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.)	판단 TYPE *1	주문치수 ORDER SIZE	수량 QUANTITY 본수 PCS	총길이 TOTAL LENGTH	중량(M/T) WEIGHT	비고 REMARK
21	4-1030 (SHJ4152080)	BBE	10 " X 0.500 " X 6.120 M	57	348.840 M	28.448	CONFIRM TO NACE NORM MR0175(LAST EDITION)
22	C815946 (SIJ3122110)	BBE	18 " X 0.375 " X 6.120 M	21	128.520 M	13.474	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
23	C825893 (SIJ3122130)	BBE	18 " X 0.375 " X 6.120 M	43	263.160 M	27.590	*DSAW:CHEMICAL COMPOSITION AND HARDNESS ONLY
24	C836638 (SIJ3122140)	BBE	18 " X 0.375 " X 6.120 M	13	79.560 M	8.341	

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	DIR *9	TENSILE TEST (Gage Length : 50mm) 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
																				*7																					
기준 SPEC									30										MAX	26		120	30	30	40	100	40	15	80								22			
																			MIN													60200	35500							
21	4-1030 (SHJ4152080)	1990	G	G	G	G			G										H	15	18	62	16	4																	
																			P	14	18	63	17	5	2	1	1	1	1		T	71210	53220	37			10	G		
																			P	16	18	61	17	2	1	2	2	1	1		W	76430								
22	C815946 (SIJ3122110)	1990	G	G	G	G			G										H	16	1	73	14	9																	
																			P	15	1	73	13	8	1	TR	1	1	1		T	68450	51050	38			7	G		
																			P	16	1	73	12	7	1	TR	1	1	TR		W	74110								
23	C825893 (SIJ3122130)	1990	G	G	G	G			G										H	16	1	80	13	10																	
																			P	15	1	81	15	12	1	1	1	1	1		T	70190	54670	35			11	G		
																			P	16	1	81	13	12	1	1	1	1	1		W	73820								
24	C836638 (SIJ3122140)	1990	G	G	G	G			G										H	18	1	76	14	7																	
																			P	17	1	75	15	5	1	2	1	1	1		T	69610	50180	39			10	G		
																			P	19	TR	76	12	5	1	2	2	1	1		W	76000								

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