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.: E200704-0086-001171(5001422)
제 품 명 / COMMODITY : E.R.W STEEL PIPE
제 품 규 격 / SPECIFICATION : API 5LB PSL1/ASTM A53B(2005)

발 급 일 자 / DATE OF ISSUE : 2007.03.30
계 약 서 번 호 / L/C No. (P/O No.) : 47LI-B82946-TLJY(1103049204)
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
1	C637462 (SHH1271170)	BBE	14 " X 0.500 " X 6.120 M	31	189.720 M	20.375	* DESCRIPTIION OF GOODS : 1,408.552MT (+/- 10 PCT) CARBON STEEL PIPES WELDED / ASTM A53 B
2	C637461 (SHH1271180)	BBE	14 " X 0.500 " X 6.120 M	33	201.960 M	21.688	* STEEL GRADE : ASTM A53 B
3	6-22856 (SHH1301160)	BBE	12 " X 0.500 " X 6.120 M	1	6.120 M	0.597	
4	4-36943 (SHH1301170)	BBE	12 " X 0.500 " X 6.120 M	36	220.320 M	21.472	

NO.	HEAT NO (BATCH NO.)	HYDROSTATIC TEST 10 Seg. 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						
1	C637462 (SHH1271170)	1500	G	G	G	G			G						
2	C637461 (SHH1271180)	1500	G	G	G	G			G						
3	6-22856 (SHH1301160)	1650	G	G	G	G			G						
4	4-36943 (SHH1301170)	1650	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											
기준 SPEC					MAX	26		120	30	30	40	40	40	15	80											
					MIN													60000	35000							
1	C637462 (SHH1271170)				H	15	3	85	15	10																
					P	15	3	86	16	12	1	1	2	1	1		T	70970	49210	48				G		
					P	15	2	85	17	10	1	2	2	1	1		W	70690								
2	C637461 (SHH1271180)				H	17	1	75	16	9																
					P	16	1	74	17	10	2	1	2	1	1		T	69970	50200	47				G		
					P	18	2	76	18	9	2	2	3	1	1		W	69694								
3	6-22856 (SHH1301160)				H	16	17	45	20	7																
					P	16	17	44	21	7	1	1	1	1	1		T	68840	48780	44				G		
					P	15	18	46	20	5	1	1	1	1	2		W	67845								
4	4-36943 (SHH1301170)				H	16	19	45	19	7																
					P	17	19	45	20	7	1	1	1	1	1		T	69690	48640	47				G		
					P	15	18	46	21	5	2	1	1	1	1		W	68841								

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

OTHER

COPY

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