CERTIFICATE OF QUALITY

주식회사 휴스틸
HUSTEEL Co., Ltd.

HEAD OFFICE : SHINAN B/D 15F, 943-19, DAECHI-DONG, KANGNAM-GU, SEOUL, KOREA
DAEBUL PLANT : 3RO, DAEBUL INDUSTRIAL COMPLEX, SAMHO-EUP, YEONGAM-GUN, JEOLLANAM-DO, KOREA

P/O No. : 20382
L/C No. : 5602600358
ISSUED DATE : 2015.04.13
COMMODITY : E.R.W. STEEL PIPE
SPECIFICATION : ~~API 5L X-42~~ PSL1/ ASTM A53B

CERTIFICATE No. : 150413-101
MANUFACTURED No. : 15-03-212
SUPPLIER : HUSTEEL CO., LTD.
CUSTOMER : PLESA ANAHUAC Y CIAS. SA DE CV

Original certificate can be verified through Qhest Application.

NO.	HEAT_NO	QUANTITY PCS	TYPE *1	NOMINAL SIZE	ORDER SIZE O.D inch	ORDER SIZE W.T inch	ORDER SIZE LENGTH ft *2	WEIGHT lb/ft	TENSILE TEST DIR. *3	TS PSI	YS PSI	EL %	YR %	WTS PSI
01	N39573	359	BPEB	12 3/4	12.750	0.225	20	30.13	T	67,295	54,822	39	81	75,416
02	N39566	76	BPEB	12 3/4	12.750	0.225	20	30.13	T	68,165	57,432	38	84	74,836
03	N39562	64	BPEB	12 3/4	12.750	0.225	20	30.13	T	69,325	57,868	38	83	76,867

CHEMICAL COMPOSITION(%)

DIV *5	C *2	Si *2	Mn *2	P *3	S *3	Cu *3	Ni *3	Cr *3	Mo *4	V *4	Nb *4	Ti *4	B *5	CEQ *3	PCM *3
H	7	1	76	13	4	17	10	20	TR	10	140	10			
P	7	2	78	13	4	16	6	20	10	9	168	7			
P	7	2	78	12	4	16	5	19	10	8	161	7			
H	7	2	76	11	6	18	10	20	TR	10	130	10			
P	7	2	75	10	6	16	6	22	10	7	156	6			
P	7	2	75	10	6	16	5	20	10	6	145	5			
H	7	1	73	13	4	13	10	20	TR	TR	120	10			
P	7	2	74	14	4	14	5	23	10	6	154	8			
P	7	1	74	13	4	14	4	24	10	6	149	8			

NO.	HYDROSTATIC TEST TP PSI *9	H.T sec *9	RESULT *9	HEAT TREATMENT ℃ *10	ZINC COATING TEST WZC g/m² *11	ZINC COATING TEST CST TIMES *11	THREADS TPI *12	THREADS ETL inch *12	HARDNESS TEST HV	IMPACT TEST (0)℃ DIV *7	IMPACT TEST Energy (Ind, J)	IMPACT TEST SIZE *8
01	1270	5	GOOD	930								
02	1270	5	GOOD	930								
03	1270	5	GOOD	930								

*13 N·D·T (UT)	FLATTENING OR BEND TEST	VISUAL& DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM
GOOD	GOOD	GOOD	GOOD	GOOD
FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST		

- Latest edition per API 5L(45th,2013) ASTM(2012)
- HARDNESS MAX 22 HRC AS PER NACE MR 0175

NOTE

*1.Type of Pipe Ends

BPE	Black Plain Ends	GPE	Galvanized Plain Ends
BPEB	BPE Bevelled	GPEB	GPE Bevelled
BTE	Black Threaded Ends	GTE	Galvanized Threaded Ends
BTC	Black Threaded & Coupled	GTC	Galvanized Threaded & Coupled

*2. O.D : Outside Diameter, W.T : Wall Thickness *3. Direction: L : Longitudinal, T : Transverse
*4. Tensile Test -TS : Tensile Strength, YS : Yield Strength, YR : Yield Ratio, EL : Elongation, WTS : Weld tensile strength, Gauge Length : 2 inch, Y.P method : 0.5% Underload
*5. H : Heat analysis, P : Product analysis *6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr :Trace *7. B : Base Metal, W : Weld Line, H : Heat Affected Zone
*8. Specimen Size -A:10x10mm, B:10x7.5mm, C:10x6.6mm, D:10x5.0mm, Direction: Transverse *9. T.P : Testing Pressure, H.T : Holding Time *10. Heat Treatment: Seam Normalizing
*11. WZC : Weight of Zinc Coating, CST : Copper Sulphate Test *12. TPI : Threads per inch, ETL : Effective length of threads *13. NDT : UT, Reference Standard 3.2¢ Drilled Hole

