

CERTIFICATE OF INSPECTION & TEST

ORIGINAL



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

(EN 10204 3.1)

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

Report No : MYM6262

Date: APR.13.2011

Customer : BROWNSVILLE STEEL CITY, LLC										Contract No. : BSC2011-230				Heat Treatment	
Spec. For Material : ASTM/ASME A/SA105N-05(NACE MR-0175)															
Chemical Composition (%)		C	Si	Mn	P	S	Ni	Cr	Mo	Cu	V	Nb	910°C NORMALIZED		
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											
00040		0.214	0.218	0.880	0.011	0.011	0.015	0.054	0.004	0.018	0.007				
Tension Test						Charpy Impact Test (10x10 mm Specimen Size)				Hardness Test (HB)	Bending Test 90:120(180°)	ANSI B16.5-2003 GOOD			
Size of Specimen(mm)		Yield Strength MPa	Tensile Strength MPa	Elongation %	Red of Area %	Individual	Average	Notch Type							
Dia	Gage Length					min	min								
12.5	50	MAX				Test Result				Temp	187				
		MIN	250.000	485.000	22.000	30.000	①	②	③		Average	137			
12.5	50		324.000	527.000	28.000	70.000					141-152				
ITEM / SIZE		Q'TY	ITEM / SIZE		Q'TY	ITEM / SIZE		Q'TY	ITEM / SIZE		Q'TY	Ultrasonic Examination PASS Magnaflux Examination N/A Remarks : **CE = 0.38 (LONG FORMULAR)			
600LBS BLRF 8"		5	BLANK			BLANK									
600LBS BLRF 10"		10													
BLANK															

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

Manager of Q.A Dept/ Y.-M. CHOI