

PO#: 235 Pack#: 91735 Order#: 832218 Lot#: skb.130081 Desc: 4 X 3 STD SMLS RED TEE AISA234 WPB SKB

MATERIAL TEST & INSPECTION CERTIFICATE


SUNGWANG BEND CO., LTD.(SKB)
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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

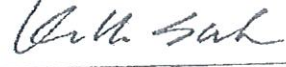
PURCHASE ORDER NO. 174239		SPEC. FOR MATERIAL		ASTM/ASME AISA234WPB-S 11/10ED WITH 11ADD		CERTIFICATE NO.		CQJH2014021971	
PJT NO. N/A		SPEC. FOR INSPECTION		ASME B16.9		DATE OF ISSUE		2014.02.18	
STARTING MATERIAL SEAMLESS PIPE		SKB NO.		2013040102		VISUAL & DIMENSION		SATISFACTORY	
NO.	SEQ/LINE/ITEM NO	DESCRIPTION				QTY	HEAT NO.	MFG ID NO.	POR/CODE/TAG NO
198		REDUCING TEE	STD*STD	4**3"	B.W SMLS	Black	400	130081	130081
250		STRAIGHT TEE	X-S	4"	B.W SMLS	Black	400	430112	430112

CHEMICAL COMPOSITION(%) (L : LADLE, P : PRODUCT)																TENSILE TEST(Gauge Length :5D)									
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	RA
																					MIN	KSI	KSI	%	%
130081		MIN		0.10	0.29																	35.0	60.0	1*	
		MAX	0.30		1.05	0.050	0.058	0.40	0.40	0.15	0.40	0.08													
	L	0.16	0.23	0.65	0.017	0.006	0.03	0.05	0.01	0.07	0.01												43.6	70.2	46.0
430112		P																							
		L	0.18	0.22	0.58	0.008	0.003	0.04	0.07	0.03	0.06	<0.01											47.5	69.3	41.0
	P																								

HEAT NO.	IMPACT TEST	TEST TEMP.	SIZE OF SPECIMEN(mm)	ABSORBED ENERGY STD. I		LATERAL EXPANSION STD. I		PERCENT SHEAR STD. I		HARDNESS HB		HEAT TREATMENT	NORMALIZED. 900°C, 30Min., "AK"		
				VALUE	AVE.	VALUE	AVE.	VALUE	AVE.	MIN	197		PMI	N/A	N.D.E
130361			BIM								HB 132	FLATTENING TEST	N/A	**MEMO 1* THE MINIMUM ELONGATION OF THE FITTING MATERIAL REFER TO TABLE 2 OF A /SA234 SPEC.	
			H.A.Z									BENDING TEST	N/A		
			WM										HYDROSTATIC TEST		N/A
430112			BIM								HB 147	CORROSION TEST	N/A		
			H.A.Z									GRAIN SIZE TEST	N/A		
			WM									HIC TEST	N/A		

MATERIAL MEETS THE REQUIREMENTS OF NACE MR0175-2009 & 0103-2012
 PED 97/23/EC / MATERIAL ALL MANUFACTURED IN KOREA.
 FREE OF MERCURY & FREE OF RADIATION

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.


 QM DIV. SENIOR MANAGING DIRECTOR

REVIEWED BY _____
 WITNESSED BY : _____
 SKE-8903

* 본 검사증명서에 영거된 규격용과 사용시 안전상 문제가 발생할 수 있으며, 검사증명서 위 변조사 시문서 위조(형법231조)로 불이익을 당하실 수 있습니다.