증명서번호
CERTIFICATE NO.: E201106-0150-001433(5006702)

제 품 명
COMMODITY : E.R.W STEEL PIPE

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

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 : 2011.05.31

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	SB01748 (SHL4222030)	BBE	12 "	X 0.250 "	X 6.120 M	241	1,474.920 M	73.908	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
2	SF00814 (SHL4222040)	BBE	12 "	X 0.250 "	X 6.120 M	70	428.400 M	21.467	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
3	SB00351 (SHL4222050)	BBE	12 "	X 0.250 "	X 6.120 M	62	379.440 M	19.014	*DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
4	KC5174 (SHL4222060)	BBE	12 "	X 0.250 "	X 6.120 M	62	379.440 M	19.014	

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
기준 SPEC									30						
1	SB01748 (SHL4222030)	840	G	G	G	G			G						
2	SF00814 (SHL4222040)	840	G	G	G	G			G						
3	SB00351 (SHL4222050)	840	G	G	G	G			G						
4	KC5174 (SHL4222060)	840	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	CHEMICAL COMPOSITION(%) DESIG *6	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti		CEQ *8
						2			3		2	2	2	2	3	3	3		
						*7													
기준 SPEC					MAX	26		120	30	30	50	50	50	15					
					MIN														
1	SB01748 (SHL4222030)				H	15	2	66	14	4									
					P	14	3	66	13	2	1	2	1	TR	TR	2	1		
					P	16	3	66	16	3	1	2	1	TR	TR	2	1		
2	SF00814 (SHL4222040)				H	14	2	70	13	8									
					P	13	3	69	13	9	TR	1	2	TR	TR	TR	TR		
					P	14	1	69	12	7	TR	1	2	TR	TR	TR	TR		
3	SB00351 (SHL4222050)				H	14	2	79	18	5									
					P	13	1	80	19	6	2	1	1	TR	1	1	2		
					P	15	3	80	16	6	2	1	1	TR	1	1	2		
4	KC5174 (SHL4222060)				H	15	1	78	18	5									
					P	14	TR	79	20	4	1	2	TR	TR	TR	1	1		
					P	14	1	78	17	4	1	2	TR	TR	TR	1	1		

NO.	HEAT NO (BATCH NO.)	DIR *9	TENSILE TEST (Gage Length : 50mm) TENSILE STRENGTH psi	YIELD STRENGTH psi	E.L % *10	IMPACT TEST (℃) ENERGY Joule	SHEAR AREA %	HARDNESS TEST	HEAT TREATMENT SN *11
기준 SPEC			60200	35500					
1	SB01748 (SHL4222030)	T	70340	49160	32				G
		W	73670						
2	SF00814 (SHL4222040)	T	69470	46990	33				G
		W	72370						
3	SB00351 (SHL4222050)	T	68020	54530	28				G
		W	70050						
4	KC5174 (SHL4222060)	T	74980	60040	29				G
		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
*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.: E201106-0150-001433(5006702)

제 품 명
COMMODITY : E.R.W STEEL PIPE

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

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 : 2011.05.31

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
5	1-5880 (SHL5131140)	BBE	10 " X SCH 40 X 6.120 M	52	318.240 M	19.254	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
6	1-5888 (SHL5131150)	BBE	10 " X SCH 40 X 6.120 M	40	244.800 M	14.810	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
7	KC6194 (SHL5131160)	BBE	10 " X SCH 40 X 6,120 M	409	2,503,080 M	151.436	*DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
8	KC6194 (SHL5132010)	BBE	10 " X SCH 40 X 6.120 M	90	550,800 M	33.323	

