCHEDULE							PG NO : 24											
		CUST No : 1828,1829,1830							PG NAME : Boiler Integral Piping and Fittings											
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)							SYSTEM DESCRIPTION : Boiler Trim piping											
		WELDING CODE : IBR				PRESSURE PARTS/NON PRESSURE PARTS				CUST DOC NO :-		CUST DOC REV :-								
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP. in °C	PWHT TEMP. in °C	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV		
				SIZE	THICK			GTAW	SMAW				TIME in mins		SPEC. NO	ACC NORM REF				
							Qty in Nos.		Qty in gms	Qty in Nos.										
								Ø2.5	Ø3.15	Ø4.0										
21	0-00-047-16633	PIPE+VALVE	SA106GRB + SA216WCC	73	14.02	GTAW + SMAW	14.02 	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift					
							6	83	65	72	-									
22	0-00-047-16633	PIPE+TEE	SA106GRB + SA234WPB	73	14.02	GTAW + SMAW	14.02 	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift					
							3	42	33	36	-									
23	0-00-047-16634	PIPE+STUB	SA335P91 + SA182F91	88.9	15.24	GTAW + SMAW	15.24 	ER90S-B9	E9015-B91			1036/09	220	745 ± 15	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB		
							1	28	11	15	5			60						
24	0-00-047-16634	PIPE+BEND	SA335P91 + SA335P91	88.9	15.24	GTAW + SMAW	15.24 	ER90S-B9	E9015-B91			1036/09	220	745 ± 15	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB		
							12	333	128	171	49			60						
25	0-00-047-16634	PIPE+VALVE	SA335P91 + SA217C12A	88.9	15.24	GTAW + SMAW	15.24 	ER90S-B9	E9015-B91			1036/09	220	745 ± 15	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB		
							4	111	43	57	17			60						
26	0-00-047-16609	STUB+PIPE	SA182F91 + SA335P22	48.3	10.16	SMAW	12 	-	E9018-B3			1113/02	220	745 ± 15	100% LPI or MPI			NDT after SR; 100% HC, 180 HB TO 300HB		
							2	-	-	4	4			30						
27	0-00-047-16609	PIPE+BEND	SA335P22 + SA335P22	48.3	10.16	GTAW + SMAW	10.16 	ER90S-B3	E9018-B3			1014/03	150	680-720	20% RT subject to min 2 weld/ welder/ shift					
							30	257	218	95	-			30						
28	0-00-047-16609	PIPE+VALVE	SA335P22 + SA182F91	48.3	10.16	SMAW	12 	-	E9018-B3			1113/02	220	745 ± 15	100% LPI or MPI			NDT after SR; 100% HC, 180 HB TO 300HB		
							8	-	-	13	16			30						
29	0-00-047-16609	PIPE+TEE	SA335P22 + SA182F91	48.3	10.16	SMAW	12 	-	E9018-B3			1113/02	220	745 ± 15	100% LPI or MPI			NDT after SR; 100% HC, 180 HB TO 300HB		
							4	-	-	7	8			30						
30	0-00-047-16636	END COVER+PIPE	SA182F22CL3 + SA335P22	88.9	21	GTAW + SMAW	21 	ER90S-B3	E9018-B3			1014/03	150	680-720	100% RT					
							1	23	7	11	8			60						
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		ERECTION WELDING SCHEDULE										PG NO : 24									
		CUST No : 1828,1829,1830										PG NAME : Boiler Integral Piping and Fittings									
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)										SYSTEM DESCRIPTION : Boiler Trim piping									
		WELDING CODE : IBR					PRESSURE PARTS/NON PRESSURE PARTS					CUST DOC NO : - CUST DOC REV : -									
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP. in °C	PWHT TEMP. in °C	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV			
				SIZE	THICK			GTAW	SMAW												
							Qty in Nos.		Qty in gms	Qty in Nos.											
