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.: E201103-0031-000485(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	C035591 (SHL1031030)	BBE	10 " X SCH40 X 6.120 M	16	97.920 M	5.925	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
2	C015543 (SHL1031040)	BBE	10 " X SCH40 X 6.120 M	288	1,762.560 M	106.635	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY *DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
3	SQ17640 (SHL1031100)	BBE	10 " X 0.500 " X 6.120 M	18	110.160 M	8.984	
4	SP89993 (SHL1042040)	BBE	10 " X 0.250 " X 6.120 M	92	563.040 M	23.698	

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
기준 SPEC									30									
1	C035591 (SHL1031030)	1450	G	G	G	G			G									
2	C015543 (SHL1031040)	1450	G	G	G	G			G									
3	SQ17640 (SHL1031100)	1990	G	G	G	G			G									
4	SP89993 (SHL1042040)	1000	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					
1	C035591 (SHL1031030)	H	16	17	77	16	2									29								
		P	15	17	76	14	2	TR	2	1	TR	1	1	1		28	T	74540	67440	36			8	G
		P	16	16	76	15	2	TR	2	1	TR	1	1	1		29	W	81360						
2	C015543 (SHL1031040)	H	14	14	77	19	3									27								
		P	13	14	77	18	2	2	2	TR	TR	2	1	1		26	T	76140	60620	34			7	G
		P	14	14	78	18	4	2	2	TR	TR	2	1	1		27	W	80780						
3	SQ17640 (SHL1031100)	H	17	1	79	14	8									30								
		P	16	TR	80	12	8	2	2	1	TR	TR	1	TR		30	T	69180	52060	38			5	G
		P	17	2	79	16	7	2	2	1	TR	TR	1	TR		31	W	76430						
4	SP89993 (SHL1042040)	H	14	1	67	18	7									25								
		P	13	TR	68	20	9	1	2	TR	TR	2	TR	1		25	T	71060	51050	37			5	G
		P	14	TR	67	20	8	1	2	TR	TR	2	TR	1		25	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 *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.: E201103-0031-000485(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	SP90333 (SHL1042050)	BBE	10 " X 0.250 " X 6.120 M	148	905.760 M	38.124	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
6	SP90336 (SHL1042060)	BBE	10 " X 0.250 " X 6.120 M	124	758.880 M	31.941	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
7	SB90422 (SHL1132030)	BBE	16 " X 0.250 " X 6.120 M	70	428.400 M	27.045	*DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
8	SB92702 (SHL1132040)	BBE	16 " X 0.250 " X 6.120 M	12	73.440 M	4.636	

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 STRENGTH psi	YIELD STRENGTH psi	E.L % *10	IMPACT TEST (°Q ENE-RGY Joule	SHEAR AREA %	HARD-NESS TEST HRC	HEAT TREAT-MENT SN *11
																				CHEMICAL COMPOSITION(%)															TENSILE TEST (Gage Length : 50mm)						
																				2			3		2	2	2	2	3	3	3		C2				%				
																				*7													*8								
기준 SPEC									30										MAX	26		120	30	30	40	40	40	15	80						60200	35500				22	
																			MIN																						
5	SP90333 (SHL1042050)	1000	G	G	G	G			G										H	14	1	65	12	4									25								
																			P	15	TR	66	14	4	TR	1	TR	TR	2	2	2		26	T	69320	48440	39			6	G
																			P	15	2	64	11	6	TR	1	TR	TR	2	2	2		26	W	72510						
6	SP90336 (SHL1042060)	1000	G	G	G	G			G										H	14	2	68	13	6									25								
																			P	13	2	69	12	5	2	2	2	TR	1	TR	1		25	T	65990	51920	41			5	G
																			P	15	1	68	11	8	2	2	2	TR	1	TR	1		27	W	71060						
7	SB90422 (SHL1132030)	670	G	G	G	G			G										H	15	1	67	17	6									26								
																			P	14	2	66	15	4	2	2	1	TR	1	TR	1		26	T	68740	47420	39			5	G
																			P	14	TR	68	18	7	2	2	1	TR	1	TR	1		26	W	72950						
8	SB92702 (SHL1132040)	670	G	G	G	G			G										H	14	1	69	10	7									26								
																			P	13	TR	69	12	5	1	1	TR	TR	1	1	TR		25	T	69030	46700	41			6	G
																			P	13	TR	69	12	8	1	1	TR	TR	1	1	TR		25	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 *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