SURVEYOR

WE HEREBY CERTIFY THAT THE MATERIAL HEREIN HAS BEEN MADE AND TESTED IN ACCORDANCE WITH THE ORDER AND ABOVE SPECIFICATION
THIS CERTIFICATE IS ISSUED ACCORDING TO EN 10204 3.1(ISO 10474 3.1 B)

MANAGER OF Q.A TEAM

HMC C-30-05-(21)

본 검사증명서에 명기된 규격등도 외 사용시 안전상 문제가 발생할 수 있으며, 검사증명서 위·변조시 사문서 위조(형법231조)로 불이익을 당하실 수 있습니다.

HUSTEEL

COPY

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HUSTEEL Co., Ltd.

HEAD OFFICE : SHINAN B/D 15F, 943-19, DAECHI-DONG, KANGNAM-GU, SEOUL, KOREA
DAEBUL PLANT : 3RO, DAEBUL INDUSTRIAL COMPLEX, SAMHO-EUP, YEONGAM-GUN, JEOLLANAM-DO, KOREA

P/O No. : 20382
L/C No. : 5602600358
ISSUED DATE : 2015.04.13
COMMODITY : E.R.W. STEEL PIPE API 5L X-42 PSL1/
SPECIFICATION : ASTM A53B

CERTIFICATE No. : 150413-101
MANUFACTURED No. : 15-03-212
SUPPLIER : HUSTEEL CO., LTD.
CUSTOMER : PLESA ANAHUAC Y CIAS. SA DE CV

※ Original certificate can be verified through QRcod Application.

NO.	HEAT_NO	QUANTITY PCS	TYPE *1	NOMINAL SIZE	ORDER SIZE O.D inch	ORDER SIZE W.T inch	ORDER SIZE LENGTH ft	WEIGHT lb/ft	TENSILE TEST DIR. *3	TS PSI *4	YS PSI *4	EL %	YR %	WTS PSI
04	N14908	27	BPEB	12 3/4	12.750	0.225	20	30.13	T	68,310	53,662	39	79	70,050
05	306133	154	BPEB	12 3/4	12.750	0.250	20	33.41	T	69,760	51,776	38	74	76,142
06	306132	83	BPEB	12 3/4	12.750	0.250	20	33.41	T	73,821	52,646	34	71	66,860

CHEMICAL COMPOSITION(%) *6

DIV *5	C -2	Si -2	Mn -2	P -3	S -3	Cu -3	Ni -3	Cr -3	Mo -4	V -4	Nb -4	Ti -4	B -5	CEQ -3	PCM -3
H	6	1	75	14	4	16	10	20	TR	TR	130	10			
P	6	2	75	15	4	16	8	25	10	14	189	7			
P	6	1	74	14	4	15	7	23	10	11	170	6			
H	16	2	82	14	2	10	10	10	50	10	10	10			
P	17	1	85	9	1	2	1	13	10	5	27	5			
P	17	1	84	9	1	1	1	12	10	4	20	4			
H	16	1	83	15	2	10	10	10	50	10	10	10			
P	17	1	85	10	1	2	1	14	10	4	23	5			
P	17	1	85	10	1	2	1	13	10	3	16	4			

NO.	HYDROSTATIC TEST T.P PSI *9	HYDROSTATIC TEST H.T sec *9	HYDROSTATIC TEST RESULT	HEAT TREATMENT ℃ *10	ZINC COATING TEST WZC g/㎡ *11	ZINC COATING TEST CST TIMES *11	THREADS TPI *12	THREADS ETL inch *12	HARDNESS TEST HV	IMPACT TEST [0]℃ DIV *7	IMPACT TEST Energy (Ind, J)	IMPACT TEST SIZE *8
04	1270	5	GOOD	930								
05	1410	5	GOOD	930								
06	1410	5	GOOD	930								

*13 N·D·T [UT]	FLATTENING OR BEND TEST	VISUAL& DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM
GOOD	GOOD	GOOD	GOOD	GOOD
FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST		

- Latest edition per API 5L(45th,2013) ASTM(2012)
- HARDNESS MAX 22 HRC AS PER NACE MR 0175

