MILL'S QUALITY CERTIFICATES

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. : E200806-0113-001255(5002660)

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 : 2008.06.16

계 약 서 번 호
L/C No. (P/O No.) : 47LI-C45661-TJFE(0801844)

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	4-47578 (SI13312220)	BBE	24 " X 0.250 "(1/4") X 6.120 M	46	281.520 M	26.818	
10	SQ25482 (SI14162300)	BBE	16 " X 0.375 "(3/8") X 6.120 M	1	6.120 M	0.569	
11	SQ25488 (SI14171060)	BBE	16 " X 0.375 "(3/8") X 6.120 M	5	30.600 M	2.845	
12	SQ35229 (SI14242250)	BBE	20 " X 0.375 "(3/8") X 6.120 M	12	73.440 M	8.576	

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	CHEMICAL COMPOSITION(%) DESIG *6	C	Si	Mn	P	S	CU	NI	CR	MO	V	CEQ *8	TENSILE TEST (Gage Length : 50mm) DIR *9	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									30										MAX	26		120	30	30	40	40	40	15	80												
																			MIN													60000	35000								
9	4-47578 (SI13312220)	440	G	G	G	G			G										H	16	18	45	15	6																	
																			P	15	19	45	15	4	1	1	1	TR	1		T	70120	53620	40				G			
																			P	17	18	44	15	5	1	1	1	TR	1		W	73121									
10	SQ25482 (SI14162300)	980	G	G	G	G			G										H	14	11	86	13	3																	
																			P	13	12	85	13	4	TR	1	1	TR	1		T	74660	63290	41				G			
																			P	14	10	87	14	4	TR	1	1	TR	1		W	77375									
11	SQ25488 (SI14171060)	980	G	G	G	G			G										H	13	13	87	14	3																	
																			P	12	13	87	15	2	1	1	1	TR	1		T	74790	65570	38				G			
																			P	14	12	86	13	2	1	1	1	TR	1		W	76077									
12	SQ35229 (SI14242250)	790	G	G	G	G			G										H	17	2	85	11	5																	
																			P	16	1	84	11	6	1	1	1	TR	1		T	70830	49630	40				G			
																			P	17	3	86	13	7	TR	1	1	TR	1		W	74686									

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

OTHER:
*DESCRIPTION OF GOODS : 364.507 MT (+/- 10 PCT.)PRIME ERW PIPES / GRADE: API 5L-B/ ASTM A53B.GRADE: API 5L-B/ ASTM A53B.
*PHYSICAL PROPERTIES SAME AS TENSILE TEST & IMPACT TEST.

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

(주)세아제강 SeAH 품질경영팀장