

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 : MYM6330 Date: MAY.02.2011

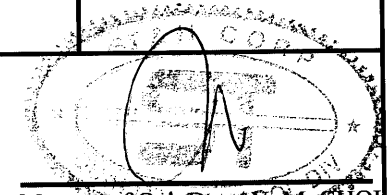
Customer : BROWNSVILLE STEEL CITY, LLC										Contract No. : BSC2011-231				Heat Treatment	
Spec. For Material : ASTM/ASME A/SA105-05(NACE MR-0175)															
Chemical Composition (%)		C	Si	Mn	P	S	Ni	Cr	Mo	Cu	V	Nb	AS FORGED		
Heat No.	MAX	0.350	0.350	1.050	0.035	0.040	0.400	0.300	0.120	0.400	0.080				
	MIN		0.100	0.600											
0137A		0.200	0.240	0.930	0.023	0.010	0.010	0.010	0.010	0.010	0.010				
Tension Test						Charpy Impact Test (10x10 mm Specimen Size)				Hardness Test (HB)	Bending Test 90:120(180°)	Dimensional Inspection 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				187					
		MIN	250.000	485.000	22.000	30.000	①	②	③	Average		Temp	137		
12.5	50		366.000	540.000	28.000	50.000						152			
ITEM / SIZE		Q'TY	ITEM / SIZE		Q'TY	ITEM / SIZE		Q'TY	ITEM / SIZE		Q'TY	Ultrasonic Examination N/A Magnetic Particle Examination N/A Remarks : **CE = 0.36 (LONG FORMULAR)			
150LBS BLRF 16"		5	BLANK			BLANK									
150LBS BLRF 24"		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