

FICATE NO. : KN-QA220914-104 DATE OF ISSUE: 09. 14. 2022  
 AINER NO : AMFU8610472  
 CE NO. : 2208-026  
 OMER : PF GLOBAL INC.

# INSPECTION CERTIFICATE

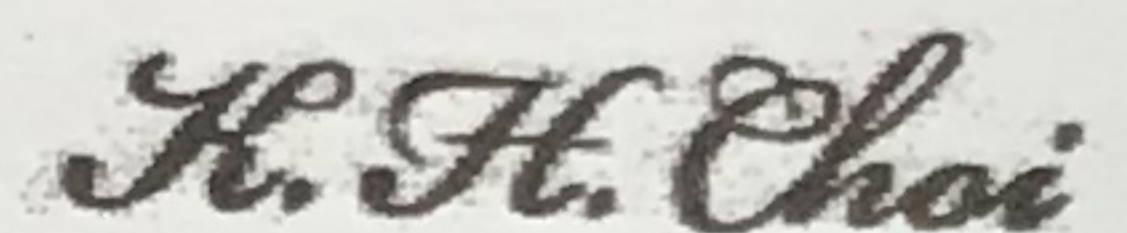
(EN10204:2004 3.1/ISO 10474:1991 3.1B)



**KYEONG NAM BEND CO.,LTD**  
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ac. for inspection	ASME B 16.9 - 18	Spec. for Material	ASTM A234 WPB-19	Starting Material	SML'S PIPE	Visual&Dimension	SATISFACTORY										
PO NO	Description	Q'ty (EA)	Material	HEAT NO.	Chemical Composition (%)										Heat Treatment		
					Spec.	C	Si	Mn	P	S	Ni	Cr	Mo	Cu		V	CE
						× 100			× 1000			× 100					
					Min.	-	10	29	-	-	-	-	-	-		-	-
PG022HA	90EL STD 8"	320	WPB	KR1685	L	20	21	56	15	8	2	5	1	2	0		Hot formed 620℃~980℃
PG022HA	90EL XH 10"	10	WPB	KR0221	L	19	21	42	12	8	1	5	1	1	0		Hot formed 620℃~980℃
PG022HA	90EL XH 12"	20	WPB	KR0221	L	19	21	42	12	8	1	5	1	1	0		Hot formed 620℃~980℃
PG022HA	90EL S40 18"	2	WPB	KR1826	L	18	22	53	12	3	2	4	1	2	0		Hot formed 620℃~980℃
PG022HA	45EL STD 14"	50	WPB	KR1501	L	21	23	43	24	7	2	9	1	1	0		Hot formed 620℃~980℃
PG022HA	45EL STD 22"	4	WPB	KR4027	L	21	25	56	11	11	2	9	2	1	0		Hot formed 620℃~980℃
PG022HA	90ES STD 4"	500	WPB	KR5007	L	20	23	44	15	13	3	3	0	2	0		Hot formed 620℃~980℃
PG022HA	90ES STD 6"	64	WPB	KR2859	L	19	22	45	21	21	2	4	1	1	0		Hot formed 620℃~980℃
PG022HA	90ES STD 12"	50	WPB	KR0259	L	20	24	54	11	7	6	3	1	2	0		Hot formed 620℃~980℃
PG022HA	90ES XH 8"	70	WPB	KR2712	L	20	23	45	17	12	4	5	1	2	0		Hot formed 620℃~980℃

Heat No.	Tensile Test				Hardness Test	Flattening Test	Impact Test(ft-lbf)		Hydrostatic Test		N.D.E	Uniformity Test of GAL'V/Zn		
	Spec.	Y.S	T.S	EL.			RA	HB	Temp(°C)	Size(2mm-v)			MPa	Pressure /Result
		MPa	MPa	%			%							
		Min.	240	415			30							
	Max.	-	-	-										
KR1685	P	269	480	33										
KR0221	P	268	482	32										
KR0221	P	268	482	32										
KR1826	P	260	470	32										
KR1501	P	263	476	34										
KR4027	P	312	499	31										
KR5007	P	305	469	30										
KR2859	P	295	475	31										
KR0259	P	268	483	30										
KR2712	P	304	460	30										

Reviewed By :  
 Witnessed By :  
 Approved By :  
  
 H. H. Choi  
 MANAGER OF QUALITY

Note:  
 \*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%.  
 \*100% X-ray detected for welded fittings  
 \*NACE MR0175

We hereby certify that the material herein has been made and tested in accordance with all requirements of the specification and the results of all examination are acceptable.

KYEONG NAM BEND CO.,LTD.