MILL'S QUALITY CERTIFICATE

SeAH Steel Corp.
(주)세 아 제 강

HEAD OFFICE ; BONGNAE-DONG 1GA, JUNG-GU, SEOUL, KOREA
POHANG PLANT ; 14-1, JANGHEUNG-DONG, NAM-GU, POHANG

증명서번호
CERTIFICATE NO.: E201004-0134-000862(5005298)

제 품 명
COMMODITY : E.R.W STEEL PIPE

제 품 규 격
SPECIFICATION : API 5LB PSL1/ASTM A53B(2007)

발 급 일 자
DATE OF ISSUE : 2010.03.31

계 약 서 번 호
L/C No. (P/O No.) : 1103077721

수 요 가
CUSTOMER : PLESA

주 문 자
SHIPPER : DUFERCO SA

NO.	HEAT NO. (BATCH NO.)	관 단 TYPE *1	주 문 치 수 ORDER SIZE	수 량 QUANTITY 본 수 PCS	총 길 이 TOTAL LENGTH	중량(M/T) WEIGHT	비 고 REMARK
33	C010186 (SIK3151160)	BBE	16 " X 0.375 " X 6.120 M	21	128.520 M	11.950	CONFIRM TO NACE NORM MR0175(LAST EDITION)
							*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
34	C030219 (SIK3151170)	BBE	16 " X 0.375 " X 6.120 M	33	201.960 M	18.778	*DSAW:CHEMICAL COMPOSITION AND HARDNESS ONLY
35	SB66575 (SIK3152140)	BBE	16 " X 0.500 " X 6.120 M	29	177.480 M	21.883	
36	SB66805 (SIK3152150)	BBE	16 " X 0.500 " X 6.120 M	16	97.920 M	12.074	

NO.	HEAT NO (BATCH NO.)	HYDROSTATIC TEST 5 Sec. psi	RESULT	N·D·T U *2	VISUAL & DIMENSION	FLATTENING	SHOCK	COMPRESSION	RESIDUAL MAGNETISM GAUSS	BENDING *3	DRIFT	CRUSH	FLARING	FLANGE	REVERSE FLATTENING	ZINC COATING TEST WEIGHT OF ZINC COAT-ING	균일성 C.S *4	알칼리 ALK *5	DESIG *6	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti		CEQ *8	DIR *9	TENSILE STRENGTH psi	YIELD STRENGTH psi	E.L % *10	IMPACT TEST (℃) ENERGY Joule	SHEAR AREA %	HARDNESS TEST HRC	HEAT TREATMENT SN *11
																				CHEMICAL COMPOSITION(%)															TENSILE TEST (Gage Length : 50mm)						
																				2			3		2	2	2	2	3	3	3										
																				*7																						
기준 SPEC									30										MAX	26		120	30	30	40	40	40	15	80												22	
																			MIN																60200	35500					
33	C010186 (SIK3151160)	1000	G	G	G	G			G										H	13	15	78	15	2																	
																			P	12	16	79	13	TR	2	1	TR	TR	2	2	1			T	71060	51630	29			8	G
																			P	14	14	78	16	4	2	1	TR	TR	2	2	1			W	77450						
34	C030219 (SIK3151170)	1000	G	G	G	G			G										H	14	20	77	12	5																	
																			P	13	21	76	12	4	TR	TR	TR	TR	TR	TR	TR			T	73090	58880	36			9	G
																			P	13	20	76	14	3	TR	TR	TR	TR	TR	TR	TR			W	79190						
35	SB66575 (SIK3152140)	1340	G	G	G	G			G										H	18	1	77	10	7																	
																			P	17	1	78	11	5	2	1	2	TR	TR	2	TR			T	69610	50610	40			7	G
																			P	17	1	76	10	6	2	1	2	TR	TR	2	TR			W	76000						
36	SB66805 (SIK3152150)	1340	G	G	G	G			G										H	19	1	73	13	4																	
																			P	18	TR	74	15	2	TR	2	1	TR	2	2	2			T	68160	49450	38			8	G
																			P	19	TR	72	15	5	TR	2	1	TR	2	2	2			W	73820						

NOTE *1 ~ *11: Refer To Others

OTHERS
*1-BBE:Black Beveled End(30°)
*2-U:Weld Seam Ultrasonic Test
*6-H:Heat(Ladle) Analysis, P:Product Analysis *7-2:X100, 3:X1000
*9-T:Base Metal Transverse, W:Weld Part Transverse *10-E.L:Elongation *11-S.N:Seam Normalizing *G:GOOD *Tr:Trace

Surveyor :

- WE HEREBY CERTIFY THAT THE MATERIAL HEREIN HAS BEEN MADE AND TESTED IN ACCORDANCE WITH ABOVE SPECIFICATION AND THE RESULTS OF ALL TEST ARE ACCEPTABLE.
- THE USE OF THE MATERIAL OUTSIDE THE SPECIFICATIONS INDICATED ON THIS CERTIFICATE MAY CAUSE SAFETY AND/OR MONETARY PROBLEMS. FURTHERMORE, ANY ORGANIZATION OR PERSON(S) WHO DELIBERATELY MODIFIES THE CERTIFICATE WILL BE PROSECUTED FOR FORGING AN OFFICIAL DOCUMENT (ACCORDING TO THE PROVISIONS OF THE CRIMINAL CODE 231)

Manager of Q.M Dept.
N. J. Baek