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	규일정 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	ENE-RGY Joule	SHEAR AREA %	HARD-NESS TEST	HEAT TREAT MENT SN *11
																				CHEMICAL COMPOSITION(%)																					
																					2			3		2	2	2	2	3	3	3									
																																		*7							
기준 SPEC									30										MAX	26		120	30	30	50	50	50	15								60200	35500					
																			MIN																						
5	1-5880 (SHL5131140)	1450	G	G	G	G			G										H	16	17	46	14	5																	
																			P	15	17	45	15	4	1	2	1	TR	TR	TR	1			T	69470	48580	38				G
																			P	17	18	47	16	5	1	2	1	TR	TR	TR	1			W	73530						
6	1-5888 (SHL5131150)	1450	G	G	G	G			G										H	17	18	46	14	5																	
																			P	16	18	47	14	5	2	TR	TR	TR	2	TR	TR			T	70770	52930	38				G
																			P	17	17	47	12	3	2	TR	TR	TR	2	TR	TR			W	73240						
7	KC6194 (SHL5131160)	1450	G	G	G	G			G										H	15	2	80	19	5																	
																			P	16	1	80	19	4	1	1	2	TR	2	12	1			T	72660	57580	34				G
																			P	14	1	80	20	5	1	1	2	TR	2	12	1			W	82670						
8	KC6194 (SHL5132010)	1450	G	G	G	G			G										H	15	2	80	19	5																	
																			P	16	1	80	19	4	1	1	2	TR	2	12	1			T	72370	58740	33				G
																			P	14	1	80	20	5	1	1	2	TR	2	12	1			W	81940						

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.: E201106-0150-001433(5006702)

제 품 명
COMMODITY : E.R.W STEEL PIPE

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

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 : 2011.05.31

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
9	KC6193 (SHL5132020)	BBE	10 " X SCH 40 X 6,120 M	55	336,600 M	20.364	CONFIRM TO NACE NORM MR0175 (LAST EDITION) *ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY *DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
10	1-5899 (SHL5182090)	BBE	12 " X 0.250 " X 6,120 M	60	367,200 M	18.400	
11	M20652 (SHL5272050)	BBE	10 " X 0.250 " X 6,120 M	58	354,960 M	14.940	
12	1-5880 (SHL5272060)	BBE	10 " X 0.250 " X 6,120 M	130	795,600 M	33.487	

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(%) *7															TENSILE TEST (Gage Length : 50mm)						
기준 SPEC									30										MAX	26		120	30	30	50	50	50	15														
																			MIN																	60200	35500					
9	KC6193	1450	G	G	G	G			G										H	15	1	78	16	5																		
	(SHL5132020)																		P	16	1	81	17	5	2	1	2	TR	3	11	1			T	72510	57870	34				G
																			P	16	1	81	17	5	2	1	2	TR	3	11	1			W	80200						
10	1-5899	840	G	G	G	G			G										H	16	18	47	14	4																		
	(SHL5182090)																		P	15	19	48	12	4	2	TR	TR	TR	1	2	1			T	72660	58300	34				G
																			P	15	19	46	12	4	2	TR	TR	TR	1	2	1			W	74690						
11	M20652	1000	G	G	G	G			G										H	6	1	75	10	7																		
	(SHL5272050)																		P	5	1	76	9	8	2	2	2	TR	1	TR	1			T	65700	54380	33				G
																			P	8	2	76	11	5	2	2	2	TR	1	TR	1			W	70630						
12	1-5880	1000	G	G	G	G			G										H	16	17	46	14	5																		
	(SHL5272060)																		P	15	17	47	14	7	TR	2	TR	TR	2	TR	1			T	72660	51920	37				G
																			P	15	18	46	14	6	TR	2	TR	TR	2	TR	1			W	73090						

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.: E201106-0150-001433(5006702)

제 품 명
COMMODITY : E.R.W STEEL PIPE

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

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 : 2011.05.31
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
13	1-5886 (SHL5272070)	BBE	10 " X 0.250 " X 6,120 M	137	838.440 M	35.290	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
14	1-6401 (SHL5272080)	BBE	10 " X 0.250 " X 6,120 M	43	263.160 M	11.076	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
15	SB00655 (SIL4291040)	BBE	14 " X SCH 40 X 6,120 M	40	244.800 M	23.085	*DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
16	SB02185 (SIL4291050)	BBE	14 " X SCH 40 X 6,120 M	15	91.800 M	8.657	