										Ø2.5			Ø3.15		Ø4.0						
31	0-00-047-16636 0-00-047-16637	PIPE+PIPE WITH STUB	SA335P22 + SA335P22	88.9	21	GTAW + SMAW	21	ER90S-B3	E9018-B3			1014/03	150	680-720	100% RT						
							34	771	217	356	257		60								
32	0-00-047-16636 0-00-047-16637	PIPE+ELBOW	SA335P22 + SA234WP91	88.9	21	GTAW + SMAW	21	ER90S-B3	E9018-B3			1035/05	220	740-770	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB			
							43	975	275	450	325		60								
33	0-00-047-16636 0-00-047-16638 1-00-047-48215 1-00-047-48280 1-00-047-48282	PIPE+BEND (OR)PIPE WITH STUB	SA335P22 + SA335P22	33.4	9.09	GTAW + SMAW	9.09	ER90S-B3	E9018-B3			1014/03	150	680-720	20% RT subject to min 2 weld/ welder/ shift						
							422	1931	5036	-	-		30								
34	0-00-047-16637	PIPE+VALVE	SA335P22 + SA217WC9	88.9	21	GTAW + SMAW	21	ER90S-B3	E9018-B3			1014/03	150	680-720	100% RT						
							4	91	26	42	31		60								
35	0-00-047-16638	END COVER+PIPE	SA182F22CL3 + SA335P91	88.9	15.24	GTAW + SMAW	15.24	ER90S-B3	E9018-B3			1038/05	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB			
							1	28	7	11	3		60								
36	0-00-047-16638 0-00-047-16639	PIPE+PIPE WITH STUB	SA335P91 + SA335P91	88.9	15.24	GTAW + SMAW	15.24	ER90S-B9	E9015-B91			1036/09	220	745 ± 15	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB			
							18	499	192	256	74		60								
37	0-00-047-16638	PIPE+ELBOW	SA335P22 + SA234WP91	88.9	15.24	GTAW + SMAW	15.24	ER90S-B3	E9018-B3			1038/05	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB			
							2	56	13	21	6		60								
38	0-00-047-16638	PIPE+PIPE WITH STUB	SA335P22 + SA335P91	33.4	9.09	GTAW + SMAW	9.09	ER90S-B3	E9018-B3			1038/05	220	745 ± 15	20% RT subject to min 2 weld/ welder/ shift			NDT after SR; 100% HC, 180 HB TO 300HB			
							8	74	96	-	-		30								
39	0-00-047-16639	PIPE+PIPE(OR)ELBOW	SA335P91 + SA234WP91	88.9	15.24	GTAW + SMAW	15.24	ER90S-B9	E9015-B91			1036/09	220	745 ± 15	100% UT			NDT after SR; 100% HC, 180 HB TO 300HB			
							34	942	362	482	139		60								
40	0-00-047-16639	PIPE+VALVE	SA335P91 + SA217WC9	88.9	15.24	GTAW + SMAW	15.24	ER90S-B3	E9018-B3			1038/05	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB			
							4	111	26	42	12		60								
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		ERECTION WELDING SCHEDULE							PG NO : 24											
		CUST No : 1828,1829,1830							PG NAME : Boiler Integral Piping and Fittings											
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)							SYSTEM DESCRIPTION : Boiler Trim piping											
		WELDING CODE : IBR				PRESSURE PARTS/NON PRESSURE PARTS				CUST DOC NO : - CUST DOC REV : -										
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP. in °C	PWHT TEMP. in °C	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV		
				SIZE	THICK			GTAW	SMAW						SPEC. NO	ACC NORM DEC				
							Qty in Nos.		Qty in gms	Qty in Nos.										
