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증서번호
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CONTRACT(PI) No.
ASTM A242/A242M SA324 WPB-2004
소재
MATERIAL
2004 MAKE MR0175-2003
적용규격
CRITERIA
ANSI B16.9-2007

검사증명서
MILL INSPECTION CERTIFICATE
수요자
CUSTOMER
MORCA INDUSTRIAL COMPANY, LLC
소재
MATERIAL
2004 MAKE MR0175-2003
적용규격
CRITERIA
ANSI B16.9-2007

주식회사 영광벤드
YOUNG KWANG BEND CO., LTD

경기도 파주시 경산동 449
#449, GEOMSAN-DONG, PANGU-SI, GYEONGGI-DO, KOREA
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순서 NO	제품규격 DESCRIPTION 판도 & 두께 & 두께 (ANGLE-OUTDIA*THICK)	수량 QUANTITY (PCS)	열처리 HEAT No.	화합물 조성 CHEMICAL COMPOSITION										CE	인장 시험 TENSILE TEST		경도 HARDNESS	배송 DELIVERY CONDITION	슬라이드 IMPACT TEST	FLATTEMI NG TEST			
				C	SI	Mn	P	S	Cr	Mo	NI	Cu	V		YIELD STREN GTH	TENSIL E STREN GTH					인장 신율 (EL)	HB	충격 에너지 ENERGY
	SPEC						0.040									240T	416T	22.1	197.1			J	
1	90 LR 4	25	228	0.19	0.31	0.44	0.021	0.022	0.03	0.02	0.02	0.02	0.04	0.001	0.28	270	460	20	145	148	A		
2	45 LR 16	10	007	0.20	0.22	0.49	0.011	0.012	0.02	0.01	0.02	0.01	0.02	0.001	0.29	275	460	23.5	145	146	A		
3	90 LR 20	3	147	0.18	0.24	0.43	0.016	0.016	0.01	0.02	0.01	0.03	0.002	0.28	280	470	28.5	150	151	A			
4	90 LR 24	5	292	0.16	0.31	0.50	0.006	0.006	0.02	0.01	0.01	0.05	0.001	0.27	285	275	28.5	152	153	A			
5	90 SR 8	5	428	0.22	0.27	0.55	0.015	0.005	0.09	0.01	0.06	0.01	0.001	0.34	282	490	31	149	152	A			
6	45 LR 12	40	172	0.20	0.26	0.45	0.018	0.020	0.03	0.01	0.01	0.08	0.003	0.29	290	470	30.5	144	145	A			
7	90 LR 12	30	172	0.20	0.26	0.45	0.018	0.020	0.03	0.01	0.01	0.08	0.003	0.29	290	470	30.5	144	145	A			
8	90 SR 12	10	172	0.20	0.26	0.45	0.018	0.020	0.03	0.01	0.01	0.08	0.003	0.29	290	470	30.5	144	145	A			
9	90 SR 30	STD	3	290	0.19	0.15	0.65	0.019	0.013	0.027	0.001	0.01	0.008	0.003	0.31	265	440	31	152	153	A		
10	TEE 2X1	STD	50	316	0.19	0.25	0.52	0.012	0.015	0.03	0.02	0.02	0.04	0.001	0.29	285	460	28	153	155	N		
11	CON RED 10 X5	STD	10	481	0.18	0.25	0.52	0.016	0.018	0.02	0.01	0.01	0.03	0.002	0.28	255	482	30	150	153	N		
12	CON RED 16 X 14	STD	10	518	0.18	0.22	0.48	0.015	0.016	0.02	0.02	0.02	0.05	0.001	0.27	275	485	30.5	144	145	N		

NOTE:
1. VISUAL & DIMENSION TEST: GOOD
2. MADE FROM SEAMLESS PIPE, CAP AND THE PRODUCTIONS WITH RT IN THE NONDESTRUCTIVE TEST IS MADE FROM PLATE.
3. CE=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
4. AS-HOT FORMED WITH FINAL TEMPERATURE BETWEEN 620 °C-860°C, AIR COOLING
N: NORMALIZING AT TEMPERATURE 890 °C±0.5 HR, AIR COOLING
5. LEAD FREE



