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.: E200807-0213-001540(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 : 2008.07.18
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
16	26474 (SHI5062110)	BBE	12 " X 0.250 "(1/4") X 6.120 M				
17	26478 (SHI5062120)	BBE	12 " X 0.250 "(1/4") X 6.120 M	115	703.800 M	35.267	
18	26478 (SHI5071010)	BBE	12 " X 0.250 "(1/4") X 6.120 M	474	2,900.880 M	145.363	

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						
16	26474 (SHI5062110)			G	G	G			G						
17	26478 (SHI5062120)	820	G	G	G	G			G						
18	26478 (SHI5071010)	820	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	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 TREATMENT SN *11	PROTECTIVE COATING & LINING THICKNESS	P.H
						2			3		2	2	2	2	3											
						*7																				
기준 SPEC					MAX	26		120	30	30	40	40	40	15	80											
					MIN													60000	35000							
16	26474 (SHI5062110)				P												T	72250	52910	39						
					P												W	74388								
					P												T	72680	51870	36						
					P												W	74388								
17	26478 (SHI5062120)				H	16	18	61	19	5																
					P	16	17	61	18	7	TR	1	1	TR	1		T	72390	53480	36				G		
					P	16	18	62	18	5	1	1	1	1	1		W	74974								
18	26478 (SHI5071010)				H	16	18	61	19	5																
					P	15	17	61	17	3	1	1	1	1	1		T	72960	51480	36				G		
					P	15	19	62	17	4	1	1	1	TR	1		W	73108								
					P												T	73670	53050	37						
					P												W	74686								

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

OTHER: DESCRIPTION OF GOODS : 1,409.329 MT (+/- 10 PCT.)PRIE ERW PIPES / GRADE: API 5L-B/ ASTM A53B.GRADE:AP 5L-B/ ASTM A53B.
PHYSICAL PROPERTIES SAME AS TENSILE TEST & IMPACTEST.

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 포항공장품질경영팀장인)