


MATERIAL TEST & INSPECTION CERTIFICATE


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CUSTOMER: FORGINGS FLANGES & FITTINGS INC.
 PROJECT NAME: N/A

According to
 DIN 50049 3.1 / EN 10204 3.1 / ISO 10474 3.1

37679

PURCHASE ORDER NO.	171856	SPEC. FOR MATERIAL	ASTM/ASME A5A234WPB-C STPTED	CERTIFICATE NO.	OCLP2311098070
PJT NO.	N/A	SPEC. FOR INSPECTION	ASME B16.9	DATE OF ISSUE	2011.08.23
STARTING MATERIAL	SEAMLESS PIPE	SKB NO.	2010092716	VISUAL & DIMENSION	SATISFACTORY

NO.	SEQ/LINE/ITEM NO	DESCRIPTION					QTY	HEAT NO.	MFG ID NO.	POR/CODE/TAG NO
282		REDUCING TEE	X-S	X-S	4**3"	B.W SMLS	Black	200	7-11020	7-11020

CHEMICAL COMPOSITION(%) (L : LADLE, P : PRODUCT)

TENSILE TEST

HEAT NO.	STD.	SPEC.	CHEMICAL COMPOSITION(%)																	TENSILE TEST						
			C	Si	Mn	P	S	Ni	Cr	Mo	Cu	V	Nb	N	Al	B	Zr	Fe	Ti	C.E	SPEC.	Y.S 0.2% offset	T.S	EL.	R.A	
7-11020		MIN		0.10	0.29																		KSI	KSI	%	%
		MAX	0.30		1.06	0.050	0.058	0.40	0.40	0.15	0.40	0.08											MIN	60.0	30.0	
		L	0.21	0.19	0.49	0.014	0.002	0.02	0.02	0.01	0.03	<0.001											MAX	85.0		
		P																						42.5	66.3	39.0

HEAT NO.	IMPACT TEST	TEST TEMP.	SIZE OF SPECIMEN(mm)	ABSORBED ENERGY		LATERAL EXPANSION		PERCENT SHEAR		BRINELL HB		HEAT TREATMENT		WORLDWIDE: 900°C, 30Min, "Ar"	
				STD. /	VALUE	AVE.	STD. /	VALUE	AVE.	STD. /	VALUE	AVE.	MIN	197	PN1
7-11020			B/M												
			H.A.Z												**MEMO
			W/M												
			B/M												
			H.A.Z												
			W/M												

- MATERIAL MEETS THE REQUIREMENTS OF NACE MR0175 & 0103.
 - PED(97/23/EC)

WE CERTIFY THIS MATERIAL HAS BEEN MANUFACTURED AND EXAMINED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE SPECIFICATION AND THE RESULTS OF ALL EXAMINATION ARE ACCEPTABLE.

REVIEWED BY : _____
 WITNESSED BY : _____


 QM DIV. SENIOR MANAGING DIRECTOR

Ord# 609013-1; PO# 48; H# 7-11020; 4 X 3 RED TEE XH WPB