										Ø2.5			Ø3.15						Ø4.0	
41	0-00-047-16640 0-00-047-16641 1-00-047-48219 0-00-047-16646 1-00-047-48222	PIPE+BEND	SA335P91 + SA335P91	48.3	10.16	GTAW + SMAW	10.16 	ER90S-B9	E9015-B91			1036/09	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB		
							235	3649	2846	1006	-			30						
42	0-00-047-16640 1-00-047-48219 0-00-047-16646 1-00-047-48222 0-00-047-16647	PIPE+VALVE	SA335P91 + SA182F91	48.3	10.16	SMAW	12 	-	E9015-B91			1118/00	220	745 ± 15	100% LPI or MPI			NDT after SR; 100% HC, 180 HB TO 300HB		
							20	-	-	42	55			30						
43	0-00-047-16640 1-00-047-48219 0-00-047-16646 1-00-047-48222 0-00-047-16647	PIPE+TEE	SA335P91 + SA182F91	48.3	10.16	SMAW	12 	-	E9015-B91			1118/00	220	745 ± 15	100% LPI or MPI			NDT after SR; 100% HC, 180 HB TO 300HB		
							14	-	-	29	39			30						
44	0-00-047-16642 0-00-047-16643 0-00-047-16644 0-00-047-16645 1-00-047-48220	PIPE+PIPE(OR)BEND	SA335P91 + SA335P91	33.4	9.09	GTAW + SMAW	9.09 	ER90S-B9	E9015-B91			1036/09	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB		
							109	1007	2168	-	-			30						
45	0-00-047-16642 0-00-047-16643 0-00-047-16644 0-00-047-16645 1-00-047-48220	PIPE+VALVE	SA335P91 + SA182F91	33.4	9.09	SMAW	10 	-	E9015-B91			1118/00	220	745 ± 15	100% LPI or MPI			NDT after SR; 100% HC, 180 HB TO 300HB		
							20	-	-	62	-			30						
46	1-00-047-48215 1-00-047-48280 1-00-047-48283	PIPE+VALVE	SA335P22 + SA182F22	33.4	9.09	SMAW	10 	-	E9018-B3			1020/01	150	Nil	100% LPI or MPI					
							12	-	-	28	-									
47	1-00-047-48220	PIPE+TEE	SA335P91 + SA182F316	48.3	10.16	SMAW	12 	-	ENiCrFe-3			1063/01	on Gr 91	745 ± 15	100% LPI or MPI			NDT after SR; 100% HC, 180 HB TO 300HB		
							2	-	-	5	6			30						
48	0-00-047-16649 0-00-047-16650	PIPE+VALVE	SA335P22 + SA182F91	33.4	9.09	SMAW	10 	-	E9018-B3			1113/02	220	745 ± 15	100% LPI or MPI			NDT after SR; 100% HC, 180 HB TO 300HB		
							8	-	-	19	-			30						
49	0-00-047-16632	PIPE+PIPE(OR)ELBOW(OR)PWS(OR)TEE	SA106GRB + SA234WPB	168.3	7.11	GTAW + SMAW	7.11 	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT					
							18	860	687	-	-									
50	0-00-047-16632	TEE+VALVE	SA106GRB + SA216WCC	168.3	7.11	GTAW + SMAW	7.11 	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT					
							1	48	39	-	-									
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		ERECTION WELDING SCHEDULE							PG NO : 24										
		CUST No : 1828,1829,1830							PG NAME : Boiler Integral Piping and Fittings										
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)							SYSTEM DESCRIPTION : Boiler Trim piping										
		WELDING CODE : IBR				PRESSURE PARTS/ NON PRESSURE PARTS				CUST DOC NO : - CUST DOC REV : -									
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP. in °C	PWHT TEMP. in °C	NDT METHOD/ QUANTUM	* REF.-.		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW						SPEC. NO	ACC NORM DEF			
							Qty in Nos.		Qty in gms	Qty in Nos.									
