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.: E200706-0020-001526(5001625)
제 품 명 COMMODITY : E.R.W STEEL PIPE
제 품 규 격 SPECIFICATION : API 5LB PSL1/ASTM A53B(2006)

발 급 일 자 DATE OF ISSUE : 2007.04.30
계 약 서 번 호 L/C No. (P/O No.) : 47LI-B93402-TMA4
수 요 가 CUSTOMER : DUFERCO SA
주 문 자 SHIPPER : SEAH STEEL CORPORATION

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	1-59101 (SHH3171060)	BBE	14 "	X 0.438 "	X 6.120 M	4	24.480 M	2.308	
10	1-59101 (SHH3171110)	BBE	14 "	X 0.500 "	X 6.120 M	1	6.120 M	0.657	
11	1-59100 (SHH3171130)	BBE	14 "	X 0.500 "	X 6.120 M	20	122.400 M	13.145	
12	1-59100 (SHH3191010)	BBE	14 "	X 0.500 "	X 6.120 M	36	220.320 M	23.660	

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
기준 SPEC									30						
9	1-59101 (SHH3171060)	1310	G	G	G	G			G						
10	1-59101 (SHH3171110)	1500	G	G	G	G			G						
11	1-59100 (SHH3171130)	1500	G	G	G	G			G						
12	1-59100 (SHH3191010)	1500	G	G	G	G			G						

NO.	HEAT NO (BATCH NO.)	ZINC COATING TEST WEIGHT OF ZINC COAT-ING	균일성 C.S *4	알칼리 ALK *5	CHEMICAL COMPOSITION(%) DESIG *6	C	Si	Mn	P	S	CU	NI	CR	MO	V	CEQ *8	DIR *9	TENSILE TEST (Gage Length : 50mm) TENSILE STRENGTH psi	YIELD STRENGTH psi	E.L % *10	IMPACT TEST (℃) ENERGY Joule	SHEAR AREA %	HARDNESS TEST	HEAT TREATMENT SN *11	PROTECTIVE COATING & LINING THICKNESS	P.H
						2			3		2	2	2	2	3											
								*7																		
					MAX	26		120	30	30	40	40	40	15	80											
					MIN													60000	35000							
9	1-59101 (SHH3171060)				H	16	18	44	20	4																
					P	17	17	43	22	3	1	1	1	TR	1		T	68130	48210	46				G		
					P	15	18	45	22	6	1	1	1	1	1		W	69979								
10	1-59101 (SHH3171110)				H	16	18	44	20	4																
					P	15	17	43	19	6	1	1	1	TR	1		T	69120	48780	46				G		
					P	17	17	44	22	6	1	1	1	TR	1		W	67845								
11	1-59100 (SHH3171130)				H	15	18	45	20	5																
					P	14	17	46	19	3	1	1	1	1	1		T	68410	49350	47				G		
					P	16	17	44	19	7	1	1	1	1	1		W	68414								
12	1-59100 (SHH3191010)				H	15	18	45	20	5																
					P	15	19	45	20	5	1	1	1	1	1		T	68130	48070	45				G		
					P	16	17	45	22	6	1	1	1	1	1		W	68130								

NOTE *1 ~ *12 : Refer To The Attached Section Designation

OTHER

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.

J. E. KIM

주식회사세아제강 포항강봉공장 SeAH