MILL'S QUALITY CERTIFICATE

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.: E201004-0134-000862(5005298)
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 : 2010.03.31
계 약 서 번 호 L/C No. (P/O No.) : 1103077721
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
25	C020218 (SIK2172120)	BBE	16 " X 0.250 " X 6.120 M	2	12.240 M	0.773	CONFIRM TO NACE NORM MR0175(LAST EDITION)
26	C010184 (SIK2172150)	BBE	16 " X 0.250 " X 6.120 M	2	12.240 M	0.773	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
27	SB65018 (SIK2262010)	BBE	18 " X 0.500 " X 6.120 M	26	159.120 M	22.142	*DSAW:CHEMICAL COMPOSITION AND HARDNESS ONLY
28	SB65132 (SIK2262020)	BBE	18 " X 0.500 " X 6.120 M	22	134.640 M	18.735	

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
기준 SPEC									30									
25	C020218 (SIK2172120)	670	G	G	G	G			G									
26	C010184 (SIK2172150)	670	G	G	G	G			G									
27	SB65018 (SIK2262010)	1190	G	G	G	G			G									
28	SB65132 (SIK2262020)	1190	G	G	G	G			G									

NO.	HEAT NO (BATCH NO.)	DESIG *6	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti		CEQ *8	DIR *9	TENSILE STRENGTH psi	YIELD STRENGTH psi	E.L % *10	IMPACT TEST (℃) ENERGY Joule	SHEAR AREA %	HARDNESS TEST HRC	HEAT TREATMENT SN *11
			2			3		2	2	2	2	3	3	3										
			*7																					
기준 SPEC		MAX	26		120	30	30	40	40	40	15	80											22	
		MIN																60200	35500					
25	C020218 (SIK2172120)	H	14	18	80	16	4																	
		P	15	17	80	15	3	2	2	TR	TR	2	TR	2			T	75710	62650	36			8	G
		P	13	17	81	15	6	2	2	TR	TR	2	TR	2			W	82520						
26	C010184 (SIK2172150)	H	14	16	78	14	4																	
		P	13	16	78	16	2	1	2	2	TR	2	1	TR			T	72510	61780	34			9	G
		P	13	17	77	14	5	1	2	2	TR	2	1	TR			W	81800						
27	SB65018 (SIK2262010)	H	17	1	77	18	9																	
		P	16	TR	77	20	7	1	TR	TR	TR	1	1	2			T	72370	47420	39			7	G
		P	17	1	77	20	10	1	TR	TR	TR	1	1	2			W	78170						
28	SB65132 (SIK2262020)	H	18	2	77	19	8																	
		P	17	1	77	20	10	TR	2	TR	TR	TR	TR	2			T	73380	47570	35			7	G
		P	18	3	77	19	7	TR	2	TR	TR	TR	TR	2			W	78320						

NOTE *1 ~ *11: Refer To Others

OTHERS
*1-BBE:Black Beveled End(30°)
*2-U:Weld Seam Ultrasonic Test
*6-H:Heat(Ladle) Analysis, P:Product Analysis *7-2:X100, 3:X1000
*9-T:Base Metal Transverse, W:Weld Part Transverse *10-E.L:Elongation *11-S.N:Seam Normalizing *G:GOOD *Tr:Trace

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