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.:	E201103-0031-000485(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
9	SB90844 (SHL1172070)	BBE	12 " X 0.500 " X 6.120 M	58	354.960 M	34.594	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
10	SB92921 (SHL1172120)	BBE	12 " X 0.375 " X 6.120 M	198	1,211.760 M	89.246	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
11	C015770 (SHL1172130)	BBE	12 " X 0.375 " X 6.120 M	35	214.200 M	15.776	*DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
12	C033972 (SHL1172140)	BBE	12 " X 0.375 " X 6.120 M	40	244.800 M	18.030	

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						
9	SB90844 (SHL1172070)	1680	G	G	G	G			G						
10	SB92921 (SHL1172120)	1260	G	G	G	G			G						
11	C015770 (SHL1172130)	1260	G	G	G	G			G						
12	C033972 (SHL1172140)	1260	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	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti		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
						2			3		2	2	2	2	3	3	3										
						*7																					
기준 SPEC					MAX	26		120	30	30	40	40	40	15	80												22
					MIN																60200	35500					
9	SB90844 (SHL1172070)				H	18	1	73	11	4									30								
					P	17	TR	72	9	2	1	TR	1	TR	1	1	1		29	T	67290	45830	40			6	G
					P	18	TR	74	10	6	1	TR	1	TR	1	1	1		31	W	74250						
10	SB92921 (SHL1172120)				H	17	1	72	14	4									29								
					P	16	TR	72	12	6	2	2	1	TR	TR	2	1		29	T	66280	43800	42			6	G
					P	18	2	71	16	2	2	2	1	TR	TR	2	1		30	W	72220						
11	C015770 (SHL1172130)				H	14	18	77	16	3									27								
					P	13	17	76	14	5	TR	1	1	TR	TR	2	1		26	T	73380	62220	35			8	G
					P	15	18	77	14	4	TR	1	1	TR	TR	2	1		28	W	79190						
12	C033972 (SHL1172140)				H	14	17	78	15	2									27								
					P	13	16	77	15	2	2	TR	2	TR	2	TR	TR		26	T	72370	65840	33			8	G
					P	13	16	79	16	2	2	TR	2	TR	2	TR	TR		27	W	80490						

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

증명서번호
CERTIFICATE NO.: E201103-0031-000485(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
13	SB91663 (SHL1192060)	BBE	14 " X 0.250 " X 6.120 M	8	48.960 M	2.698	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
14	SB90672 (SHL1192070)	BBE	14 " X 0.250 " X 6.120 M	59	361.080 M	19.899	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY *DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
15	SB91441 (SHL1192080)	BBE	14 " X 0.250 " X 6.120 M	21	128.520 M	7.083	
16	KA8870 (SHL1202010)	BBE	14 " X 0.500 " X 6.120 M	104	636.480 M	68.352	

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
기준 SPEC									30									
13	SB91663 (SHL1192060)	770	G	G	G	G			G									
14	SB90672 (SHL1192070)	770	G	G	G	G			G									
15	SB91441 (SHL1192080)	770	G	G	G	G			G									
16	KA8870 (SHL1202010)	1530	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	SB91663 (SHL1192060)	H	15	1	61	13	6									25								
		P	14	TR	61	12	8	2	TR	TR	TR	1	1	1		24	T	63810	47570	40			5	G
		P	15	2	61	11	6	2	TR	TR	TR	1	1	1		25	W	72660						
14	SB90672 (SHL1192070)	H	13	1	61	18	7									23								
		P	12	TR	62	17	5	1	1	2	TR	TR	2	1		23	T	67870	49160	40			6	G
		P	13	1	61	19	8	1	1	2	TR	TR	2	1		24	W	75710						
15	SB91441 (SHL1192080)	H	14	1	67	13	6									25								
		P	13	TR	66	14	5	2	1	2	TR	1	2	2		25	T	65120	48580	42			5	G
		P	13	TR	66	13	5	2	1	2	TR	1	2	2		25	W	74690						
16	KA8870 (SHL1202010)	H	15	1	79	17	7									28								
		P	14	1	79	18	6	2	2	1	TR	TR	TR	TR		28	T	72660	60770	35			7	G
		P	14	2	79	18	5	2	2	1	TR	TR	TR	TR		28	W	78320						

