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
13	SB66169 (SHK3241010)	BBE	14 " X 0.375 " X 6.120 M	2	12.240 M	0.992	CONFIRM TO NACE NORM MR0175(LAST EDITION)
14	3B66169 (SHK3241030)	BBE	14 " X 0.375 " X 6.120 M	3	18.360 M	1.489	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
15	SB66169 (SHK3241040)	BBE	14 " X 0.375 " X 6.120 M	13	79.560 M	6.451	*DSAW:CHEMICAL COMPOSITION AND HARDNESS ONLY
16	SB66923 (SHK3241110)	BBE	14 " X SCH40 X 6.120 M	38	232.560 M	21.930	

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	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											
기준 SPEC									30										MAX	26		120	30	30	40	40	40	15	80												22	
																			MIN																60200	35500					
13	SB66169 (SHK3241010)	1150	G	G	G	G			G										H	20	1	75	13	6																	
																			P	19	1	75	11	6	1	2	1	TR	2	TR	2			T	74400	52500	34			7	G
																			P	21	2	74	14	4	1	2	1	TR	2	TR	2			W	77300						
14	SB66169 (SHK3241030)	1150	G	G	G	G			G										H	20	1	75	13	6																	
																			P	19	TR	76	11	6	2	TR	1	TR	TR	1	1			T	70480	51920	33			7	G
																			P	21	2	76	12	6	2	TR	1	TR	TR	1	1			W	76430						
15	SB66169 (SHK3241040)	1150	G	G	G	G			G										H	20	1	75	13	6																	
																			P	19	TR	76	15	8	1	2	TR	TR	1	1	TR			T	71500	50470	34			8	G
																			P	19	TR	75	14	4	1	2	TR	TR	1	1	TR			W	81800						
16	SB66923 (SHK3241110)	1340	G	G	G	G			G										H	18	1	82	15	7																	
																			P	17	TR	83	13	7	1	1	2	TR	TR	TR	2			T	69760	47570	39			8	G
																			P	17	2	81	13	5	1	1	2	TR	TR	TR	2			W	75560						

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