MILL'S QUALITY CERTIFICATE

SeAH 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
5	C710685 (SHH3132040)	BBE	12 " X 0.250 " X 6.120 M	126	771.120 M	38.640	
6	C710683 (SHH3132050)	BBE	12 " X 0.250 " X 6.120 M	60	367.200 M	18.400	
7	SB68287 (SHH3142140)	BBE	10 " X 0.365 " X 6.120 M	184	1,126.080 M	68.128	
8	1-59102 (SHH3171050)	BBE	14 " X 0.438 " X 6.120 M	81	495.720 M	46.747	

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
기준 SPEC									30									
5	C710685 (SHH3132040)	820	G	G	G	G			G									
6	C710683 (SHH3132050)	820	G	G	G	G			G									
7	SB68287 (SHH3142140)	1430	G	G	G	G			G									
8	1-59102 (SHH3171050)	1310	G	G	G	G			G									

CHEMICAL COMPOSITION(%) *6 *7 *8

NO.	DESIG	C	Si	Mn	P	S	CU	NI	CR	MO	V	CEQ
		2			3		2	2	2	2	3	
기준 SPEC	MAX	26		120	30	30	40	40	40	15	80	
	MIN											
5	H	15	2	77	19	10						
	P	15	3	76	18	11	2	1	1	1	1	
	P	14	2	78	20	9	2	2	1	1	1	
6	H	16	2	79	14	10						
	P	17	2	79	15	8	1	2	1	1	1	
	P	17	2	81	16	9	1	2	2	1	1	
7	H	18	3	77	15	9						
	P	17	2	77	13	10	1	1	1	TR	TR	
	P	18	3	76	13	7	1	1	1	TR	TR	
8	H	15	18	44	23	5						
	P	14	19	45	23	6	1	1	1	1	1	
	P	14	19	43	22	6	1	1	1	1	TR	

NO.	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
기준 SPEC		60000	35000							
5	T	69260	53480	39				G		
	W	70121								
6	T	76090	57170	39				G		
	W	75384								
7	T	69550	50920	38				G		
	W	70406								
8	T	68410	46510	47				G		
	W	68983								

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