

CERTIFICATE OF INSPECTION & TEST

ORIGINAL



(EN 10204 3.1)

Certified to ISO9001:2008, ISO14001:2004, PED97/23/EC by LRQA

Certified API Spec Q1 and API Spec 6A (Licence No : 6A-1284)



ST&H CORPORATION
 411-3 Shinwol-ri, Jinryemyun, Gimhae-si Gyungnam, Korea
 Tel:82.51.744-4680(5 line) Fax:82.51.744-4670
 E-mail : stcorp@kornet.net

Customer : PLESA ANAHUAC Y CIAS.,S.A DE C.V.				Contract No. : 15090				Report No : MHJ7913				Date: APR.15.2013			
Spec. For Material : ASTM/ASME A/SA105N-11(NACE MR0175/ISO 15156-2009)												Heat Treatment			
Chemical Composition (%)		C	Si	Mn	P	S	Ni	Cr	Mo	Cu	V	N	910°C NORMALIZED & A.C		
Heat No.	MAX	0.350	0.350	1.050	0.035	0.040	0.400	0.300	0.120	0.400	0.080				
	MIN		0.100	0.600											
B3647		0.190	0.180	0.980	0.016	0.004	0.017	0.010	0.030	0.010	0.003				
Tension Test						Charpy Impact Test (10x10 mm Specimen Size)				Hardness Test (HB)		Bending Test 90:120(180°)		Dimensional Inspection	
Size of Specimen(mm)		Yield Strength MPa	Tensile Strength MPa	Elongation %	Red of Area %	Individual		Average		Notch Type	Temp	187	90:120(180°)	ANSI B16.5 - 2009	
Dia	Gage Length					min	min	Test Result							
12.5	50	MAX				①	②	③	Average				GOOD		
		MIN	250.000	485.000	22.000	30.000									
12.5	50		430.000	565.000	32.000	68.000					143, 146		Ultrasonic Examination		
ITEM / SIZE		Q'TY		ITEM / SIZE		Q'TY		ITEM / SIZE		Q'TY		Remarks :			
150LBS BLRF 10"		20		150LBS BLRF 24"		10		600LBS BLRF 14"		3		N/A			
150LBS BLRF 14"		3		150LBS BLRF 4"		100		600LBS BLRF 16"		5		Magnetic Particle Examination			
150LBS BLRF 12"		5		300LBS BLRF 3"		20		600LBS BLRF 2"		10		N/A			
150LBS BLRF 16"		5		300LBS BLRF 6"		10		600LBS BLRF 20"		3		**CE = 0.36 (LONG FORMULAR)			
150LBS BLRF 18"		3		600LBS BLRF 10"		10		600LBS BLRF 3"		10					

NOTE :
 1MPa = 145.037 psi
 1MPa = 0.145037 ksi
 1psi = 0.006895 MPa
 1ksi = 6.89476 MPa

W.C:Water Cool O.C.Oil Cool
 A.C:Air Cool N.A:Non Action
 N:Normalized A:Annealed
 Q.T:Quenched and Tempered
 N.T:Normalized and Tempered

We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.

Witnessed by/ K. S. KIM



Manage of QA Dept/ H. J. LEE