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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Manager of Q.M Dept.
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증명서번호
CERTIFICATE NO.: E201103-0031-000485(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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(주)세 아 제 강

HEAD OFFICE ; BONGNAE-DONG 1GA, JUNG-GU, SEOUL, KOREA
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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
17	SB90183 (SHL1212170)	BBE	18 "	X 0.500 "	X 6.120 M	2	12.240 M	1.703	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
18	SB90015 (SHL1212180)	BBE	18 "	X 0.500 "	X 6.120 M	64	391.680 M	54.502	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
19	SB92233 (SHL1212190)	BBE	18 "	X 0.500 "	X 6.120 M	26	159.120 M	22.142	*DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
20	SP91914 (SHL1252160)	BBE	10 "	X SCH40	X 6.120 M	98	599.760 M	36.285	

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
기준 SPEC									30									
17	SB90183 (SHL1212170)	1190	G	G	G	G			G									
18	SB90015 (SHL1212180)	1190	G	G	G	G			G									
19	SB92233 (SHL1212190)	1190	G	G	G	G			G									
20	SP91914 (SHL1252160)	1450	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					
17	SB90183 (SHL1212170)	H	18	2	80	17	5									31								
		P	17	3	79	18	6	TR	2	1	TR	TR	TR	1		31	T	68740	48870	40			6	G
		P	18	3	79	15	4	TR	2	1	TR	TR	TR	1		32	W	78460						
18	SB90015 (SHL1212180)	H	18	2	73	13	5									30								
		P	17	3	73	11	3	1	1	1	TR	1	2	TR		30	T	64540	48730	44			5	G
		P	17	3	74	14	6	1	1	1	TR	1	2	TR		30	W	77450						
19	SB92233 (SHL1212190)	H	18	1	78	13	5									31								
		P	17	2	78	15	3	TR	2	2	TR	1	2	TR		31	T	69180	50320	41			6	G
		P	19	TR	78	13	4	TR	2	2	TR	1	2	TR		33	W	76580						
20	SP91914 (SHL1252160)	H	19	1	77	11	3									32								
		P	18	TR	78	10	4	TR	1	TR	TR	2	1	2		31	T	71640	50030	37			6	G
		P	19	1	76	10	5	TR	1	TR	TR	2	1	2		32	W	78170						

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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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.: E201103-0031-000485(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
21	SQ26668 (SHL1252170)	BBE	10 " X SCH40 X 6.120 M	20	122.400 M	7.405	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
22	SQ26263 (SHL1262010)	BBE	10 " X 0.500 " X 6.120 M	178	1,089.360 M	88.837	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
23	SB90922 (SHL2012070)	BBE	16 " X 0.500 " X 6.120 M	37	226.440 M	27.920	*DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
24	SB90429 (SHL2012080)	BBE	16 " X 0.500 " X 6.120 M	29	177.480 M	21.883	