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 (℃) ENE-RGY Joule	SHEAR AREA %	HARD-NESS TEST	HEAT TREAT MENT SN *11
																				CHEMICAL COMPOSITION(%) *7																					
기준 SPEC									30										MAX	26		120	30	30	50	50	50	15													
																			MIN																	60200	35500					
13	1-5886 (SHL5272070)	1000	G	G	G	G			G										H	16	18	47	12	6																		
																			P	15	17	48	10	5	2	1	1	TR	1	TR	TR			T	74110	56850	36				G
																			P	16	19	48	11	7	2	1	1	TR	1	TR	TR			W	78170						
14	1-6401 (SHL5272080)	1000	G	G	G	G			G										H	17	17	45	21	4																		
																			P	16	17	46	22	5	2	1	1	TR	2	1	1			T	72370	53510	34				G
																			P	18	16	44	19	2	2	1	1	TR	2	1	1			W	73240						
15	SB00655 (SIL4291040)	1340	G	G	G	G			G										H	18	1	75	12	5																		
																			P	20	1	77	11	4	1	1	1	TR	1	1	TR			T	71640	56710	37				G
																			P	20	1	77	12	5	1	1	1	TR	1	TR	TR			W	77740						
16	SB02185 (SIL4291050)	1340	G	G	G	G			G										H	18	1	75	12	7																		
																			P	17	1	76	13	7	TR	2	TR	TR	TR	2	1			T	72950	50900	34				G
																			P	17	2	76	11	5	TR	2	TR	TR	TR	2	1			W	73960						

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

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.: E201106-0150-001433(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
17	SB01779 (SIL4302060)	BBE	12 "	X 0.500 "	X 6.120 M	28	171.360 M	16.701	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
18	SQ37153 (SIL4302070)	BBE	12 "	X 0.500 "	X 6.120 M	37	226.440 M	22.069	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
19	1-2350 (SIL4302080)	BBE	12 "	X SCH 40	X 6.120 M	35	214.200 M	17.061	*DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
20	SB01779 (SIL5021010)	BBE	12 "	X SCH 40	X 6.120 M	70	428.400 M	34.122	

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																				
기준 SPEC									30										MAX	26		120	30	30	50	50	50	15								60200	35500					
																			MIN																						
17	SB01779 (SIL4302060)	1680	G	G	G	G			G										H	20	1	82	15	6																	
																			P	19	2	81	17	7	TR	TR	1	TR	2	TR	2			T	75420	54380	35				G
																			P	20	TR	81	14	7	TR	TR	1	TR	2	TR	2			W	77010						
18	SQ37153 (SIL4302070)	1680	G	G	G	G			G										H	18	2	82	9	5																	
																			P	17	1	81	9	6	TR	1	TR	TR	1	1	TR			T	76580	52060	38				G
																			P	19	4	83	11	7	TR	1	TR	TR	1	1	TR			W	78460						
19	1-2350 (SIL4302080)	1360	G	G	G	G			G										H	17	17	46	17	7																	
																			P	17	18	46	19	7	1	1	1	TR	1	TR	1			T	67730	53950	38				G
																			P	16	18	46	20	7	1	1	1	1	1	1	1			W	74690						
20	SB01779 (SIL5021010)	1360	G	G	G	G			G										H	20	1	82	15	6																	
																			P	21	1	84	16	6	2	1	2	TR	2	TR	TR			T	72660	54820	36				G
																			P	21	1	84	16	6	2	1	2	TR	2	1	TR			W	81800						

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

주식회사세아제강 포항공장품질경영팀장 SeAH

증명서번호
CERTIFICATE NO.: E201106-0150-001433(5006702)

제 품 명
COMMODITY : E.R.W STEEL PIPE

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

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 : 2011.05.31

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
21	SB98980 (SIL5021020)	BBE	12 " X SCH 40 X 6.120 M	19	116.280 M	9.262	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
22	1-5882 (SIL5111050)	BBE	16 " X 0.250 " X 6.120 M	5	30.600 M	1.931	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
23	1-5886 (SIL5111070)	BBE	16 " X 0.250 " X 6.120 M	59	361.080 M	22.795	*DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
24	SP01350 (SIL5111090)	BBE	16 " X 0.250 " X 6.120 M	16	97.920 M	6.182	