										Ø2.5			Ø3.15						Ø4.0
51	0-00-047-16632	VALVE+PIPE(OR)PWS	SA216WCC + SA106GRC	159	30	GTAW + SMAW	30	ER70S-A1	E7018-1			1004/04	100	610 ± 15	100% RT				
							3	137	35	57	101			75					
52	0-00-047-16632	PIPE+BEND(OR)PWS	SA106GRC + SA106GRC	159	30	GTAW + SMAW	30	ER70S-A1	E7018-1			1004/04	100	610 ± 15	100% RT				
							3	137	35	57	101			75					
53	0-00-047-16632	PIPE+CONNECTOR	SA106GRC + SA105	159	30	GTAW + SMAW	30	ER70S-A1	E7018-1			1004/04	100	610 ± 15	100% RT				
							1	46	12	19	34			75					
54	0-00-047-16632	CONNECTOR+TEE	SA105 + SA234WPC	114.3	20	GTAW + SMAW	20	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT				
							1	35	9	14	10								
55	0-00-047-16632	TEE+CONNECTOR	SA234WPC + SA182F12CL2	114.3	20	GTAW + SMAW	20	ER70S-A1	E7018-A1			1018/05	150	650-670	100% RT				
							4	139	33	54	40			60					
56	0-00-047-16632	CONNECTOR+PIPE	SA182F12CL2 + SA335P22	114.3	20	GTAW + SMAW	20	ER80S-B2	E8018-B2			1012/04	150	680-720	100% RT				
							7	243	58	94	69			60					
57	0-00-047-16632	CONNECTOR+VALVE	SA182F12CL2 + SA216WCC	114.3	20	GTAW + SMAW	20	ER70S-A1	E7018-A1			1018/05	150	650-670	100% RT				
							3	104	25	41	30			60					
58	0-00-047-16632	PIPE+ELBOW	SA335P22 + SA234WP22CL1	114.3	20	GTAW + SMAW	20	ER90S-B3	E9018-B3			1014/03	150	680-720	100% RT				
							8	277	66	108	79			60					
59	0-00-047-16632	TEE+PIPE	SA234WPB + SA106GRB	114.3	6.02	GTAW + SMAW	6.02	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT				
							1	32	20	-	-								
60	0-00-047-16632	PIPE+ELBOW	SA106GRB + SA234WPB	114.3	6.02	GTAW + SMAW	6.02	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT				
							18	570	346	-	-								
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		ERECTION WELDING SCHEDULE							PG NO : 24											
		CUST No : 1828,1829,1830							PG NAME : Boiler Integral Piping and Fittings											
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)							SYSTEM DESCRIPTION : Boiler Trim piping											
		WELDING CODE : IBR				PRESSURE PARTS/ NON PRESSURE PARTS				CUST DOC NO : - CUST DOC REV : -										
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC				WPS NO/REV NO.	MIN. PRE HEAT TEMP. in °C	PWHT TEMP. in °C	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV	
				SIZE	THICK			GTAW	SMAW							SPEC. NO	ACC NORM DEC			
							Qty in Nos.		Qty in gms	Qty in Nos.										
										Ø2.5	Ø3.15			Ø4.0						
61	0-00-047-16632	PIPE+BEND	SA106GRC + SA234WPC	114.3	17.12	GTAW + SMAW	17.12 	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT					
							8	298	66	108	53									
62	0-00-047-16632	VALVE+PIPE(OR)BEND	SA216WCC + SA234WPC	114.3	17.12	GTAW + SMAW	17.12 	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT					
							4	149	33	54	27									
63	0-00-047-16632	PIPE+TEE	SA106GRC + SA234WPC	114.3	17.12	GTAW + SMAW	17.12 	ER70S-A1	E7018-1			1003/04	20	Nil	100% RT					
							1	38	9	14	7									
64	0-00-047-16726 0-00-047-16729 0-00-047-16730 0-00-047-16731	PIPE+PIPE(OR)BEND	SA106GRC + SA106GRC	60.3	11.07	GTAW + SMAW	11.07 	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift					
							79	925	739	390	-									
65	0-00-047-16726	PIPE+NIPPLE(OR)TEE	SA106GRC + SA105	60.3	11.07	SMAW	13 	-	E7018-1			1021/02	Nil	Nil	10% LPI or MPI					
							4	-	-	8	12									
66	0-00-047-16726 0-00-047-16730 0-00-047-16731	PIPE+VALVE	SA106GRC + SA105	60.3	11.07	SMAW	13 	-	E7018-1			1021/02	Nil	Nil	10% LPI or MPI					
							8	-	-	15	24									
67	0-00-047-16726	TEE+REDUCER	SA105 + SA234WPB	60.3	11.07	GTAW + SMAW	11.07 	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift					
							1	12	10	5	-									
68	0-00-047-16726	REDUCER+BEND	SA106GRC + SA234WPB	33.4	9.09	GTAW + SMAW	9.09 	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift					
							1	5	12	-	-									
69	0-00-047-16728 0-00-047-16731	PIPE+REDUCER	SA106GRC + SA234WPC	60.3	11.07	GTAW + SMAW	11.07 	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift					
							2	24	19	10	-									
70	0-00-047-16728 0-00-047-16731	REDUCER+PIPE	SA234WPC + SA106GRC	48.3	10.15	GTAW + SMAW	10.15 	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift					
							2	18	15	7	-									
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		ERECTION WELDING SCHEDULE							PG NO : 24											
		CUST No : 1828,1829,1830							PG NAME : Boiler Integral Piping and Fittings											
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)							SYSTEM DESCRIPTION : Boiler Trim piping											
		WELDING CODE : IBR				PRESSURE PARTS/NON-PRESSURE PARTS				CUST DOC NO : - CUST DOC REV : -										
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP. in °C	PWHT TEMP. in °C	NDT METHOD/ QUANTUM	* REF.-		REMARKS	REV		
				SIZE	THICK			GTAW	SMAW						SPEC. NO	ACC NORM DEF				
							Qty in Nos.		Qty in gms	Qty in Nos.										
