



INSPECTION CERTIFICATE ACC. TO EN10204 3.1

CUSTOMER:

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CONTRACT No.:2428-A

DATE:JUL 10,2015

HEAT No.	GRADE	DESIGNATION	Q'TY	SPECIFICATION
TH16622	SA/A 182 F316/316L	150LB BLRF 1"	40	ASME B16.5
14JS4575		4"	15	
		6"	10	
TH16622		150LB THRF 1/2"	40	
		1"	50	
		1-1/4"	50	
14JS4575		4"	10	
TH16622		150LB SORF 1-1/2"	100	
		2"	200	
14JS4575		4"	75	
TH17395		6"	75	
14JS4442		8"	25	

DIMENSIONAL INSPECTION

VISUAL INSPECTION

GOOD

GOOD

Pre-Material specification: ASME/ASTM SA/A182/A 182M-02

CHEMICAL COMPOSITION (%)

HEAT No.	C	Mn	P	S	Si	Ni	Cr	Mo	N
MAX.	0.030	2.00	0.045	0.030	1.00	10.00-15.00	16.00-18.00	2.00-3.00	0.1
TH16622	0.012	1.20	0.037	0.005	0.51	10.07	16.82	2.05	0.038
14JS4575	0.016	1.20	0.040	0.006	0.53	10.11	16.76	2.05	0.043
TH17395	0.013	1.23	0.041	0.004	0.47	10.06	17.14	2.04	0.036
14JS4442	0.014	1.22	0.036	0.005	0.43	10.08	16.64	2.03	0.057

MECHANICAL PROPERTIES

HEAT No.	Y.S.(MPa)	T.S.(MPa)	E.L.(%)	R.A.(%)	HARDNESS	HEAT-TREAT
MIN.	205	515	30	50	≤ 187	1050-1150°C
TH16622	268	575	48	62	137	1100°C
14JS4575	275	572	50	59	137	1100°C
TH17395	280	583	46	55	144	1100°C
14JS4442	270	573	52	64	137	1100°C

WE HEREBY CERTIFY THAT THE ABOVE MENTIONED PRODUCTS HAVE BEEN MADE SATISFACTORY IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED IN THE CONTRACT AND THE RESULTS DESCRIBED ABOVE ARE TRUE AND CORRECT IN EVERY DETAIL.

*[Signature]*

INSPECTOR OF Q.A. SECTION