INSPECTION 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. : E201106-0151-001434(5006702)
제 품 명 / COMMODITY : E.R.W STEEL PIPE
제 품 규 격 / SPECIFICATION : API 5L B(PSL1)

발 급 일 자 / DATE OF ISSUE : 2011.05.31
계 약 서 번 호 / L/C No. (P/O No.) : P01103087278
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
1	SB02030 (SHL4221060)	BBE	12 " X 0.225 " X 6.120 M	340	2,080.800 M	93.074	CONFIRM TO NACE NORM MR0175 (LAST EDITION) *ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY *DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
2	SB03176 (SHL4221070)	BBE	12 " X 0.225 " X 6.120 M	75	459.000 M	20.531	
3	SB02029 (SHL4221080)	BBE	12 " X 0.225 " X 6.120 M	66	403.920 M	18.067	
4	SB97788 (SHL4221090)	BBE	12 " X 0.225 " X 6.120 M	77	471.240 M	21.079	

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	HEAT TREATMENT SN *11
																				CHEMICAL COMPOSITION(%)																					
																					2			3		2	2	2	2	3	3	3									
																				*7														*8	*9							
기준 SPEC									30										MAX	26		120	30	30	50	50	50	15														
																			MIN																	60200	35500					
1	SB02030 (SHL4221060)	750	G	G	G	G			G										H	14	1	63	10	6																		
																			P	13	TR	62	9	8	TR	2	TR	TR	1	2	2			T	64390	42780	37				G
																			P	14	2	64	8	6	TR	2	TR	TR	1	2	2			W	70190						
2	SB03176 (SHL4221070)	750	G	G	G	G			G										H	15	2	65	15	4																		
																			P	14	2	66	17	5	1	TR	1	TR	2	TR	TR			T	66130	49310	33				G
																			P	14	2	64	15	2	1	TR	1	TR	2	TR	TR			W	70920						
3	SB02029 (SHL4221080)	750	G	G	G	G			G										H	14	2	66	17	5																		
																			P	13	2	65	18	3	2	TR	TR	TR	2	TR	1			T	65990	50470	32				G
																			P	14	2	67	16	6	2	TR	TR	TR	2	TR	1			W	68600						
4	SB97788 (SHL4221090)	750	G	G	G	G			G										H	16	2	66	13	6																		
																			P	15	2	65	13	5	2	TR	TR	TR	TR	2	1			T	72370	51340	30				G
																			P	16	3	67	14	5	2	TR	TR	TR	TR	2	1			W	74980						

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

증명서번호
CERTIFICATE NO.: E201106-0151-001434(5006702)

제 품 명
COMMODITY : E.R.W STEEL PIPE

제 품 규 격
SPECIFICATION : API 5L B(PSL1)

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(주)세 아 제 강

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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
5	SB01439 (SHL4221100)	BBE	12 " X 0.225 " X 6.120 M	68	416.160 M	18.615	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
6	SF00814 (SHL4221110)	BBE	12 " X 0.225 " X 6.120 M	77	471.240 M	21.079	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
7	SB01752 (SIL4281070)	BBE	14 " X 0.225 " X 6.120 M	63	385.560 M	18.962	*DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
8	SB92411 (SIL4281080)	BBE	14 " X 0.225 " X 6.120 M	64	391.680 M	19.263	

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	ENERGY Joule	SHEAR AREA %	HARDNESS TEST	HEAT TREATMENT SN *11
																				CHEMICAL COMPOSITION(%)																					
																				2			3		2	2	2	2	3	3	3										
기준 SPEC									30										MAX	26		120	30	30	50	50	50	15													
																			MIN																60200	35500					
5	SB01439 (SHL4221100)	750	G	G	G	G			G										H	14	1	63	16	4																	
																			P	13	1	63	16	2	TR	TR	TR	TR	2	1	2			T	70190	46260	32				G
																			P	13	2	62	18	5	TR	TR	TR	TR	2	1	2			W	76430						
6	SF00814 (SHL4221110)	750	G	G	G	G			G										H	14	2	70	13	8																	
																			P	13	2	69	14	8	2	1	1	TR	1	2	TR			T	67000	48730	32				G
																			P	15	2	69	13	10	2	1	1	TR	1	2	TR			W	72370						
7	SB01752 (SIL4281070)	690	G	G	G	G			G										H	14	1	67	14	5																	
																			P	13	2	68	12	4	2	TR	TR	TR	TR	1	1			T	66130	51630	33				G
																			P	15	2	66	13	6	2	TR	TR	TR	TR	1	1			W	74250						
8	SB92411 (SIL4281080)	690	G	G	G	G			G										H	16	2	71	15	9																	
																			P	15	3	72	16	11	TR	TR	1	TR	2	1	TR			T	67580	48290	30				G
																			P	16	2	70	15	11	TR	TR	1	TR	2	1	TR			W	68890						

NOTE *1 ~ *11: Refer To Others

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