NOTE

*1.Type of Pipe Ends

BPE	Black Plain Ends	GPE	Galvanized Plain Ends
BPEB	BPE Bevelled	GPEB	GPE Bevelled
BTE	Black Threaded Ends	GTE	Galvanized Threaded Ends
BTC	Black Threaded & Coupled	GTC	Galvanized Threaded & Coupled

*2. O.D : Outside Diameter, W.T : Wall Thickness *3. Direction- L : Longitudinal, T : Transverse
*4. Tensile Test -TS : Tensile Strength, YS : Yield Strength, YR : Yield Ratio, EL : Elongation, WTS : Weld tensile strength, Gauge Length : 2 inch, Y.P method : 0.5% Underload
*5. H : Heat analysis, P : Product analysis *6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr :Trace *7. B : Base Metal, W : Weld Line, H : Heat Affected Zone
*8. Specimen Size -A:10x10mm, B:10x7.5mm, C:10x6.6mm, D:10x5.0mm, Direction Transverse *9. T.P : Testing Pressure, H.T : Holding Time *10. Heat Treatment Seam Normalizing
*11. WZC : Weight of Zinc Coating, CST : Copper Sulphate Test *12. TPI : Threads per inch, ETL : Effective length of threads *13. NDT : UT, Reference Standard 3.2 ¢ Drilled Hole

SURVEYOR

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MANAGER OF Q.A TEAM

HMC C-30-06-(21)

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COPY

CERTIFICATE OF QUALITY

주식회사 휴스틸
HUSTEEL Co., Ltd.

HEAD OFFICE : SHINAN B/D 15F, 943-19, DAECHI-DONG, KANGNAM-GU, SEOUL, KOREA
DAEBUL PLANT : 3RO, DAEBUL INDUSTRIAL COMPLEX, SAMHO-EUP, YEONGAM-GUN, JEOLLANAM-DO, KOREA

P/O No. : 20382
L/C No. : 5602600358
ISSUED DATE : 2015.04.13
COMMODITY : E.R.W. STEEL PIPE
SPECIFICATION : API 5L X-42 PSL1/ ASTM A53B

CERTIFICATE No. : 150413-101
MANUFACTURED No. : 15-03-212
SUPPLIER : HUSTEEL CO., LTD.
CUSTOMER : PLESA ANAHUAC Y CIAS. SA DE CV

※ Original certificate can be verified through QRcod Application.

NO.	HEAT_NO	QUANTITY PCS	TYPE *1	NOMINAL SIZE	ORDER SIZE O.D inch	ORDER SIZE WT inch	ORDER SIZE LENGTH ft	WEIGHT lb/ft	TENSILE TEST DIR. *3	TS PSI	YS PSI	EL %	YR %	WTS PSI
07	305535	83	BPEB	12 3/4	12.750	0.250	20	33.41	T	71,501	52,936	38	74	76,722
08	N39566	53	BPEB	12 3/4	12.750	0.312	20	41.48	T	68,600	58,883	37	86	72,661
09	N38113	32	BPEB	12 3/4	12.750	0.312	20	41.48	T	68,165	54,967	40	81	71,065

CHEMICAL COMPOSITION(%) *5 *6

NO.	DIV	C -2	Si -2	Mn -2	P -3	S -3	Cu -3	Ni -3	Cr -3	Mo -4	V -4	Nb -4	Ti -4	B -5	CEQ -3	PCM -3
07	H	15	1	81	16	4	10	10	10	50	20	20	10			
	P	14	2	83	14	2	4	1	17	10	5	28	7			
	P	14	2	82	14	2	3	1	16	10	3	22	6			
08	H	7	2	76	11	6	18	10	20	TR	10	130	10			
	P	7	2	76	11	6	17	7	21	10	7	151	5			
	P	7	2	75	10	6	17	7	20	10	6	145	5			
09	H	7	1	76	15	7	13	10	20	TR	TR	120	10			
	P	7	1	79	17	6	14	6	21	10	6	175	5			
	P	7	1	79	17	6	14	5	20	10	5	172	5			

NO.	HYDROSTATIC TEST T.P PSI	H.T sec	RESULT *9	HEAT TREATMENT ℃ *10	ZINC COATING TEST WZC g/㎡ *11	CST TIMES	THREADS TPI *12	ETL inch	HARDNESS TEST HV	IMPACT TEST (0)℃ DIV *7	Energy (Jud, J)	SIZE *8
07	1410	5	GOOD	930								
08	1760	5	GOOD	930								
09	1760	5	GOOD	930								

