



INSPECTION CERTIFICATE
RIGID INDUSTRIES CO., LTD.

PURCHASER : _____
STANDARD : ASTM A234 WPB-19
ASME SA234 WPB-21
MATERIALS : ASTM A106 Gr.B
INSP. SPEC. : ASME B16.9 -18

8, MEI-CHUNG RD. NIAO-SONG,
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DATE: 2022-02-21
ORDER NO: 287738-00
P.I. NO: 21D09-1
CERTIFI. NO: 220104-1

ACCORDING TO EN10204/DIN50049/3.1

ITEM NO.	PRODUCT & SIZE	QUANTITY PCS	MFG NO.	VISUAL & DIMENSIONAL INSPECTION	HARDNESS MAX. 197 HB	HEAT TREATMENT (NOTE)	MAGNETIC PARTICLE EXAMINATION
3	ELL 90 LR 2" STD	3305	21D8363	GOOD	132-136	A	
4	ELL 90 LR 2" STD	2225	21E3363	GOOD	128-132	A	
5	ELL 90 LR 3" STD	800	21E9653	GOOD	127-134	A	
6	ELL 180 LR 1.1/4" XH	20	21C4506(21C)	GOOD	129-135	A	
7	ELL 180 LR 1.1/2" STD	72	316896(3I)	GOOD	113-125	A	
8	ELL 180 LR 1.1/2" STD	148	20D2019(20D)	GOOD	127-130	A	

ITEM NO.	MATERIAL CHARGE NO.	CHEMICAL COMPOSITION %											* PHYSICAL TEST					
		C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Y S	T S	*** E	**	C.E.	
		x100	x100	x100	x1000	x1000	x100	x100	x100	x100	x100	x1000	KSI	KSI	%		X100	
	STANDARD	MIN.	10	29														
		MAX.	30	165	50	58	40	40	40	15	8	20						50
3	11309763		13	17	77	9	2	5	3	8	3	<1	<1	47.7	69.6	32.5	L	29
4	11309763		13	17	77	9	2	5	3	8	3	<1	<1	45.1	68.0	32.7	L	29
5	11311953		13	17	80	10	4	2	2	6	2	<1	<1	46.1	67.6	32.9	L	28
6	910106		19	20	44	7	10	14	4	3	1	1	<1	46.2	67.3	31.4	L	29
7	J3L4396		7	23	129	12	2	1	3	10	1	<1	<1	47.3	65.7	54.0	L	31
8	18325219		13	15	78	10	6	3	3	7	3	<1	1	44.8	65.2	32.0	L	28

(NOTE):A:HOT FORMED WITH FINAL TEMPERATURE BETWEEN 620°C-980°C,AIR COOLING.
N:NORMALIZING AT TEMPERATURE 880°C X0.5HR,AIR COOLING.
S:COLD FORMED WITH STRESS RELIEF AT TEMPERATURE 650°C X0.5HR
NACE MR0175-2015/ISO15156-1 NACE MR0103-2015/ISO17945:SATISFACTORY
MATERIAL IS FULLY KILLED AND FREE OF WELD REPAIRS.

* TYPE OF SPECIMEN:STRIP(WIDTH:1 in./GAUGE LENGTH:2 in.) ** SAMPLING DIRECTION:L=LONGITUDINAL T=TRANSVERSE
*** ACTUAL THICKNESS OF SPECIMEN(Ø LESS THAN 5/16" E=48+15 (L) E=32+10 (T)
WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS CONCERNED AND ALSO WITH THE PURCHASER'S REQUIREMENTS AND THAT THE TEST RESULTS SHOWN HEREIN ARE CORRECT.

Daniel Kang

MANAGER OF Q.A. DEPT.