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
9	SQ62955 (SHJ4101080)	BBE	12 "	X 0.375 "	X 6.120 M	54	330.480 M	24.340	CONFIRM TO NACE NORM MR0175(LAST EDITION) *ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY *DSAW:CHEMICAL COMPOSITION AND HARDNESS ONLY
10	SB34332 (SHJ4101090)	BBE	12 "	X 0.375 "	X 6.120 M	42	257.040 M	18.931	
11	SB35127 (SHJ4101150)	BBE	12 "	X 0.406 "	X 6.120 M	8	48.960 M	3.900	
12	4-1030 (SHJ4101160)	BBE	12 "	X 0.406 "	X 6.120 M	70	428.400 M	34.122	

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	DIR *9	TENSILE STRENGTH psi	YIELD STRENGTH psi	E.L % *10	IMPACT TEST (℃) ENERGY Joule	SHEAR AREA %	HARDNESS TEST HRC	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	100	40	15	80								22			
																			MIN													60200	35500							
9	SQ62955	1990	G	G	G	G			G										H	18	2	80	10	4																
	(SHJ4101080)																		P	17	2	81	12	5	TR	1	1	TR	1		T	71930	56850	31			10	G		
																			P	18	2	80	11	6	1	1	1	TR	1		W	80060								
10	SB34332	1990	G	G	G	G			G										H	19	1	78	12	9																
	(SHJ4101090)																		P	18	1	78	13	11	1	1	TR	TR	2		T	71060	51480	34			9	G		
																			P	20	TR	77	10	7	1	1	TR	TR	1		W	77300								
11	SB35127	1990	G	G	G	G			G										H	17	1	74	18	6																
	(SHJ4101150)																		P	16	2	74	19	4	TR	TR	TR	TR	1		T	69470	49890	38			7	G		
																			P	16	TR	75	20	7	TR	TR	TR	TR	2		W	74110								
12	4-1030	1990	G	G	G	G			G										H	15	18	62	16	4																
	(SHJ4101160)																		P	14	17	62	17	6	1	1	1	TR	1		T	70190	53080	39			8	G		
																			P	15	17	62	17	3	1	1	1	1	1		W	79040								

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

(주)세아제강 품질경영팀