S. H. KANG
INSPECTION MANAGER

본 증서는 관련규격에 따라 제작된 것을 증명합니다.
WE HEREBY CERTIFY THAT MATERIAL DESCRIBED SPECIFICATION HEREIN HAS BEEN
ACCEPTED IN ACCORDANCE WITH THE PRESCRIBED SPECIFICATION AND ORDER
SURVEYOR
YOUNG KWANG BEND CO., LTD



INSPECTION CERTIFICATE

PANTECH STEEL INDUSTRIES SDN. BHD. (599731-A)
 LOT 13258 & 13259, Jalan Haji Abd. Manan,
 Off Jalan Meru, 42200 Klang, Selangor, Malaysia.
 Tel: 603-3393 1633 Fax: 603-3393 1733 E-mail: info@pantechsteel.com



Cert. No.: KLR 0403926
 PED 97/23/IC Annex 1 Clause 4.3
 Cert. No.: 0038/PED/NOH/09100702

WROUGHT CARBON STEEL BUTTWELDING FITTINGS

INSPECTION DOCUMENT: EN10204:2004 Type 3.1

Certificate No : PSI 94999
 Date : 28-Oct-14

Purchaser :

Order No.	Invoice No.	Starting Material	Specification for Fittings- Seamless	Specification for Inspection													
65997	E 000011182	Seamless Pipe	ASTM A234 -13 WPB / ASME SA234 -13 WPB NACE MR0175/ NACE MR 0103/ ISO15156*	ASME B16.9 - 12 / ASTM A960 - 10													
Heat No.	Product & Size	Quantity (pcs)	Visual Examination	Dimensional Inspection	Heat Treatment	Magnetic Particle Testing											
RC 701C	14" x 12" STD CON RED	10	GOOD	GOOD	C & S	N.A											
RG 402	2" x 1" STD RED TEE	25	GOOD	GOOD	C & S	GOOD											
Chemical Composition (%)																	
Specification	C	Si	Mn	P	S	Ni	Cr	Mo	Cu	V	Pb	CE x100	YS (KSI)	TS (MPa)	E (%)	Hardness (HB)	
Min	-	10	29	-	-	-	-	-	-	-	-	-	240	415	22	1	2
Max	30	-	106	50	58	40	40	15	40	80	-	50	-	-	-	-	197
Heat No.																	
RC 701C	21	20	56	14	5	11	17	0	3	2	<0.10	35	362	510	37.0	128	129
RG 402	11	19	79	7	6	3	7	2	2	0	<0.10	26	388	510	25.9	127	128

WE CERTIFY THAT ALL PRODUCTS WERE MANUFACTURED, SAMPLED, TESTED, AND INSPECTED SOLELY BY THE MANUFACTURER LISTED AT THE ADDRESS ABOVE IN ACCORDANCE WITH INDICATED SPECIFICATION AND FOUND TO MEET REQUIREMENTS. MATERIAL IS FREE FROM MERCURY AND RADIOACTIVE CONTAMINATION.
 TENSILE REQUIREMENT: CONFORMS TO ASTM A370 STANDARD, LONGITUDINAL DIRECTION, GAUGE LENGTH 2" (50mm)
 *HARDNESS ACCORDING TO NACE MR0175/ NACE MR 0103/ ISO15156

NOTE:
 C: Cold formed at temperature below 620°C
 S: Stress relieved in temperature between 595°C - 690°C and cooled in still air.
 H: Hot formed in temperature between 845°C - 945°C and cooled in still air.
 N: Normalised at 910°C
 Q: Heated to 910°C and quenched in water.
 T: Tempered between 590°C - 690°C.

*1: YS = Yield strength TS = Tensile strength E = Elongation

Made in Malaysia

STEEL INDUSTRIES SDN. BHD.
 QA / QC MANAGER
 HOI YS
 509731-A

[Signature]
 Quality Assurance Manager