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.: E201103-0032-000486(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	SP90336 (SHL1051040)	BBE	10 " X 0.225 " X 6.120 M	80	489.600 M	18.405	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
2	SP90333 (SHL1051050)	BBE	10 " X 0.225 " X 6.120 M	165	1,009.800 M	37.958	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
3	SB91443 (SHL1171060)	BBE	12 " X 0.225 " X 6.120 M	297	1,817.640 M	81.303	*DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
4	SB91443 (SHL1172010)	BBE	12 " X 0.225 " X 6.120 M	69	422.280 M	18.889	

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	SP90336 (SHL1051040)	890	G	G	G	G			G									
2	SP90333 (SHL1051050)	890	G	G	G	G			G									
3	SB91443 (SHL1171060)	750	G	G	G	G			G									
4	SB91443 (SHL1172010)	750	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	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	*9							
기준 SPEC		MAX	26		120	30	30	40	40	40	15	80						60200	35500					
		MIN																						
1	SP90336 (SHL1051040)	H	14	2	68	13	6									25								
		P	13	1	68	15	7	2	1	1	TR	2	2	1		25	T	69180	50320	40			5	G
		P	15	3	69	12	8	2	1	1	TR	2	2	1		27	W	72660						
2	SP90333 (SHL1051050)	H	14	1	65	12	4									25								
		P	13	TR	64	10	5	1	TR	TR	TR	2	TR	2		24	T	67580	53370	42			5	G
		P	14	2	66	13	5	1	TR	TR	TR	2	TR	2		25	W	72370						
3	SB91443 (SHL1171060)	H	14	2	66	15	5									25								
		P	13	1	66	13	6	1	TR	2	TR	2	1	TR		25	T	66710	46840	40			6	G
		P	15	2	67	17	4	1	TR	2	TR	2	1	TR		27	W	71350						
4	SB91443 (SHL1172010)	H	14	2	66	15	5									25								
		P	13	2	65	14	3	2	2	TR	TR	2	TR	2		24	T	67870	44670	43			6	G
		P	14	1	65	17	6	2	2	TR	TR	2	TR	2		25	W	71640						

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

주식회사세아제강 SeAH 포항강철공장품질경영팀장

증명서번호
CERTIFICATE NO.: E201103-0032-000486(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
5	SB91439 (SHL1172020)	BBE	12 " X 0.225 " X 6.120 M	116	709.920 M	31.755	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
6	SB92411 (SHL1192110)	BBE	14 " X 0.225 " X 6.120 M	214	1,309.680 M	64.410	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
7	SA59698 (SHL1192120)	BBE	14 " X 0.225 " X 6.120 M	99	605.880 M	29.797	*DSAW: CHEMICAL COMPOSITION AND HARDNESS ONLY
8	SP90330 (SHL1252020)	BBE	10 " X 0.225 " X 6.120 M	81	495.720 M	18.634	

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 (℃) ENE-RGY Joule	SHEAR AREA %	HARD-NESS TEST HRC	HEAT TREAT MENT SN *11
																				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					
																			MIN																							
5	SB91439	750	G	G	G	G			G										H	14	3	68	16	6									25									
	(SHL1172020)																		P	13	3	69	16	4	2	1	TR	TR	TR	2	1		25	T	72080	52640	38			6	G
																			P	13	2	67	15	7	2	1	TR	TR	TR	2	1		24	W	75850						
6	SB92411	690	G	G	G	G			G										H	16	2	71	15	9									28									
	(SHL1192110)																		P	15	1	70	16	11	2	TR	1	TR	2	TR	2		27	T	69900	50320	38			5	G
																			P	16	2	72	16	11	2	TR	1	TR	2	TR	2		28	W	74400						
7	SA59698	690	G	G	G	G			G										H	15	2	71	14	6									27									
	(SHL1192120)																		P	14	1	71	15	8	1	TR	TR	TR	1	2	2		26	T	73960	52350	38			6	G
																			P	14	3	71	14	7	1	TR	TR	TR	1	2	2		26	W	76870						
8	SP90330	890	G	G	G	G			G										H	15	2	67	9	4									26									
	(SHL1252020)																		P	14	2	66	9	5	2	1	2	TR	1	1	2		26	T	72220	53660	40			5	G
																			P	15	2	68	10	4	2	1	2	TR	1	1	2		27	W	77300						

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.: E201103-0032-000486(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	SQ25216 (SHL1252030)	BBE	10 " X 0.225 " X 6.120 M	82	501.840 M	18.864	CONFIRM TO NACE NORM MR0175 (LAST EDITION)
10	SP90328 (SHL1252040)	BBE	10 " X 0.225 " X 6.120 M	82	501.840 M	18.864	*ERW: CHEMICAL COMPOSITION, HEAT TREATMENT AND HARDNESS ONLY
11	SQ25790 (SHL1252050)	BBE	10 " X 0.225 " X 6.120 M	73	446.760 M	16.794	*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
기준 SPEC									30									
9	SQ25216 (SHL1252030)	890	G	G	G	G			G									
10	SP90328 (SHL1252040)	890	G	G	G	G			G									
11	SQ25790 (SHL1252050)	890	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
			CHEMICAL COMPOSITION(%) *7															TENSILE TEST (Gage Length : 50mm)						
			2			3		2	2	2	2	3	3	3		C2								
기준 SPEC		MAX	26		120	30	30	40	40	40	15	80												
		MIN																60200	35500					
9	SQ25216 (SHL1252030)	H	15	1	75	10	5									28								
		P	14	1	76	8	4	2	2	2	TR	TR	2	TR		27	T	69900	50180	39			5	G
		P	15	1	76	12	4	2	2	2	TR	TR	2	TR		28	W	76430						
10	SP90328 (SHL1252040)	H	15	1	69	11	4									27								
		P	14	1	68	11	4	2	2	TR	TR	2	TR	2		26	T	69610	48440	41			6	G
		P	14	1	69	11	5	2	2	TR	TR	2	TR	2		26	W	75270						
11	SQ25790 (SHL1252050)	H	17	1	79	10	5									30								
		P	16	1	78	8	6	TR	TR	2	TR	TR	2	2		29	T	71640	51050	42			5	G
		P	18	TR	78	10	3	TR	TR	2	TR	TR	2	2		31	W	77300						

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