*13 N·D·T (UT)	FLATTENING OR BEND TEST	VISUAL& DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM
GOOD	GOOD	GOOD	GOOD	GOOD
FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST		

- Latest edition per API 5L(45th,2013) ASTM(2012)
- HARDNESS MAX 22 HRC AS PER NACE MR 0175

NOTE

*1.Type of Pipe Ends

BPE	Black Plain Ends	GPE	Galvanized Plain Ends
BPEB	BPE Beveled	GPEB	GPE Beveled
BTE	Black Threaded Ends	GTE	Galvanized Threaded Ends
BTC	Black Threaded & Coupled	GTC	Galvanized Threaded & Coupled

*2. O.D : Outside Diameter, W.T : Wall Thickness *3. Direction- L : Longitudinal, T : Transverse
*4. Tensile Test -TS : Tensile Strength, YS : Yield Strength, YR : Yield Ratio, EL : Elongation, WTS : Weld tensile strength, Gauge Length : 2 inch, Y.P method : 0.5% Underload
*5. H : Heat analysis, P : Product analysis *6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr : Trace *7. B : Base Metal, W : Weld Line, H : Heat Affected Zone
*8. Specimen Size -A:10x10mm, B :10x7.5mm, C:10x6.6mm, D:10x5.0mm, Direction: Transverse *9. T.P : Testing Pressure, H.T : Holding Time *10. Heat Treatment Seam Normalizing
*11. WZC : Weight of Zinc Coating, CST : Copper Sulphate Test *12. TPI : Threads per inch, ETL : Effective length of threads *13. NDT : UT, Reference Standard 3.2 ¢ Drilled Hole

SURVEYOR

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MANAGER OF Q.A TEAM

HMC C-30-05-(21)

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HUSTEEL Co., Ltd.

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DAEBUL PLANT : 3RO, DAEBUL INDUSTRIAL COMPLEX, SAMHO-EUP, YEONGAM-GUN, JEOLLANAM-DO, KOREA

P/O No. : 20382
L/C No. : 5602600358
ISSUED DATE : 2015.04.13
COMMODITY : E.R.W. STEEL PIPE
SPECIFICATION : API 5L X-42 PSL1/ ASTM A53B

CERTIFICATE No. : 150413-101
MANUFACTURED No. : 15-03-212
SUPPLIER : HUSTEEL CO., LTD.
CUSTOMER : PLESA ANAHUAC Y CIAS. SA DE CV

※ Original certificate can be verified through QHeal Application.

NO.	HEAT_NO	QUANTITY PCS	TYPE *1	NOMINAL SIZE	ORDER SIZE O.D inch	ORDER SIZE W.T inch	ORDER SIZE LENGTH ft	WEIGHT lb/ft	TENSILE TEST DIR. *3	TS PSI	YS PSI	EL %	YR %	WTS PSI
10	N39798	73	BPEB	12 3/4	12.750	0.406	20	53.57	T	67,585	55,837	40	83	73,676
11	N39780	43	BPEB	12 3/4	12.750	0.406	20	53.57	T	70,775	60,623	40	86	74,401
12	N38109	14	BPEB	12 3/4	12.750	0.406	20	53.57	T	67,005	56,272	40	84	76,142

CHEMICAL COMPOSITION(%)

NO.	DIV *5	C -2	Si -2	Mn -2	P -3	S -3	Cu -3	Ni -3	Cr -3	Mo -4	V -4	Nb -4	Ti -4	B -5	CEQ -3	PCM -3
10	H	7	1	77	13	5	14	10	20	TR	10	240	10			
	P	7	1	78	15	6	13	5	22	10	6	202	6			
	P	8	1	78	15	6	13	5	22	10	6	196	6			
11	H	7	2	75	13	5	14	10	30	TR	TR	230	10			
	P	7	2	77	14	4	14	5	30	10	8	265	7			
	P	7	2	77	14	4	13	5	28	10	6	260	6			
12	H	6	1	75	11	6	14	10	20	TR	TR	240	10			
	P	7	1	78	15	6	14	5	23	10	6	205	7			
	P	7	1	78	15	6	13	4	22	10	6	198	7			

