CERTIFICATE NO.(성적서 번호) : A304982/A

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CONTRACT(P/O) NO.(계약번호) :

PR NO.(주문서 번호) : S200111791

COMMODITY(제품명) : CARBON STEEL PIPE

SPECIFICATION(제품규격) : API 5L B PSL1/ASTM 53B

검 사 증 명 서
MILL TEST CERTIFICATE
EN 10204 TYPE 3.1 - 2004

HYUNDAI STEEL 현대제철주식회사 HYUNDAI STEEL

울산 공장 (ULSAN PLANT) : 울산광역시 북구 염포로 706 (우)683-711
706, Yeompo-ro, Buk-gu, Ulsan, Korea
TEL:82-52-280-0114, FAX:82-52-287-8916

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

No.	TYPE OF PIPE END ※1	SIZE OUT-DIA x THICK x LENGTH (외경 X 두께 X 길이)	PCS (본)	WEIGHT (KG)	TOTAL LENGTH (F)	HEAT No.	Hydrostatic Test Pressure PSI	Hydrostatic Test Time SEC	Spec. Min. / Max.	※2	Tensile Properties (Gage length : 2 inch) Tensile Strength Base Mpa	Tensile Strength Weld Mpa	Yield Strength Mpa	Y/R Rate %	E.L %	※3	Hardness Test	※2	CVN Impact Test (℃) Specimen size	Absorbed Energy (Joule) 1	2	3	Avg	Shear Area(%)	D.W.T Test (℃) Shear Area(%) 1	2	Avg
									Min.		415	415	245		25												
									Max.											Criteria : In the case of 10X10							
1	EB BE	12-3/4" X 0.225" X 21.000 F	83	23,826	1,743.0	SB59143	750	5		T	465	513	334		38												
2	EB BE	12-3/4" X 0.225" X 21.000 F	50	14,354	1,050.0	SB59144	750	5		T	454	500	322		41												
3	EB BE	12-3/4" X 0.225" X 21.000 F	70	20,095	1,470.0	SB57451	750	5		T	465	520	316		40												
		TOTAL	203	58,275	4,263.0																						

Chemical Composition ※2:x100 3: x1000 4:x10000

No.	Heat No.	Spec.		C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	V	Ti	Nb	Al	B	CEQ ※5	CM1 ※8	CM2 ※9	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
				2	2	2	3	3	2	2	2	2	2	2	2	2	4	3	2	2				psi	%	%	%	
		Min.	※4																									
		Max.		26		120	30	30	50	50	50	15					10		6	15								
1	SB59143		H	15	TR	66	13	5																				
			P	14	1	67	11	6	1	2	4	TR	TR	TR	TR	2	2	263	TR	TR								
			P	14	1	67	11	5	1	2	4	TR	TR	TR	TR	2	2	264	TR	TR								
2	SB59144		H	14	TR	67	13	5																				
			P	14	1	68	12	6	1	2	4	TR	TR	TR	TR	3	2	264	TR	TR								
			P	13	1	69	13	6	1	2	4	TR	TR	TR	TR	3	2	258	TR	TR								
3	SB57451		H	15	TR	72	14	4																				
			P	14	TR	74	12	5	1	3	3	1	TR	TR	TR	4	2	280	TR	TR								
			P	14	TR	74	12	5	1	3	3	1	TR	TR	TR	5	2	277	TR	TR								

Remark

※ 1) Type of pipe end(관종)
EB:ERW Black BE:Bevel End
※ 2) L: Longitudinal, 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)

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

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.

SURVEYOR

H.K.CHOI

Q.A Manager