CERTIFICATE NO.(성적서 번호) : A406508

DATE OF ISSUE(발행일자) : 2016-03-31

CONTRACT(P/O) NO.(계약번호) :

PR NO.(주문서 번호) : F160100105

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														
									Max.										Criteria : In the case of 10X10								
1	EB BE	12-3/4" X 0.250" X 21.000 F	39	12,507	819.0	SB56727	850	5		T	454	500	322	70	41												
2			145	46,497	3,045.0	SB57451	850	5		T	474	473	329	69	41												
3			75	24,050	1,575.0	SB59144	850	5		T	464	498	317	68	40												
4			75	24,050	1,575.0	SB59545	850	5		T	472	504	355	75	39												

No.	Heat No.	Spec.	※4	Chemical Composition ※2:x100 3: x1000 4:x10000 C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	B	CM1 ※8	CM2 ※9	Zn-Coating Test Zn Coating g/㎡	Copper Sulfate Test Time	Copper Sulfate Test Result	HC-Test Collapse Pressure psi	H.I.C Test CLR %	CTR %	CSR %	S.S.C.C Test
				2	2	2	3	3	2	2	2	2	4	2	2								
		Min.																					
		Max.		26		120	30	30	50	50	50	15	10	6	15								
1	SB56727		H	14	1	70	9	3															
			P	15	TR	74	14	5	1	1	3	TR	1	TR	TR								
			P	15	1	73	12	4	1	TR	3	TR	2	TR	TR								
2	SB57451		H	15	1	72	14	4															
			P	14	TR	74	12	5	1	3	3	1	2	TR	TR								
			P	14	TR	75	12	5	1	3	4	1	2	TR	TR								
3	SB59144		H	14	1	67	13	5															
			P	13	1	69	12	5	1	2	4	TR	2	TR	TR								
			P	13	2	70	12	5	1	2	4	TR	2	TR	TR								
4	SB59545		H	15	1	69	13	4															
			P	15	TR	73	12	5	1	2	3	TR	2	TR	TR								
			P	15	1	73	12	5	1	2	3	TR	2	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)
※ HARDNESS TO NACE MR 0175
※ HARDNESS TO NACE MR 0103
※ HARDNESS TO ISO 15156

ORIGINAL

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

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

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									Min.	415	415	245													
									Max.								Criteria : In the case of 10X10								
		TOTAL	334	107,104	7,014.0																				

No.	Heat No.	Spec.		Chemical Composition ※2:x100 3: x1000 4:x10000 C	Si	Mn ※7	P	S	Cu	Ni	Cr	Mo	B	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	4	2	2	g/㎡	Time	Result	psi	%	%	%	
		Min.	※4																				
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ORIGINAL

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