INSPECTION 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.:	E201103-0030-000484(5006417)
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 :	2011.02.28
계 약 서 번 호 L/C No. (P/O No.) :	P01103085067
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	SQ20519 (SIKZ011060)	BBE	24 " X 0.375 " X 6.120 M	17	104.040 M	14.636	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
2	SQ24563 (SIL1212120)	BBE	24 " X 0.500 " X 6.120 M	28	171.360 M	32.055	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
3	SQ24556 (SIL1222180)	BBE	24 " X 0.375 " X 6.120 M	8	48.960 M	6.888	*DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
4	SQ24556 (SIL1241010)	BBE	24 " X 0.375 " X 6.120 M	11	67.320 M	9.471	

NO.	HEAT NO (BATCH NO.)	HYDROSTATIC TEST 10 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 (℃) ENE-RGY Joule	SHEAR AREA %	HARD-NESS TEST HRC	HEAT TREAT MENT SN *11
																				CHEMICAL COMPOSITION(%)																					
																				2			3		2	2	2	2	3	3	3		C2								
기준 SPEC									30										MAX	26		120	30	30	40	40	40	15	80											22	
																			MIN																60200	35500					
1	SQ20519	670	G	G	G	G			G										H	17	1	77	10	4									30							
	(SIKZ011060)																		P	16	1	78	12	3	TR	2	2	TR	1	TR	TR		30	T	68600	51480	39			5	G
																			P	18	1	76	12	3	TR	2	2	TR	1	TR	TR		31	W	73820						
2	SQ24563	890	G	G	G	G			G										H	17	1	80	9	4									30							
	(SIL1212120)																		P	16	1	80	11	4	TR	TR	2	TR	1	2	2		30	T	65410	44520	44			5	G
																			P	18	TR	81	7	3	TR	TR	2	TR	1	2	2		32	W	70050						
3	SQ24556	670	G	G	G	G			G										H	17	1	80	8	4									30							
	(SIL1222180)																		P	16	1	81	7	4	1	2	TR	TR	TR	2	TR		30	T	68310	47860	39			6	G
																			P	18	TR	80	10	2	1	2	TR	TR	TR	2	TR		32	W	76140						
4	SQ24556	670	G	G	G	G			G										H	17	1	80	8	4									30							
	(SIL1241010)																		P	16	1	80	8	6	TR	TR	TR	TR	1	TR	2		29	T	69610	47130	39			6	G
																			P	16	2	81	7	3	TR	TR	TR	TR	1	TR	2		30	W	74400						

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 *8-C2:C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
*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

INSPECTION 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.: E201103-0030-000484(5006417)
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 : 2011.02.28
계 약 서 번 호 / L/C No. (P/O No.) : P01103085067
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
5	M08166 (SIL2012090)	BBE	20 " X 0.500 " X 6.120 M	19	116.280 M	18.037	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
6	M08166 (SIL2061010)	BBE	20 " X 0.500 " X 6.120 M	23	140.760 M	21.835	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
7	SB95838 (SIL2061020)	BBE	20 " X 0.500 " X 6.120 M	24	146.880 M	22.784	*DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
8	SQ23029 (SIL2091020)	BBE	20 " X 0.375 " X 6.120 M	55	336.600 M	39.309	

NO.	HEAT NO (BATCH NO.)	HYDROSTATIC TEST 10 Sec. psi	RESULT	N·D·T U *2	VISUAL & DIMENSION	FLATTENING	SHOCK	COMPRESSION	RESIDUAL MAGNETISM GAUSS	BENDING *3	DRIFT	CRUSH	FLARING	FLANGE	REVERSE FLATTENING
기준 SPEC									30						
5	M08166 (SIL2012090)	1070	G	G	G	G			G						
6	M08166 (SIL2061010)	1070	G	G	G	G			G						
7	SB95838 (SIL2061020)	1070	G	G	G	G			G						
8	SQ23029 (SIL2091020)	800	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 2	Si 2	Mn 2	P 3	S 3	Cu 2	Ni 2	Cr 2	Mo 2	V 3	Nb 3	Ti 3		CEQ C2 *8	DIR *9	TENSILE STRENGTH psi	YIELD STRENGTH psi	E.L % *10	IMPACT TEST (℃) ENE-RGY Joule	SHEAR AREA %	HARD-NESS TEST HRC	HEAT TREAT MENT SN *11
기준 SPEC					MAX	26		120	30	30	40	40	40	15	80											22	
					MIN																60200	35500					
5	M08166 (SIL2012090)				H	18	2	81	20	2									32								
					P	17	3	81	19	1	1	1	1	TR	1	TR	1		31	T	70340	52930	37			6	G
					P	18	2	81	21	3	1	1	1	TR	1	TR	1		32	W	75560						
6	M08166 (SIL2061010)				H	18	2	81	20	2									32								
					P	17	1	80	19	3	2	1	2	TR	1	TR	1		31	T	71640	51480	35			7	G
					P	17	3	80	19	3	2	1	2	TR	1	TR	1		31	W	77010						
7	SB95838 (SIL2061020)				H	17	1	77	12	5									30								
					P	16	TR	76	11	3	1	TR	TR	TR	1	2	2		29	T	69180	45970	38			6	G
					P	16	TR	76	12	7	1	TR	TR	TR	1	2	2		29	W	70340						
8	SQ23029 (SIL2091020)				H	17	1	76	10	4									30								
					P	16	TR	75	9	2	TR	1	1	TR	TR	TR	1		29	T	68160	49310	38			6	G
					P	16	1	77	9	3	TR	1	1	TR	TR	TR	1		29	W	74110						

