

ORIGINAL

MATERIAL TEST & INSPECTION CERTIFICATE



Pusan Fitting Corporation

Purchaser _____
Project Name _____
Project No _____
Po No 292800GA

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

#39, Noksansandan 46-ro, Gangseo-gu, Busan, Korea
TEL: 82-51-832-2100
FAX: 82-51-832-2103
http://www.pusanfitting.com

SPEC. FOR MATERIAL	ASTM A234 WPB-19 & ASME SA234 WPB(ASME BPVC.II.A-2019)	HEAT TREATMENT	A : HOT FORMED WITH FINAL(620°C ~ 980°C) SR : STRESS RELIEVING(620°C×0.5hr/in & A/C)	CERTIFICATE NO.	PM220314 - 10
SPEC. FOR INSPECTION	ASME B16.9 (Wrought Butt welding Fittings)-2018			DATE FOR ISSUE	2022.03.14
STARTING MATERIAL	CARBON STEEL SEAMLESS PIPE			VISUAL & DIMENSION	GOOD

No	SEQ/LINE/ITEM NO	ITEM	SCH.	NPS	Qty	HCN	RAW HEAT NO	H/T	NDE / PMI	Remark
1	4	90D ELBOW LR	XXH	2	300	A1025	741719	A		
2	6	45D ELBOW LR	STD	3	175	A4217	623482	A		
3	17	90D ELBOW LR	STD	12 × 10	25	A3361	20B11861	A		
4	9	REDUCER(CON)	STD	14 × 6	5	A3684	960748	SR		
5	10	REDUCER(CON)	STD	20 × 12	5	A3608	986789	SR		
6	11	REDUCER(ECC)	STD	16 × 12	9	A3622	989956	SR		
7	12	TEE(RED)	STD	20 × 14	2	A3608	986789	SR	MT : GOOD	
8	15	90D ELBOW LR	STD	2-1/2 × 2	40	A1365	106D1705	A		
9	16	90D ELBOW LR	STD	3 × 2-1/2	95	A3223	A9506936	A		

No	HCN	CHEMICAL COMPOSITION (wt. %)												TENSILE TEST					IMPACT TEST(ft-lbf)		Hydro Test		
		SPEC.	C	Si	Mn	P	S	Ni	Cr	Mo	Cu	V		C.E.	SPEC	Y.S	T.S	E.L	R.A	Hardness	Temp.(°C)	Size(2mm-v)	(MPa)
		MIN	×100	×100	×100	×1000	×1000	×100	×100	×100	×100	×100	×100		MIN	ksi	ksi	%	%	HBW	Min()	Ave.()	Pressure / result
		MAX	30		106	50	58	40	40	15	40	8	0.50	MAX						197	Act.	Ave.	
1	A1025	L	20	20	105	12	2	13	8	4	16	0	0.419	P	48	75	48.0		135/135				
2	A4217	L	16	26	94	13	5	9	15	3	18	0	0.371	P	49	72	37.8		143/140				
3	A3361	L	21	27	54	9	9	0	3	0	0	0	0.307	P	46	68	39.4		140/137				
4	A3684	L	12	24	109	11	1	14	16	9	16	7	0.386	P	59	84	34.8		167/170				
5	A3608	L	19	27	95	12	1	11	12	3	11	0	0.394	P	49	65	36.2		132/135				
6	A3622	L	19	28	99	13	1	13	12	5	16	1	0.409	P	46	77	40.0		140/136				
7	A3608	L	19	27	95	12	1	11	12	3	11	0	0.394	P	49	65	36.2		132/135				
8	A1365	L	20	23	47	18	16	2	7	0	3	0	0.296	P	39	64	30.0		144/145				
9	A3223	L	20	24	59	9	4	3	4	1	3	0	0.313	P	42	66	35.0		146/149				

Note.

- L : LADLE ANALYSIS , P : PRODUCT ANALYSIS , HCN : Heat Control Number
- Mn : FOR EACH REDUCTION OF 0.01% BELOW THE SPECIFIED CARBON MAXIMUM, AN INCREASE OF 0.06% MANGANESE ABOVE THE SPECIFIED MAXIMUM WILL BE PERMITTED, UP TO A MAXIMUM OF 1.65%
- "ASME SA234/SA234M(ASME BPVC.II.A-2019) TABLE 1"
- NACE MR0175/ISO 15156-2 : 2015
- MADE IN SOUTH KOREA

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 :

IMV Services No.:K002
Witness Reviewed
D.Y. Yang 21. APR. 2022.
Signature Date

[Handwritten Signature]

MANAGER OF QUALITY

