MILL'S QUALITY CERTIFICATE

SeAH Steel Corp.
(주)세아제강

HEAD OFFICE ; BONGNAE-DONG 1GA, JUNG-GU, SEOUL, KOREA
POHANG PLANT ; 14-1, JANGHEUNG-DONG, NAM-GU, POHANG

증명서번호 / CERTIFICATE NO.: E201101-0143-000143(5006262)
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 : 2011.01.24
계 약 서 번 호 / L/C No. (P/O No.) : P01103083800
수 요 가 / CUSTOMER : PLESA
주 문 자 / SHIPPER : DUFERCO SA

NO.	HEAT NO. (BATCH NO.)	관단 TYPE *1	주문치수 ORDER SIZE	수량 QUANTITY 본수 PCS	총길이 TOTAL LENGTH	중량(M/T) WEIGHT	비고 REMARK
1	SB89491 (SHKZ071060)	BBE	14 " X 0.225 " X 6.120 M	344	2,105.280 M	103.538	CONFIRM TO NACE NORM MR0175(LAST EDITION)
2	SP88675 (SHKZ151080)	BBE	10 " X 0.225 " X 6.120 M	84	514.080 M	19.324	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
3	SP88675 (SHKZ152010)	BBE	10 " X 0.225 " X 6.120 M	171	1,046.520 M	39.339	*DSAW:CHEMICAL COMPOSITION AND HARDNESS ONLY
4	SP88672 (SHKZ152020)	BBE	10 " X 0.225 " X 6.120 M	262	1,603.440 M	60.273	

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	DIR *9	TENSILE TEST (Gage Length : 50mm) TENSILE STRENGTH psi	YIELD STRENGTH psi	E.L % *10	IMPACT TEST (℃) ENE-RGY Joule	SHEAR AREA %	HARD-NESS TEST	HEAT TREAT MENT SN *11
																				CHEMICAL COMPOSITION(%)																						
기준 SPEC									30										MAX	26		120	30	30	40	40	40	15	80							60200	35500					
																			MIN																							
1	SB89491	690	G	G	G	G			G										H	15	1	66	17	6																		
	(SHKZ071060)																		P	14	2	66	19	8	TR	2	TR	TR	TR	1	TR			T	63960	51190	36				G
																			P	15	2	67	17	7	TR	2	TR	TR	TR	1	TR			W	71640						
2	SP88675	890	G	G	G	G			G										H	14	1	66	11	3																		
	(SHKZ151080)																		P	13	TR	65	11	3	TR	1	TR	TR	2	1	TR			T	69320	49310	33				G
																			P	15	TR	67	13	1	TR	1	TR	TR	2	1	TR			W	75130						
3	SP88675	890	G	G	G	G			G										H	14	1	66	11	3																		
	(SHKZ152010)																		P	13	TR	66	10	3	2	1	2	TR	TR	TR	2			T	69180	51480	34				G
																			P	13	1	67	9	3	2	1	2	TR	TR	TR	2			W	73530						
4	SP88672	890	G	G	G	G			G										H	15	1	67	12	5																		
	(SHKZ152020)																		P	14	TR	66	11	3	TR	1	2	TR	1	TR	2			T	69900	52640	33				G
																			P	14	1	67	11	6	TR	1	2	TR	1	TR	2			W	76290						

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

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.: E201101-0143-000143(5006262)

제 품 명
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제 품 규 격
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발 급 일 자
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CUSTOMER : PLESA

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SHIPPER : DUFERCO SA

NO.	HEAT NO. (BATCH NO.)	관단 TYPE *1	주문치수 ORDER SIZE	수량 QUANTITY 본수 PCS	총길이 TOTAL LENGTH	중량(M/T) WEIGHT	비고 REMARK
5	SB92411 (SHKZ291070)	BBE	14 " X 0.225 " X 6.120 M	72	440.640 M	21.671	CONFIRM TO NACE NORM MR0175(LAST EDITION) *ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY *DSAW:CHEMICAL COMPOSITION AND HARDNESS ONLY

NO.	HEAT NO (BATCH NO.)	HYDROSTATIC TEST 5 Sec. psi	HYDROSTATIC TEST 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	HEAT TREATMENT SN *11
																				*7																					
기준 SPEC									30										MAX	26		120	30	30	40	40	40	15	80												
																			MIN																60200	35500					
5	SB92411 (SHKZ291070)	690	G	G	G	G			G										H	16	2	71	15	9																	
																			P	15	2	72	14	9	2	2	2	TR	TR	TR	1			T	69760	48440	32				G
																			P	17	1	70	15	8	2	2	2	TR	TR	TR	1			W	74250						

NOTE *1 ~ *11: Refer To Others

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