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.: E200706-0016-001522(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 : 2007.05.31

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	C720288 (SHH5182080)	BBE	10 " X 0.225 " X 6.120 M	56	342.720 M	12.883	
6	C720288 (SHH5211010)	BBE	10 " X 0.225 " X 6.120 M	55	336.600 M	12.653	
7	C710335 (SHH5211020)	BBE	10 " X 0.225 " X 6.120 M	56	342.720 M	12.883	
8	SP83050 (SHH5222030)	BBE	14 " X 0.225 " X 6.120 M	75	459.000 M	22.574	

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	CEQ *8	DIR *9	TENSILE STRENGTH psi	YIELD STRENGTH psi	E.L % *10	IMPACT TEST (℃) ENERGY Joule	SHEAR AREA %	HARDNESS TEST	HEAT TREAT MENT SN *11	PROTECTIVE COATING & LINING THICKNESS	P.H
																				CHEMICAL COMPOSITION(%)																				
																				2			3		2	2	2	2	3											
기준 SPEC									30										MAX	26		120	30	30	40	40	40	15	80											
																			MIN													60000	35000							
5	C720288 (SHH5182080)	880	G	G	G	G			G										H	16	1	73	15	8																
																			P	15	2	72	15	10	1	1	1	1	1		T	74240	53190	40				G		
																			P	15	1	72	15	10	1	1	1	1	2		W	74100								
6	C720288 (SHH5211010)	880	G	G	G	G			G										H	16	1	73	15	8																
																			P	17	TR	73	17	9	1	2	1	1	1		T	72530	55470	41				G		
																			P	17	TR	72	17	7	1	2	2	1	1		W	74240								
7	C710335 (SHH5211020)	880	G	G	G	G			G										H	16	1	81	11	6																
																			P	16	1	81	12	7	1	1	1	1	1		T	73250	54760	42				G		
																			P	16	1	81	9	6	1	1	1	1	2		W	74380								
8	SP83050 (SHH5222030)	880	G	G	G	G			G										H	14	TR	68	11	5																
																			P	13	TR	68	9	5	TR	1	1	TR	1		T	65710	46080	41				G		
																			P	14	TR	68	13	6	1	1	1	TR	TR		W	66420								

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 SeAH 포항창원품질경영팀장)