

MATERIAL TEST & INSPECTION CERTIFICATE

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According to

DIN 50049 3.1 / EN 10204 3.1 / ISO 10474 3.1

PURCHASE ORDER NO.	PO309581	SPEC. FOR MATERIAL	ASTM/ASME A/SA234WPB-S 19/21ED	CERTIFICATE NO.	QCLY2022040822
PJT NO.	N/A	SPEC. FOR INSPECTION	ASME B16.9	DATE OF ISSUE	2022.04.19
STARTING MATERIAL	SEAMLESS PIPE	SKB NO.	2022010404	VISUAL & DIMENSION	SATISFACTORY

NO.	SEQ/LINE/ITEM NO	DESCRIPTION					QTY	HEAT NO.	MFG ID NO.	POR/CODE/TAG NO
3		90D ELBOW(L)	STD	6"	B.W SMLS	Black	228	017638	017638	
8		90D ELBOW(L)	STD	16"	B.W SMLS	Black	50	012743	012743	

CHEMICAL COMPOSITION(%) (L : LADLE, P : PRODUCT)																				TENSILE TEST						
HEAT NO.	STD.	SPEC.	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	
			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	35.0	60.0
012743	L		0.14	0.28	1.07	0.007	0.003	0.04	0.09	0.02	0.06	0.01									0.35	42.8	65.0	44.0		
	P																									
017638	L		0.13	0.26	1.07	0.007	0.002	0.03	0.08	0.01	0.05	0.01									0.33	46.7	67.6	37.0		
	P																									

HEAT NO.	IMPACT TEST	TEST TEMP.	SIZE OF SPECIMEN(mm)	ABSORBED ENERGY STD. /				LATERAL EXPANSION STD. /				PERCENT SHEAR STD. /				HARDNESS HBW			HEAT TREATMENT		HOT FORMED. 870°C, N/A., "Air"				
				VALUE		AVG.		VALUE		AVG.		VALUE		AVG.		MIN	197		PMI	N/A	N.D.E	N/A			
				B/M		H.A.Z		W/M		B/M		H.A.Z		W/M		MAX	130 128		FLATTENING TEST	N/A	**MEMO				
012743																									
017638																									

NACE MR0175 - 2015

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 : _____

S. Y. Kim

CHIEF QUALITY OFFICER

SKE-8903

* 본 검사증명서에 명기된 규격용외 사용시 안전상 문제가 발생할 수 있으며, 검사증명서 위 변조시 사문서 위조(형법231조)로 불이익을 당하실 수 있습니다.

6" STD LR 90 A234 WPB

Order: 2939312
Line: 1

Heat: 017638
Your PO: 237870-01