										Ø2.5			Ø3.15						Ø4.0	
71	0-00-047-16728 0-00-047-16731 0-00-047-16732 0-00-047-16727 1-00-047-48214	PIPE+PIPE(OR)BEN D	SA106GRC + SA106GRC	48.3	10.15	GTAW + SMAW	10.15 ▽	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift					
							150	1282	1091	472	-									
72	0-00-047-16729	PIPE+CONNECTOR	SA106GRC + SA182F12CL2	60.3	11.07	GTAW + SMAW	11.07 ▽	ER70S-A1	E7018-1			1017/04	150	Nil	20% RT subject to min 2 weld/ welder/ shift					
							1	12	10	5	-									
73	0-00-047-16729	CONNECTOR+CON NECTOR	SA182F12CL2 + SA335P22	60.3	11.07	GTAW + SMAW	11.07 ▽	ER80S-B2	E8018-B2			1012/04	150	680-720	20% RT subject to min 2 weld/ welder/ shift					
							1	12	10	5	-			30						
74	0-00-047-16729	CONNECTOR+VALV E	SA335P22 + SA182F91	60.3	11.07	SMAW	13 ▴	-	E9018-B3			1113/02	220	745 ± 15	100% LPI or MPI			NDT after SR; 100% HC, 180 HB TO 300HB		
							1	-	-	2	3			30						
75	0-00-047-16729	VALVE+TUBE	SA182F91 + SA213T91	60.3	12	SMAW	14 ▴	-	E9015-B91			1118/00	220	745 ± 15	100% LPI or MPI			NDT after SR; 100% HC, 180 HB TO 300HB		
							1	-	-	3	6			30						
76	0-00-047-16729	TUBE+BEND	SA213T91 + SA213T91	60.3	12	GTAW + SMAW	12 ▽	ER90S-B9	E9015-B91			1036/09	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB		
							4	79	60	34	-			30						
77	0-00-047-16730 0-00-047-16731	PIPE+VALVE	SA106GRC + SA216WCC	60.3	11.07	SMAW	13 ▴	-	E7018-1			1021/02	Nil	Nil	10% LPI or MPI					
							4	-	-	8	12									
78	0-00-047-16731 0-00-047-16732 0-00-047-16727 1-00-047-48214	PIPE+TEE	SA106GRC + SA105	48.3	10.15	SMAW	12 ▴	-	E7018-1			1021/02	Nil	Nil	10% LPI or MPI					
							11	-	-	17	22									
79	0-00-047-16731	TEE+PIPE	SA105 + SA106GRC	33.4	9.09	SMAW	10 ▴	-	E7018-1			1021/02	Nil	Nil	10% LPI or MPI					
							1	-	-	3	-									
80	0-00-047-16732 0-00-047-16727	PIPE+VALVE	SA106GRC + SA216WCC	48.3	10.15	SMAW	12 ▴	-	E7018-1			1021/02	Nil	Nil	10% LPI or MPI					
							4	-	-	7	8									
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.	
