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
9	SB66168 (SHK3232040)	BBE	14 " X 0.375 " X 6.120 M	7	42.840 M	3.473	CONFIRM TO NACE NORM MR0175(LAST EDITION)
10	SB66168 (SHK3232050)	BBE	14 " X 0.375 " X 6.120 M	1	6.120 M	0.496	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
11	SB66168 (SHK3232060)	BBE	14 " X 0.375 " X 6.120 M	1	6.120 M	0.496	*DSAW:CHEMICAL COMPOSITION AND HARDNESS ONLY
12	SB66169 (SHK3232080)	BBE	14 " X 0.375 " X 6.120 M	1	6.120 M	0.496	

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										
기준 SPEC									30											MAX	26		120	30	30	40	40	40	15	80												22	
																				MIN																60200	35500					
9	SB66168 (SHK3232040)	1150	G	G	G	G			G											H	20	2	76	15	6																	
																				P	20	1	77	14	8	1	TR	2	TR	TR	TR	TR			T	73960	52500	36			8	G
																				P	19	2	77	15	8	1	TR	2	TR	TR	TR	TR			W	80060						
10	SB66168 (SHK3232050)	1150	G	G	G	G			G											H	20	2	76	15	6																	
																				P	19	2	76	15	4	1	TR	2	TR	1	1	2			T	74980	57720	34			8	G
																				P	21	1	75	14	5	1	TR	2	TR	1	1	2			W	79040						
11	SB66168 (SHK3232060)	1150	G	G	G	G			G											H	20	2	76	15	6																	
																				P	19	2	77	16	7	2	TR	1	TR	1	TR	1			T	75710	51190	36			7	G
																				P	21	1	76	15	8	2	TR	1	TR	1	TR	1			W	81070						
12	SB66169 (SHK3232080)	1150	G	G	G	G			G											H	20	1	75	13	6																	
																				P	19	TR	76	13	6	1	TR	TR	TR	1	2	TR			T	71060	49740	34			8	G
																				P	19	2	75	13	8	1	TR	TR	TR	1	2	TR			W	78320						

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