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.: E200905-0021-000489(5004055)
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 : 2009.04.30
계 약 서 번 호 / L/C No. (P/O No.) : 47LI-C94065-TLRR(1103070196)
수 요 가 / CUSTOMER : PLESA
주 문 자 / SHIPPER : DUFERCO SA

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	SB26384 (SHJ3262060)	BBE	10 " X 0.500 " X 6.120 M	26	159.120 M	12.976	CONFIRM TO NACE NORM MR0175(LAST EDITION) *ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY *DSAW:CHEMICAL COMPOSITION AND HARDNESS ONLY
6	4-1029 (SHJ4062070)	BBE	10 " X 0.250 " X 6.120 M	116	709.920 M	29.881	
7	4-1030 (SHJ4062080)	BBE	10 " X 0.250 " X 6.120 M	117	716.040 M	30.138	
8	SP37229 (SHJ4101070)	BBE	12 " X 0.375 " X 6.120 M	38	232.560 M	17.128	

NO.	HEAT NO (BATCH NO.)	HYDROSTATIC TEST 5 Sec. psi	RESULT	N·D·T U *2	DIMENSIONAL & VISUAL	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	DIR *9	TENSILE STRENGTH psi	YIELD STRENGTH psi	E.L % *10	IMPACT TEST (℃) ENERGY Joule	SHEAR AREA %	HARDNESS TEST HRC	HEAT TREATMENT SN *11	PROTECTIVE COATING & LINING THICKNESS	P.H
																				CHEMICAL COMPOSITION(%) *7										*8		TENSILE TEST (Gage Length : 50mm)									
																				2			3		2	2	2	2	3												
기준 SPEC									30										MAX	26		120	30	30	40	100	40	15	80									22			
																			MIN													60200	35500								
5	SB26384 (SHJ3262060)	1990	G	G	G	G			G										H	19	1	78	10	7																	
																			P	18	2	78	8	9	1	1	TR	TR	1		T	71930	51770	35			8	G		
																			P	20	1	77	12	8	TR	1	TR	TR	2		W	78610								
6	4-1029 (SHJ4062070)	1990	G	G	G	G			G										H	15	17	62	16	4																	
																			P	14	16	62	18	6	1	1	1	1	1		T	70770	49600	38			7	G		
																			P	14	17	63	16	3	1	1	1	1	1		W	76720								
7	4-1030 (SHJ4062080)	1990	G	G	G	G			G										H	15	18	62	16	4																	
																			P	16	18	62	15	6	1	1	1	TR	TR		T	71060	51050	37			8	G		
																			P	14	19	62	16	2	1	2	1	1	TR		W	78320								
8	SP37229 (SHJ4101070)	1990	G	G	G	G			G										H	19	1	77	10	5																	
																			P	18	1	77	8	6	TR	TR	1	TR	1		T	72510	53800	34			10	G		
																			P	18	2	77	9	6	TR	TR	1	TR	2		W	79190								

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.

N. J. Baek

주식회사세아제강 SeAH 포항공장품질경영팀장