

검사증명서

MILL TEST CERTIFICATE

EN10204 3.1/ISO 10474 3.1B

CUSTOMER(고객사): PLESA ANAHUAC Y CIAS S.A. DE C.V.



출산공장 : 울산광역시 북구 영포로 706, Yeompo-ro, Buk-gu, Ulsan, Korea



CERTIFICATE NO(증서번호) : AC10072
 DATE OF ISSU(발행일자) : 2016-12-31
 CONTRACT P/O NO(계약번호) : 2449
 PRJ NO(프로젝트번호) : F161000176
 COMMOITY(재품명) : ERW CARBON STEEL PRE
 SPECIFICATION(세공규격) : API 5L B PSL1/STIM/ASME SA533

No.	TYPE OF PIPE END	SIZE OUT-DIA*THICK*LENGTH (외경*두께*길이)	PCS (부)	WEIGHT (KG)	TOTAL LENGTH (F)	HEAT NO.	Hydrostatic Test			Tensile Properties(Coape Length: 2 inch)			Hardness Test		
							Pressure	Time	Spec.	Base	Weld	Yield Strength	Tensile Strength	Y/R	EL
1	EB BE	14" X 0.250" X 20.177 F	32	10,947	645.694	SUB4048	770	5	T	526	485	395	38	B	165
2	EB BE	14" X 0.250" X 20.177 F	70	23,728	1,412.39	SUB4056	770	5	T	527	485	403	37	B	163
3	EB BE	14" X 0.250" X 20.177 F	188	63,727	3,793.276	SUB4058	770	5	T	530	527	411	37	B	162
4	EB BE	14" X 0.312" X 20.177 F	51	21,249	1,029.027	PI2923	950	5	T	470	475	376	42	H	159

No.	Heat No.	Spec. #4	Chemical Composition(%)											Zn-Coating Test			H/C Test			S.S.C.C Test					
			C	Si	Mn	P	S	OU	Ni	Cr	Mo	V	Ti	Nb	B	CM1 #8	CM2 #9	Zn Coating	Cooper Sulfide Test		H/C-Test Collapse Pressure	CLR	CTR	CSR	
1	SUB4048	H	6	21	100	11	2	1	1	2	TR	TR	2	3	2	2	10	6	15						
2	SUB4056	P	8	19	100	9	3	1	1	2	TR	TR	2	3	2	2									
3	SUB4058	H	7	20	102	9	2	1	1	2	TR	TR	2	3	2	2									
4	PI2923	P	6	2	80	13	6	2	1	2	TR	TR	1	1	1	1									

Remark

※1) Type of pipe end(관종)
 EB:EW/ Bead(BE)Bevel End
 ※2) L: Longitudinal T: Transverse
 ※3) B: Base, W: Weld Line, H: Heat Affected Zone
 ※4) H: Head(Ladle) Analysis, P: Product Analysis
 ※5) For each reduction of 0.01% below the specified max for C, an increase of 0.05% above the specified max for Mn is permissible, up to a max. of 1.65%
 ※6) CM1=b+V
 ※7) CM2=b+V+Ti
 ※8) SPEC YEAR - API 5L 45th Edition(2013)/ASTM A53(2012)/ASME SA533(2015)
 ※9) License No.: SL-0206
 ※10) Address to NACE MR0175(ISO 15919) / ISO 15155
 ※11) Address to NACE MR0103 / ISO 15155
 ※12) API 5L Annex E(NDE) : O.D.<6"ECT(1.6mm hole) O.D.>6" UT(3.2mm hole)
 ※13) Heat treatment: Normalizing(Temp.871~1100C, Holding time: max.30min/hr)

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SURVEOR

QA Manager

CERTIFICATE NO.(영문서번호) : AC10072
 DATE OF ISSUE(발행일자) : 2016-12-31
 CONTRACT(P/O) NO.(계약번호) : 24409
 PR NO.(주문서번호) : F161000176
 COMMODITY(제품명) : ERW CARBON STEEL PIPE
 SPECIFICATION(제품규격) : API 5L B F80 / ASTM A53B / SMLS S453B

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 MILL TEST CERTIFICATE
 EN10204 3.1/ISO 10474 3.1B
 CUSTOMER(고객사) : PLESA ANAHUAC Y CIAS S.A. DE C.V.