NO.	HYDROSTATIC TEST T.P PSI *9	HYDROSTATIC TEST H.T sec *9	HYDROSTATIC TEST RESULT *9	HEAT TREATMENT ℃ *10	ZINC COATING TEST WZC g/m² *11	ZINC COATING TEST CST TIMES *11	THREADS TPI *12	THREADS ETL inch *12	HARDNESS TEST HV	IMPACT TEST (0) ℃ DIV *7	IMPACT TEST Energy (Ind, J)	IMPACT TEST SIZE *8
10	2280	5	GOOD	950								
11	2280	5	GOOD	950								
12	2280	5	GOOD	950								

*13 N·D·T (UT)	FLATTENING OR BEND TEST	VISUAL& DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM
GOOD	GOOD	GOOD	GOOD	GOOD
FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST		

- Latest edition per API 5L(45th,2013) ASTM(2012)
- HARDNESS MAX 22 HRC AS PER NACE MR 0175

NOTE

*1.Type of Pipe Ends

BPE	Black Plain Ends	GPE	Galvanized Plain Ends
BPEB	BPE Bevelled	GPEB	GPE Bevelled
BTE	Black Threaded Ends	GTE	Galvanized Threaded Ends
BTC	Black Threaded & Coupled	GTC	Galvanized Threaded & Coupled

*2. O.D : Outside Diameter, W.T : Wall Thickness *3. Direction- L : Longitudinal, T : Transverse
*4. Tensile Test -TS : Tensile Strength, YS : Yield Strength, YR : Yield Ratio, EL : Elongation, WTS : Weld tensile strength, Gauge Length : 2 inch, Y.P method : 0.5% Underload
*5. H : Heat analysis, P : Product analysis *6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr :Trace *7. B : Base Metal, W : Weld Line, H : Heat Affected Zone
*8. Specimen Size -A:10x10mm, B :10x7.5mm, C :10x6.6mm, D:10x5.0mm, Direction: Transverse *9. T.P : Testing Pressure, H.T : Holding Time *10. Heat Treatment Seam Normalizing
*11. WZC : Weight of Zinc Coating, CST : Copper Sulphate Test *12. TPI : Threads per inch, ETL : Effective length of threads *13. NDT : UT, Reference Standard 3.2 ℃ Drilled Hole

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P/O No. : 20382
L/C No. : 5602600358
ISSUED DATE : 2015.04.13
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SPECIFICATION : API 5L X-42 PSL1/ ASTM A53B

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SUPPLIER : HUSTEEL CO., LTD.
CUSTOMER : PLESA ANAHUAC Y CIAS. SA DE CV

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NO.	HEAT NO	QUANTITY PCS	TYPE *1	NOMINAL SIZE	ORDER SIZE O.D inch	ORDER SIZE W.T inch	ORDER SIZE LENGTH ft	WEIGHT lb/ft	TENSILE TEST DIR. *3	TS PSI *4	YS PSI *4	EL %	YR %	WTS PSI
13	N39566	73	BPEB	14	14.000	0.312	20	45.65	T	68,600	58,883	37	86	72,661
14	N40814	74	BPEB	16	16.000	0.225	20	37.94	T	67,875	53,517	43	79	67,585
15	M47441	120	BPEB	16	16.000	0.281	20	47.22	T	78,172	63,524	36	81	81,943

CHEMICAL COMPOSITION(%)

DIV *5	C -2	Si -2	Mn -2	P -3	S -3	Cu -3	Ni -3	Cr -3	Mo -4	V -4	Nb -4	Ti -4	B -5	CEQ -3	PCM -3
H	7	2	76	11	6	18	10	20	TR	10	130	10			
P	7	2	76	11	6	17	7	21	10	7	151	5			
P	7	2	75	10	6	17	7	20	10	6	145	5			
H	6	1	76	10	5	16	10	20	TR	10	140	10			
P	6	2	77	9	5	13	5	22	10	9	157	7			
P	6	2	76	9	5	13	4	21	10	8	150	6			
H	6	16	101	14	2	20	10	20	TR	10	310	10			
P	5	17	108	14	1	16	5	28	10	17	420	14			
P	5	17	107	14	1	16	5	27	10	16	417	14			

NO.	HYDROSTATIC TEST TP PSI *9	HT sec *9	RESULT *9	HEAT TREATMENT ℃ *10	ZINC COATING TEST WZC g/m² *11	CST TIMES *11	THREADS TPI *12	ETL inch *12	HARDNESS TEST HV	IMPACT TEST (0)℃ DIV *7	Energy (Ind, J)	SIZE *8
13	1600	5	GOOD	930								
14	1010	5	GOOD	930								
15	1260	5	GOOD	930								