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																		
기준 SPEC									30										MAX	26		120	30	30	50	50	50	15													
																			MIN																60200	35500					
21	SB98980 (SIL5021020)	1360	G	G	G	G			G										H	20	1	87	13	8																	
																			P	20	1	87	13	7	2	2	3	TR	2	1	TR			T	71060	55690	35				G
																			P	20	1	88	13	7	2	2	3	TR	2	TR	TR			W	81650						
22	1-5882 (SIL5111050)	670	G	G	G	G			G										H	15	18	46	16	5																	
																			P	14	19	46	14	7	2	TR	TR	TR	1	1	2			T	70050	49310	39				G
																			P	15	19	45	17	4	2	TR	TR	TR	1	1	2			W	73820						
23	1-5886 (SIL5111070)	670	G	G	G	G			G										H	16	18	47	12	6																	
																			P	15	19	47	10	8	2	1	1	TR	TR	1	TR			T	72510	56420	36				G
																			P	16	19	46	12	4	2	1	1	TR	TR	1	TR			W	73530						
24	SP01350 (SIL5111090)	670	G	G	G	G			G										H	14	1	67	11	7																	
																			P	13	2	67	13	7	2	2	1	TR	1	1	1			T	66420	45250	36				G
																			P	15	TR	67	9	7	2	2	1	TR	1	1	1			W	69900						

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.: E201106-0150-001433(5006702)

제 품 명
COMMODITY : E.R.W STEEL PIPE

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

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 : 2011.05.31

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
25	SB02179 (SIL5112010)	BBE	16 "	X 0.312 "	X 6.120 M	49	299.880 M	23.280	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
26	1-5884 (SIL5112020)	BBE	16 "	X 0.312 "	X 6.120 M	15	91.800 M	7.126	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
27	4-70339 (SIL5191040)	BBE	18 "	X 0.250 "	X 6.120 M	16	97.920 M	6.964	*DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
28	SP01347 (SIL5191050)	BBE	18 "	X 0.250 "	X 6.120 M	60	367.200 M	26.115	

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 (℃) ENE-RGY Joule	SHEAR AREA %	HARD-NESS TEST	HEAT TREAT MENT SN *11
																					CHEMICAL COMPOSITION(%)															TENSILE TEST (Gage Length : 50mm)						
																						2			3		2	2	2	2	3	3	3										
기준 SPEC									30											MAX	26		120	30	30	50	50	50	15								60200	35500					
																				MIN																							
25	SB02179 (SIL5112010)	840	G	G	G	G			G											H	18	3	72	14	5																		
																				P	19	3	73	14	6	TR	TR	1	TR	2	1	1			T	65840	48730	35				G
																				P	19	3	72	13	5	TR	TR	1	TR	2	1	1			W	77740						
26	1-5884 (SIL5112020)	840	G	G	G	G			G											H	16	17	46	18	4																		
																				P	15	16	46	19	2	1	TR	TR	TR	2	TR	2			T	71060	49740	37				G
																				P	16	16	46	18	3	1	TR	TR	TR	2	TR	2			W	76000						
27	4-70339 (SIL5191040)	600	G	G	G	G			G											H	16	17	45	16	3																		
																				P	15	17	46	15	1	1	TR	1	TR	2	2	TR			T	72800	52790	36				G
																				P	16	16	46	15	1	1	TR	1	TR	2	2	TR			W	74540						
28	SP01347 (SIL5191050)	600	G	G	G	G			G											H	14	1	68	12	6																		
																				P	13	1	67	10	4	2	1	1	TR	TR	TR	1			T	67000	45390	37				G
																				P	14	1	67	11	8	2	1	1	TR	TR	TR	1			W	71350						

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.: E201106-0150-001433(5006702)

제 품 명
COMMODITY : E.R.W STEEL PIPE

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

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 : 2011.05.31

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
29	M15384 (SIL5191070)	BBE	18 " X 0.250 " X 6.120 M	28	171.360 M	12.187	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	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(%) *7																					
기준 SPEC									30										MAX	26		120	30	30	50	50	50	15													
																			MIN																60200	35500						
29	M15384 (SIL5191070)	600	G	G	G	G			G										H	8	3	80	18	5																		
																			P	7	4	79	18	3	1	TR	1	TR	1	1	1			T	72080	63960	33				G
																			P	9	3	79	19	7	1	TR	1	TR	1	1	1			W	77740						

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