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.: E201004-0131-000859(5005233)

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.) : 1103077092

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
17	SB64305 (SIK2102160)	BBE	18 " X 0.500 " X 6.120 M	11	67.320 M	9.367	CONFIRM TO NACE NORM MR0175(LAST EDITION)
18	SB64305 (SIK2262060)	BBE	18 " X 0.500 " X 6.120 M	5	30.600 M	4.258	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
19	SB63971 (SIK2262070)	BBE	18 " X 0.500 " X 6.120 M	26	159.120 M	22.142	*DSAW:CHEMICAL COMPOSITION AND HARDNESS ONLY
20	C915714 (SIK3151120)	BBE	16 " X 0.375 " X 6.120 M	21	128.520 M	11.950	

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	ENERGY Joule	SHEAR AREA %	HARDNESS TEST	HEAT TREATMENT SN *11
																				CHEMICAL COMPOSITION(%)															TENSILE TEST (Gage Length : 50mm)			IMPACT TEST (℃)			
																				2			3		2	2	2	2	3	3	3										
기준 SPEC									30										MAX	26		120	30	30	40	40	40	15	80													
																			MIN																60200	35500						
17	SB64305 (SIK2102160)	1190	G	G	G	G			G										H	18	1	77	14	10																	
																			P	17	1	76	14	8	TR	2	TR	TR	1	2	TR			T	72390	46790	38				G
																			P	17	TR	76	16	9	TR	2	TR	TR	1	2	TR			W	75540						
18	SB64305 (SIK2262060)	1190	G	G	G	G			G										H	18	1	77	14	10																	
																			P	17	1	76	14	10	1	1	2	TR	2	TR	1			T	70830	45940	35				G
																			P	18	TR	78	13	10	1	1	2	TR	2	TR	1			W	72410						
19	SB63971 (SIK2262070)	1190	G	G	G	G			G										H	17	1	82	13	9																	
																			P	16	1	83	13	8	TR	2	TR	TR	TR	2	TR			T	70400	45080	39				G
																			P	17	2	81	13	7	TR	2	TR	TR	TR	2	TR			W	73410						
20	C915714 (SIK3151120)	1000	G	G	G	G			G										H	14	2	81	12	1																	
																			P	13	2	80	14	TR	1	TR	2	TR	TR	2	2			T	74500	65710	30				G
																			P	14	1	82	14	1	1	TR	2	TR	TR	2	2			W	78230						

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