

INSPECTION CERTIFICATE

KYEONG NAM BEND CO.,LTD

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AINER NO. : TRHU2455862

CE NO. : 2206-015

OMER : PF GLOBAL INC.

(EN10204:2004 3.1/ISO 10474:1991 3.18)



Spec. for Inspection	ASME B 16.9-2018	Spec. for Material	ASTM A/SA234 WPB-2018	Starting Material	SMLS STEEL 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	-	-	-	-	-	-		-	-
Max.	30	-	106	50	58	40	40	15	40	8							
PG101AA	90EL STD 2"	1600	WPB	KR1645	L	19	24	48	15	7	3	3	1	2	0	Hot formed 620℃~980℃	
PG101AA	90EL STD 3"	1800	WPB	KR3959	L	19	21	40	16	12	2	3	2	2	0	Hot formed 620℃~980℃	
PG101AA	90EL STD 4"	1080	WPB	KR1071	L	23	37	65	30	30	1	4	2	2	0	Hot formed 620℃~980℃	
PG101AA	90EL STD 14"	35	WPB	KR0510	L	23	27	65	30	10	2	4	0	0	0	Hot formed 620℃~980℃	
PG101AA	90EL STD 18"	16	WPB	KR1527	L	23	26	60	25	10	1	4	0	0	0	Hot formed 620℃~980℃	
PG101AA	90EL STD 2-1/2"	400	WPB	KR3959	L	19	21	40	16	12	2	3	2	2	0	Hot formed 620℃~980℃	
PG101AA	90EL XH 3"	300	WPB	KR0005	L	23	27	65	23	13	3	2	1	0	0	Hot formed 620℃~980℃	
PG101AA	90EL XH 1-1/2"	900	WPB	KR1490	L	18	23	45	20	12	2	1	1	0	0	Hot formed 620℃~980℃	
PG101AA	45EL STD 3"	200	WPB	KR3959	L	19	21	40	16	12	2	3	2	2	0	Hot formed 620℃~980℃	
PG101AA	45EL STD 14"	8	WPB	KR0510	L	23	27	65	30	10	2	4	0	0	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()	Max()				
	Min.	240	415	30	-		-	Act.	Ave.				
Max.	-	-	-	-	197								
KR1645	P	299	486	33	-	150 152							
KR3959	P	289	470	30	-	150 152							
KR1071	P	298	471	32	-	150 152							
KR0510	P	295	484	32	-	150 152							
KR1527	P	321	486	32	-	150 152							
KR3959	P	289	470	30	-	150 152							
KR0005	P	327	498	33	-	150 152							
KR1490	P	303	483	31	-	150 152							
KR3959	P	289	470	30	-	150 152							
KR0510	P	295	484	32	-	150 152							

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.