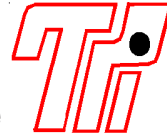


WPS / PQR (Carbon, Stainless & Alloy Steel)

Sr. No.	Wps/Pqr/No.	Material spec.	Material P No. to P No.	F. No.	A. No.	Welder No.	Thk mm	Thk range from To	PWHT Cycle	Impact at Tem.	IGC	Hardness	Soaking Time	Others
#														
1	101-1-02	API 5L Gr X 60	unassg	4	1	w5	22	4.76	24.2	N(2)+WQ+T	yes	yes	50+5+120	-
2	101-1-01	A 737 Gr.B	1	"	"	w4	18	"	19.8	N	yes	yes	50	-
3	16/2/03	A 516 Gr.70	"	"	"	w2	16	"	17.6	N+N+T	yes	yes	35+35+120	-
4	TPI/041/2000	"	"	"	"	w19	12	"	13.2	N	yes	yes	35	-
5	TPI/043/2000	"	"	"	"	w25	14	"	15.4	N(2times)	-	yes	35	-
6	TPF/10	"	"	"	"	w13	50	4.8	55	N	-	-	120	-
#														
1	26/02-03	SA 240 TY 304L	8	5	8	w11	8	1.6	16	SA+WQ	-	yes	35	-
2	EIL/05	SA 240 TY 316L	"	"	"	w28	55	4.76	60.5	"	-	-	135	WC+FN
3	EIL/04	SA 240 TY 321	"	"	"	w5	50	4.8	55	SA+WQ+STBL	-	yes	120+240	"
4	EIL/02	SA 240 TY 321	"	"	"	w8	8	1.6	8.8	"	-	yes	35+240	"
5	TPF/037/2000	SA 240 TY 316L	"	"	"	w19	10	1.6	20	-	-	-	*	-
6	TPF/09	SA 240 TY 321	"	"	"	w5	28	4.76	30.8	SA+WQ	-	yes	60	-
#														
1	10/02-03	SA387 Gr P11CL1	4	4	4	w4	30	4.76	60	T	-	yes	120	-
2	22/02-03	SA387 Gr P5CL1	5B	6&4	"	w3	16	"	32	T	-	"	240	-
3	20/02-03	SA387 Gr P5CL1	"	4	4	w12	16	"	32	T	-	"	240	-
4	05/02-03	SA387 Gr P5CL1	"	6/4	"	w4	16	"	32	T	-	"	120	-
5	17/02-03	SA387 Gr P5CL1	5B	4	4	w17	17	4.76	34	N+T+T	-	yes	35+120+120	-
6	03/02-03	"	"	"	"	w11	16	"	32	T+T	-	"	120+120	-
7	EIL/01	SA387 Gr P11	4	4	3	w5	45	"	49.5	N+T	yes	"	90+120	WC
8	TPI/040/2000	SA387 Gr P11CL1	4	4	3	w23	10	"	11	"	-	"	90+120	WC
9	TPI/039/2000	SA335 Gr P5	5B	4	4	w19	34	"	37.4	N+T+T	-	"	75+120+120	-
10	18/02-03	SA387 Gr P5CL1	"	"	"	w13	16	"	17.6	N+T+SR	yes	"	35+120+120	-
11	025/98	SA335 Gr P9	"	"	5	w19	11	"	22	SR	-	"	60	-
12	TPF/033/99	SA387 Gr P5	"	"	"	w25	14	1.6	28	"	-	"	60	-
13	02/02-03	SA387 Gr P5CL1	"	4	4	w8	16	4.76	32	T	-	"	120	-
14	04/02-03	SA387 Gr P22CL1	5A	"	"	w18	40	4.76	44	N+T	-	-	35+120	-
15	TPF/022/98	SA203 Gr E	9B	"	10	w25	8	1.6	16	SR	yes	-	60	-
16	TPF/019/98	SA203 Gr E	9B	"	10	w7	8	1.6	8.8	N	"	-	35	-
17	TPF/020/98	SA 387 Gr. P5	5B	4	4	w3	10	4.76	20	N+T	-	yes	15+30	-



WPS / PQR (CLAD: Carbon+Alloy / Stainless+Alloy / Carbon+Stainless Steel)

Sr. No.	Wps/Pqr/No.	Material spec.	Material P to P No.		F. No.	A. No.	Welder No.	Thk mm	Thk range from to		PWHT Cycle	mpac	IGC	Hardness	Soaking time	Others
			4./8	4./8					4./5	4./8						
1	06A/02-03	SA 264(SA387Gr P11+SA 240TY316L)	4./8	4./8	4./5	4./8	W8	12+3	-	-	T	yes	-	yes	120	-
2	8/2/03	SA 264(SA387Gr P5)														
3	12/02.-03	CL1 +SA 240TY 316L SA 387Gr P11 to SA 240 TY 304	4./8	4./8	6./5	8	W4&W8	20+3	-	-	T	-	-	yes	120	-
4	06/ 02.-03	SA 264(SA387Gr P11+SA 240TY316L)	4	8	5./6	8	W11&W8	14	-	-	T,SR	-	-	yes	-	-
5	7/2/03	SA 264(SA387Gr P11+SA 240TY316L)	4./8	4./8	4./5	4./8	W8	12+3	-	-	T	-	-	yes	120	-
6	13A/02 -03	SA 264(SA387Gr P11+SA 240TY316L)	4./8	4./8	4./5	4./8	W13	12+3	-	-	T	yes	-	yes	240	-
7	029/99	SA 387Gr P11 CL1 overlay 316L	4	-	5	8	W10	30	4.76	200	T	-	-	yes	120	-
8	038/2000	SA 387 Gr.P5 to SA 263(516Gr.70+ SA 240 Ty 410S)	5B	1./7	5	8	W 19	14	1.6	28	SR	-	-	Yes	60	-
9	028/99	SA 516Gr 70 to AWS E 316L-16 OVERLAY	1	8	5	8	W 19	25+6	-	-	SR	-	-	-	240	-
10	023/98	SA 387 Gr.P5 to SA 263(516Gr.70+ SA 240 TY 410S)	5B	1./7	5	8	W 5	14	-	-	T	-	-	Yes	90	-
11	031/99	SA 335 Gr.P9 to SA 263(515Gr.70+ SA 240 410S)	5B	5B	5	8	W 19	12.5	1.6	25	SR	-	-	yes	60	-
12	TPF/CL-02/98	SA 240TY410S to SA263(SA516 Gr. 70+SA240TP410S)	7	7	5	8	W 19	8	-	-	-	-	-	-	-	-
13	TPF/CL-01/98	SA263(SA516 Gr. 70 + SA240TP410S) to SA263 (SA515Gr 70+SA240TP410S)	1./7	1./7	5	8	W 5	12.5	1.6	16	-	-	-	-	-	-
		SA263(SA516 Gr. 70+SA240TP410S) to SA263 (SA515Gr 70 + SA240TP410S)	1./7	1./7	4./5	1./8	W 5	12.5	-	-	-	-	-	-	-	-
		P11+SA 240TY316L														

Abbreviation used

- WQ - Water Quenching
- N - Normalising
- T - Tempering
- SR- Stress Relieving
- WC- Weld chemical

- SA- Solution Annealing
- STBL - Stabilising
- F- Ferrite check
- ST- Soaking Time (Minutes)

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