NO.	HEAT NO (BATCH NO.)	HYDROSTATIC TEST 5 Sec. psi	RESULT	N·D·T U *2	VISUAL & DIMENSION	FLATTENING	SHOCK	COMPRESSION	REESIDUAL 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 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								
																				*7													*8								
기준 SPEC									30										MAX	26		120	30	30	40	40	40	15	80						60200	35500				22	
																			MIN																						
21	SQ26668 (SHL1252170)	1450	G	G	G	G			G										H	17	2	80	13	5									30								
																			P	16	1	81	11	3	TR	1	1	TR	TR	TR	2		30	T	68890	50180	39			5	G
																			P	17	3	80	14	4	TR	1	1	TR	TR	TR	2		31	W	73380						
22	SQ26263 (SHL1262010)	1990	G	G	G	G			G										H	17	2	80	11	2									30								
																			P	16	1	79	9	TR	2	1	TR	TR	1	TR	TR		29	T	69610	59030	39			6	G
																			P	18	2	80	11	TR	2	1	TR	TR	1	TR	TR		32	W	81070						
23	SB90922 (SHL2012070)	1340	G	G	G	G			G										H	18	1	76	18	8									31								
																			P	17	1	77	17	8	1	1	2	TR	2	TR	2		30	T	69900	50180	43			6	G
																			P	18	2	76	20	10	1	1	2	TR	2	TR	2		31	W	74250						
24	SB90429 (SHL2012080)	1340	G	G	G	G			G										H	18	1	73	12	6									30								
																			P	17	1	74	10	8	TR	TR	TR	TR	1	1	1		29	T	68020	48870	42			5	G
																			P	19	TR	74	13	8	TR	TR	TR	TR	1	1	1		31	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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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.: E201103-0031-000485(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
25	SA63774 (SHL2072040)	BBE	12 " X 0.375 " X 6.120 M	27	165.240 M	12.170	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
26	KA8870 (SHL2072050)	BBE	12 " X 0.375 " X 6.120 M	44	269.280 M	19.832	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
27	SB95858 (SIL2181090)	BBE	16 " X 0.500 " X 6.120 M	17	104.040 M	12.828	*DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
28	SQ30597 (SIL2222040)	BBE	18 " X 0.500 " X 6.120 M	1	6.120 M	0.851	

NO.	HEAT NO (BATCH NO.)	HYDROSTATIC TEST 5 Sec. psi	RESULT	N·D·T U *2	VISUAL & DIMENSION	FLATTENING	SHOCK	COMPRESSION	REESIDUAL 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 TEST (Gage Length : 50mm) 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							
																				*7													*8							
기준 SPEC									30										MAX	26		120	30	30	40	40	40	15	80										22	
																			MIN																60200	35500					
25	SA63774 (SHL2072040)	1260	G	G	G	G			G										H	18	1	78	18	5									31							
																			P	17	2	77	20	3	TR	2	TR	TR	TR	1	TR		30	T	68310	52210	40			6	G
																			P	17	2	79	19	7	TR	2	TR	TR	TR	1	TR		30	W	80490						
26	KA8870 (SHL2072050)	1260	G	G	G	G			G										H	15	1	79	17	7									28							
																			P	14	2	80	19	8	1	2	1	TR	TR	2	TR		28	T	73530	56420	35			7	G
																			P	14	2	78	18	7	1	2	1	TR	TR	2	TR		27	W	77880						
27	SB95858 (SIL2181090)	1340	G	G	G	G			G										H	16	1	74	11	10									28							
																			P	15	1	75	12	9	TR	TR	TR	TR	1	TR	TR		28	T	66710	47710	42			5	G
																			P	15	TR	75	9	12	TR	TR	TR	TR	1	TR	TR		28	W	72660						
28	SQ30597 (SIL2222040)	1190	G	G	G	G			G										H	16	1	77	8	4									29							
																			P	15	TR	76	6	3	2	1	TR	TR	2	TR	TR		28	T	65260	48730	46			6	G
																			P	17	1	77	6	4	2	1	TR	TR	2	TR	TR		30	W	73380						

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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POHANG PLANT ; 14-1, JANGHEUNG-DONG, NAM-GU, POHANG

증명서번호 / CERTIFICATE NO.: E201103-0031-000485(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
29	SB95838 (SIL2222050)	BBE	18 " X 0.500 " X 6.120 M	1	6.120 M	0.852	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 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						60200	35500				22	
																			MIN																						
29	SB95838 (SIL2222050)	1190	G	G	G	G			G										H	17	1	77	12	5									30								
																			P	16	TR	78	10	3	TR	TR	1	TR	2	2	TR		29	T	67000	47710	42			4	G
																			P	18	2	77	14	7	TR	TR	1	TR	2	2	TR		31	W	71930						

NOTE *1 ~ *11: Refer To Others

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*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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