HYUNDAI STEEL
 울산공장 : 울산광역시 북구 영포로 706
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No.	TYPE OF PIPE END	SIZE OUT-DIA*THICK*LENGTH (외경*두께*길이)	PCS	WEIGHT (KG)	TOTAL LENGTH (F)	HEAT NO.	Hydrostatic Test		Tensile Properties(See Length : 2 inch)			Hardness Test		Headress Test & CN Impact Test		DWT Test (°C)	
							Pressure	Time	Base	Weld	Yield	UTR	EL	Max Value	HV		Absorbed Energy(Joule)
5	EB BE #1	14" X 0.312" X 20.177 F	6	2,500	121.082	P13035	950	5	474	471	374	42	248				
		TOTAL	347	122,051	7,001.419												
Chemical Composition(%) 2 : x100 3 : x1000 4 : x10000 C SI Mn P S CU NI CR MO V Ti Nb B #4 2 2 2 3 3 2 2 2 2 2 2 4 2 2 Min. 26 120 30 30 30 50 50 50 15 Max. 77 13 4 4 2 2 1 3 TR TR TR 1 1 1 1 1 2																	

| Zn-Coating Test Zn Coating Copper Sulfide Test Time Result HIC Test CLR CTR CSR % % % S.S.C.C Test #1) Type of pipe end(관종) ERW/Beck BE/Bevel End #2) L: Longitudinal T: Transverse #3) B: Base W: Weld Line H: Heat Affected Zone #4) H: Heat(ade) Analysis P: Product Analysis #7) For each reduction of 0.01% below the specified max for C, an increase of 0.05% above the specified max for Mn is permissible up to a max of 1.65% #8) CM1=Nb+V #9) CM2=Nb+V+Ti * SPEC YEAR - API 5L 45th Edition(2013)/ASTM A53(2012)/SMLS S453B (2015) * License No. : SL-0026 * Harness to NACE MR0175(2013ED) / ISO 15156 * Harness to NACE MR0103 / ISO 15156 * API 5L Annex(E) : OD<6"ECT(I) (ann hole) OD>6"UT(32mm hole) * Heat treatment : Normalizing(Temp:871~1100°C; Holding time : max:30min/tr) | | | | | | | | | | | | | | | | | |
| Head Treatment Non-Destructive Test (UT) GOOD Flattening / Bending Test GOOD Visual & Dimension GOOD Residual Magnetism (Gauss) GOOD SURENGER WE HEREBY CERTIFY THAT MATERIAL DESCRIBED HEREIN HAS BEEN ACCEPTED IN ACCORDANCE WITH THE PRESCRIBED SPECIFICATION AND ORDER. * 본 검사증명서에 영구된 규격용도의 사용시 안전성 문제가 발생될 수 있으며, 검사증명서 위변조시 사문서 위조로 표의 이익을 당해할 수 있습니다. 본 제품은 관련 규격에 합격되었음을 보증합니다. * 본 검사증명서는 원본인 전자문서(전자서명) 중본 포함)로부터 출력된 시본입니다. 전자문서의 내용은 원본과 동일하게 확인하실 수 있습니다.(http://sm.hyundai-steel.com/cs/cn/09jn.jsp) * This Mill Test Certificate is a copy that has been printed from original electronic document(with digital signing). You are able to check an original electronic document at Hyundai's customer portal.(http://sm.hyundai-steel.com/cs/cn/09jn.jsp) * QRcode scanner App : 'QReal' QA Manager | | | | | | | | | | | | | | | | | |

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