

CERTIFICATE OF INSPECTION & TEST



ORIGINAL



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(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/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										
10336Y		0.180	0.270	1.050	0.015	0.007	0.010	0.020	0.006	0.010	0.001		Dimensional Inspection	
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		289.500	526.750	35.500	61.500					145-152	Ultrasonic Examination		
ITEM / SIZE		Q'TY	ITEM / SIZE		Q'TY	ITEM / SIZE		Q'TY	Magnaflux Examination					
150LBS SORF 16"		5	BLANK			BLANK					N/A			
150LBS SORF 18"		3							N/A					
150LBS SORF 20"		3									Remarks : **CE = 0.36 (LONG FORMULAR)			
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 Manage of Q.A Dept/ Y. M. CHOI