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 *8-C2:C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
*9-T:Base Metal Transverse, W:Weld Part Transverse *10-E.L:Elongation *11-S.N:Seam Normalizing *G:GOOD *Tr:Trace

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Manager of Q.M Dept.
N. J. Baek

증명서번호
CERTIFICATE NO.: E201103-0030-000484(5006417)

제 품 명
COMMODITY : E.R.W STEEL PIPE

제 품 규 격
SPECIFICATION : API 5LB PSL1/ASTM A53B(2007)

INSPECTION 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

발 급 일 자
DATE OF ISSUE : 2011.02.28

계 약 서 번 호
L/C No. (P/O No.) : P01103085067

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
9	SP81765 (SIL2091040)	BBE	20 " X 0.375 " X 6.120 M	38	232.560 M	27.158	CONFIRM TO NACE NORM MR0175 (LAST EDITION) *ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY *DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
10	SB87201 (SIL2091050)	BBE	20 " X 0.375 " X 6.120 M	25	153.000 M	17.867	
11	SQ23022 (SIL2091060)	BBE	20 " X 0.375 " X 6.120 M	33	201.960 M	23.585	
12	SB91500 (SIL2091070)	BBE	20 " X 0.375 " X 6.120 M	23	140.760 M	16.438	

NO.	HEAT NO (BATCH NO.)	HYDROSTATIC TEST 10 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
																				CHEMICAL COMPOSITION(%)														TENSILE TEST (Gage Length : 50mm)						
																				2			3		2	2	2	2	3	3	3		C2								
기준 SPEC									30										MAX	26		120	30	30	40	40	40	15	80												22	
																			MIN																60200	35500					
9	SP81765 (SIL2091040)	800	G	G	G	G			G										H	16	2	87	9	4									31								
																			P	15	2	86	9	3	1	TR	2	TR	TR	1	TR		30	T	65550	44520	42			6	G
																			P	17	3	88	8	6	1	TR	2	TR	TR	1	TR		32	W	72220						
10	SB87201 (SIL2091050)	800	G	G	G	G			G										H	17	3	74	20	5									29								
																			P	16	3	75	19	5	2	2	1	TR	1	2	2		29	T	66280	43650	42			6	G
																			P	17	4	75	18	3	2	2	1	TR	1	2	2		30	W	78320						
11	SQ23022 (SIL2091060)	800	G	G	G	G			G										H	17	2	76	11	4									30								
																			P	16	2	75	12	3	2	2	TR	TR	2	1	1		29	T	69760	48000	40			5	G
																			P	18	3	77	9	2	2	2	TR	TR	2	1	1		31	W	75420						
12	SB91500 (SIL2091070)	800	G	G	G	G			G										H	18	1	76	15	8									31								
																			P	17	2	77	14	8	TR	TR	TR	TR	2	1	2		30	T	68890	49740	40			5	G
																			P	19	2	75	16	8	TR	TR	TR	TR	2	1	2		32	W	76430						

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 *8-C2:C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
*9-T:Base Metal Transverse, W:Weld Part Transverse *10-E.L:Elongation *11-S.N:Seam Normalizing *G:GOOD *Tr:Trace

Surveyor :

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CERTIFICATE NO.: E201103-0030-000484(5006417)

제 품 명
COMMODITY : E.R.W STEEL PIPE

제 품 규 격
SPECIFICATION : API 5LB PSL1/ASTM A53B(2007)

INSPECTION CERTIFICATE

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발 급 일 자
DATE OF ISSUE : 2011.02.28

계 약 서 번 호
L/C No. (P/O No.) : P01103085067

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	SB95460 (SIL2092160)	BBE	20 " X 0.250 " X 6.120 M	36	220.320 M	17.441	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
14	SB95460 (SIL2101010)	BBE	20 " X 0.250 " X 6.120 M	164	1,003.680 M	79.451	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY *DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY

NO.	HEAT NO (BATCH NO.)	HYDROSTATIC TEST 10 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									
13	SB95460 (SIL2092160)	540	G	G	G	G			G									
14	SB95460 (SIL2101010)	540	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	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		C2								
			*7													*8								
기준 SPEC		MAX	26		120	30	30	40	40	40	15	80											22	
		MIN																60200	35500					
13	SB95460 (SIL2092160)	H	15	2	64	13	7									26								
		P	14	1	65	15	7	1	TR	TR	TR	1	TR	2		25	T	67580	46840	38			5	G
		P	14	3	63	14	5	1	TR	TR	TR	1	TR	2		25	W	73670						
14	SB95460 (SIL2101010)	H	15	2	64	13	7									26								
		P	14	1	65	11	6	2	2	TR	TR	TR	1	TR		25	T	68310	48150	38			6	G
		P	14	1	64	13	7	2	2	TR	TR	TR	1	TR		25	W	71060						

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 *8-C2:C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15
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