CERTIFICATE NO(성적서 번호) : B403991 Page 1 of 1
DATE OF ISSUE(발행일자) : 2017-04-13
CONTRACT(P/O) NO.(계약번호) : 24410
PR NO.(주문서번호) : F161000177
COMMODITY(제품명) : E.R.W. CARBON STEEL PIPE
SPECIFICATION(제품규격) : API 5L B PSL1/ASTM A53B/ASME SA53B

검사증명서
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 염포로 706
706, Yeompo-ro, Buk-gu, Ulsan, Korea

No.	TYPE OF PIPE END ※1	SIZE OUT-DIA×THICK×LENGTH (외경×두께×길이)	PCS (본)	WEIGHT (KG)	TOTAL LENGTH (F)	HEAT No.	Hydrostatic Test Pressure PSI	Hydrostatic Test Time SEC	Spec Min.	Spec Max.	※2	Tensile Properties(Gage Length : 2 inch) Tensile Strength Base Mpa	Tensile Strength Weld Mpa	Yield Strength Mpa	Y/R Rate %	EL %	Hardness Test ※3	Hardness Test Max. Value HV	※2 ※3	Hardness Test & CVN Impact Test CVN Impact Test('C) Specimen size	Absorbed Energy(Joule) 1	2	3	avg	Shear Area (%)	D.W.T Test('C) Shear Area(%) 1	2	avg
							PSI	SEC	Min.	Max.		415	415	245				248										
																				Criteria : In the case of 10×10								
1	EB BE	16" X 0.500 " X 20.177 F	8	6,056	161.416	G56724	1330	5			T	467	480	346		46	B	170										
																	H	168										
																	W	165										
2	EB BE	16" X 0.500 " X 20.177 F	33	25,022	665.841	G56725	1330	5			T	469	475	341		47	B	168										
																	H	168										
		TOTAL	41	31,088	827.257												W	157										

No.	Heat No.	Spec.	※4	Chemical Composition(%) C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	Ti	Nb	B	CM1 ※8	CM2 ※9	2 : ×100 3 : ×1000 4 : ×10000	Zn-Coating Test Zn Coating	Copper Sulfate Test Time	Copper Sulfate Test Result	HC-Test Collapse Pressure	H.I.C Test CLR	CTR	CSR	S.S.C.C Test	Remark
		Min.		2	2	2	3	3	2	2	2	3	3	3	3	4	3	3					psi	%	%	%		
		Max.		25		120	30	30	50	50	50	150				10	60	150										
1	G56724		H	18	2	78	15	4																				
			P	15	2	77	13	5	5	1	4	2	TR	2	1	1	1	3										
			P	15	2	77	13	5	5	1	4	2	1	2	1	1	1	3										
2	G56725		H	16	2	77	14	4																				
			P	13	1	78	11	5	4	1	4	TR	TR	1	1	1	1	2										
			P	12	1	79	11	5	4	1	4	TR	TR	1	1	1	1	2										

※1) Type of pipe end(관종)
EB:ERW Black BE:Bevel End
※2) L: Longtudinal, T: Transverse
※3) B: Base, W: Weld Line, H: Heat Affected Zone
※4) H: Heat(Ladle) 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)/ASME SA53 (2015)
※ License No. : 5L-0026
※ Hardness to NACE MR0175(2013ED) / ISO 15156
※ API 5L Annex.E(N.D.E) : O.D<6"ECT(1.6mm hole), O.D>6"UT(3.2mm hole)
※ Heat treatment : Normalizing(Temp.871~1100'c, Holding time : max30m/min)

COPY

Heat Treatment	Non-Destructive Test (U.T)	Flattening / Bending Test	Visual & Dimension	Residual Magnetism (Gauss)
GOOD	GOOD	GOOD	GOOD	GOOD

SURVEYOR

본 제품은 관련 규격에 합격되었음을 보증합니다.
WE HEREBY CERTIFY THAT MATERIAL DESCRIBED HEREIN HAS BEEN ACCEPTED IN ACCORDANCE WITH THE PRESCRIBED SPECIFICATION AND ORDER.
* 본 검사증명서에 명기된 규격용도외 사용시 안전상 문제가 발생할 수 있으며, 검사증명서 위.변조시 사문서 위조로 불이익을 당하실 수 있습니다.

H.K. CHOI
QA Manager

* 본 검사증명서는 원본인 전자문서(전자서명 정보 포함)로부터 출력된 사본입니다. 전자문서의 내용은 현대제철 고객포탈에서 확인하실 수 있습니다.(http://sm.hyundai-steel.com/cs/cm/login.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 hyundaisteel's customer portal.(http://sm.hyundai-steel.com/cs/cm/login.jsp) * QRcode scanner App : 'QReal'