C.GEETHANJALI				C.MANIKANDAN				R Gopinath				08.12.2022		1828-24-TRP-EWS			0		8/9	
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		ERECTION WELDING SCHEDULE							PG NO : 24											
		CUST No : 1828,1829,1830							PG NAME : Boiler Integral Piping and Fittings											
		PROJECT : PATRATU SUPER THERMAL POWER STATION EXPANSION,PHASE-I (3X800 MW)							SYSTEM DESCRIPTION : Boiler Trim piping											
		WELDING CODE : IBR				PRESSURE PARTS/NON PRESSURE PARTS				CUST DOC NO :-				CUST DOC REV :-						
SL. NO	DRG NO. FOR WELD LOCATION & IDENTIFICATION MARK	DESCRIPTION OF PARTS TO BE WELDED	MATERIAL SPEC.	DIMENSIONS		PROCESS OF WELDING	TYPE OF WELD	ELECTRODE FILLER SPEC			WPS NO/REV NO.	MIN. PRE HEAT TEMP. in °C	PWHY TEMP. in °C	NDT METHOD/ QUANTUM	* REF.-.		REMARKS	REV		
				SIZE	THICK			GTAW	SMAW				TIME in mins		SPEC. NO	ACC NORM REF				
							Qty in Nos.		Qty in gms	Qty in Nos.									Ø2.5	Ø3.15
81	0-00-047-16732 0-00-047-16727 1-00-047-48214	PIPE+VALVE	SA106GRC + SA105	48.3	10.15	SMAW	12	Δ	-	E7018-1			1021/02	Nil	Nil	10% LPI or MPI				
							8	-	-	13	16									
82	0-00-047-16733	PIPE+PIPE(OR)BEN D	SA106GRC + SA105	33.4	9.09	GTAW + SMAW	9.09	▽	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift				
							18	83	215	-	-									
83	0-24-800-01103	PIPE+PIPE(OR)BEN D	SA335P22 + SA335P22	33.4	9.09	GTAW + SMAW	9.09	▽	ER90S-B3	E9018-B3			1014/03	150	680-720	20% RT subject to min 2 weld/ welder/ shift				
							300	1373	3580	-	-									
84	0-24-800-01103	PIPE(OR)REDUCER+ VALVE	SA335P22 + SA182F22	33.4	9.09	SMAW	10	Δ	-	E9018-B3			1020/01	150	Nil	100% LPI or MPI				
							140	-	-	318	-									
85	0-24-800-01103	PIPE+PIPE(OR)BEN D (OR)ELBOW	SA335P91 + SA182F91	33.4	9.09	GTAW + SMAW	9.09	▽	ER90S-B9	E9015-B91			1036/09	220	745 ± 15	100% RT			NDT after SR; 100% HC, 180 HB TO 300HB	
							25	231	498	-	-									
86	0-24-800-01103	PIPE+VALVE	SA335P91 + SA182F22	33.4	9.09	SMAW	10	Δ	-	E9018-B3			1113/02	220	745 ± 15	100% LPI or MPI			NDT after SR; 100% HC, 180 HB TO 300HB	
							10	-	-	23	-									
87	0-24-800-01104	PIPE+PIPE(OR)BEN D	SA106GRC + SA106GRC	33.4	6.35	GTAW + SMAW	6.35	▽	ER70S-A1	E7018-1			1003/04	20	Nil	20% RT subject to min 2 weld/ welder/ shift				
							100	628	618	-	-									
88	0-24-800-01104	PIPE+VALVE	SA106GRC + SA105	33.4	6.35	SMAW	7	Δ	-	E7018-1			1021/02	Nil	Nil	10% LPI or MPI				
							38	-	90	-	-									
89	0-24-800-01104	CONNECTOR+PIPE (CONDENSING LOOP)	SA105 + SA106GRC	21.3	4.78	SMAW	6	Δ	-	E7018-1			1021/02	Nil	Nil	10% LPI or MPI				
							2	-	3	-	-									
90	0-24-800-01103	VALVE+CONNECTOR	SA182F22 + SA182F91	33.4	9.09	SMAW	10	Δ	-	E9018-B3			1113/02	220	745 ± 15	100% LPI or MPI			NDT after SR; 100% HC, 180 HB TO 300HB	
							2	-	-	5	-									
PREPARED				CHECKED (W.T.C)				APPROVED				DATE		DOC NO.			REV NO :		PAGE NO.	
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