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
29	C836264 (SIJ4011120)	BBE	20 "	X 0.375 "	X 6.120 M	12	73.440 M	8.576	CONFIRM TO NACE NORM MR0175(LAST EDITION) *ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY *DSAW:CHEMICAL COMPOSITION AND HARDNESS ONLY
30	C836264 (SIJ4011130)	BBE	20 "	X 0.375 "	X 6.120 M	37	226.440 M	26.444	
31	4-1028 (SIJ4061130)	BBE	16 "	X 0.500 "	X 6.120 M	94	575.280 M	70.932	
32	SP37725 (SIJ4072030)	BBE	18 "	X 0.500 "	X 6.120 M	2	12.240 M	1.704	

NO.	HEAT NO (BATCH NO.)	HYDROSTATIC TEST 5 Sec. psi	RESULT	N·D·T U *2	VISUAL & DIMENSION	FLATTENING	SHOCK	COMPRESSION	REMAGNETISM RESIDUAL GAUSS	BENDING *3	DRIFT	CRUSH	FLARING	FLANGE	REVERSE FLATTENING
기준 SPEC									30						
29	C836264 (SIJ4011120)	1990	G	G	G	G			G						
30	C836264 (SIJ4011130)	1990	G	G	G	G			G						
31	4-1028 (SIJ4061130)	1990	G	G	G	G			G						
32	SP37725 (SIJ4072030)	1990	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
						CHEMICAL COMPOSITION(%) *7										
						2			3		2	2	2	2	3	
기준 SPEC					MAX	26		120	30	30	40	100	40	15	80	
					MIN											
29	C836264 (SIJ4011120)				H	16	1	79	13	9						
					P	15	1	80	13	7	1	2	1	1	1	
					P	15	1	78	11	10	1	2	1	1	TR	
30	C836264 (SIJ4011130)				H	16	1	79	13	9						
					P	15	2	80	11	9	1	1	1	1	1	
					P	17	2	80	12	11	TR	1	TR	1	TR	
31	4-1028 (SIJ4061130)				H	16	17	60	18	4						
					P	15	16	60	19	6	1	1	1	TR	TR	
					P	16	16	60	16	2	1	1	1	TR	TR	
32	SP37725 (SIJ4072030)				H	17	1	78	11	7						
					P	16	TR	77	10	5	TR	TR	1	TR	2	
					P	16	2	78	10	7	TR	TR	1	TR	1	

NO.	HEAT NO (BATCH NO.)	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
기준 SPEC								22			
			60200	35500							
29	C836264 (SIJ4011120)	T	69760	51630	39			10	G		
		W	77300								
30	C836264 (SIJ4011130)	T	70340	51770	38			8	G		
		W	75560								
31	4-1028 (SIJ4061130)	T	70340	50610	35			10	G		
		W	80490								
32	SP37725 (SIJ4072030)	T	70630	51480	37			10	G		
		W	78170								

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 품질경영팀