*13 N·D·T (UT)	FLATTENING OR BEND TEST	VISUAL& DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM
GOOD	GOOD	GOOD	GOOD	GOOD
FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST		

- Latest edition per API 5L(45th,2013) ASTM(2012)
- HARDNESS MAX 22 HRC AS PER NACE MR 0175

NOTE

*1.Type of Pipe Ends

BPE	Black Plain Ends	GPE	Galvanized Plain Ends
BPEB	BPE Bevelled	GPEB	GPE Bevelled
BTE	Black Threaded Ends	GTE	Galvanized Threaded Ends
BTC	Black Threaded & Coupled	GTC	Galvanized Threaded & Coupled

*2. O.D : Outside Diameter, WT : Wall Thickness *3. Direction: L : Longitudinal, T : Transverse
*4. Tensile Test -TS : Tensile Strength, YS : Yield Strength, YR : Yield Ratio, EL : Elongation, WTS : Weld tensile strength, Gauge Length : 2 inch, YP method : 0.5% Underload
*5. H : Heat analysis, P : Product analysis *6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr : Trace *7. B : Base Metal, W : Weld Line, H : Heat Affected Zone
*8. Specimen Size A:10x10mm, B :10x7.5mm, C:10x6.6mm, D:10x5.0mm, Direction: Transverse *9. TP : Testing Pressure, H.T : Holding Time *10. Heat Treatment Seam Normalizing
*11. WZC : Weight of Zinc Coating, CST : Copper Sulphate Test *12. TPI : Threads per inch, ETL : Effective length of threads *13. NDT : UT, Reference Standard 3.2 ¢ Drilled Hole

SURVEYOR

WE HEREBY CERTIFY THAT THE MATERIAL HEREIN HAS BEEN MADE AND TESTED IN ACCORDANCE WITH THE ORDER AND ABOVE SPECIFICATION
THIS CERTIFICATE IS ISSUED ACCORDING TO EN 10204 3.1(ISO 10474 3.1 B)

MANAGER OF Q.A TEAM

HMC C-30-05-(21)

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COPY

CERTIFICATE OF QUALITY

주식회사 휴스틸
HUSTEEL Co., Ltd.

HEAD OFFICE : SHINAN B/D 15F, 943-19, DAECHI-DONG, KANGNAM-GU, SEOUL, KOREA
DAEBUL PLANT : 3RO, DAEBUL INDUSTRIAL COMPLEX, SAMHO-EUP, YEONGAM-GUN, JEOLLANAM-DO, KOREA

P/O No. : 20382
L/C No. : 5602600358
ISSUED DATE : 2015.04.13
COMMODITY : E.R.W. STEEL PIPE
SPECIFICATION : API 5L X-42 PSL1/ ASTM A53B

CERTIFICATE No. : 150413-101
MANUFACTURED No. : 15-03-212
SUPPLIER : HUSTEEL CO., LTD.
CUSTOMER : PLESA ANAHUAC Y CIAS. SA DE CV

Original certificate can be verified through QAed Application.

NO.	HEAT NO	QUANTITY PCS	TYPE *1	NOMINAL SIZE	ORDER SIZE O.D inch	ORDER SIZE W.T inch	ORDER SIZE LENGTH ft	WEIGHT lb/ft	TENSILE TEST DIR. *3	TS PSI *4	YS PSI *4	EL %	YR %	WTS PSI
16	N40815	80	BPEB	16	16.000	0.312	20	52.32	T	67,730	55,112	42	81	74,836
17	N35295	2	BPEB	16	16.000	0.312	20	52.32	T	68,165	54,242	41	80	69,180
18	N27689	1	BPEB	16	16.000	0.312	20	52.32	T	68,455	59,173	38	86	78,462

NO.	DIV *5	C -2	Si -2	Mn -2	P -3	S -3	Cu -3	Ni -3	Cr -3	Mo -4	V -4	Nb -4	Ti -4	B -5	CEQ -3	PCM -3
		*6														
16	H	6	2	75	10	5	12	10	20	TR	TR	130	10			
	P	6	2	77	10	5	12	5	20	10	9	161	8			
	P	7	2	77	10	5	12	5	19	10	7	156	7			
17	H	6	1	78	12	5	12	10	20	TR	TR	140	10			
	P	6	2	77	9	5	14	5	21	10	11	195	8			
	P	6	2	77	9	5	14	5	20	10	10	190	7			
18	H	7	1	74	11	6	18	10	20	TR	TR	140	10			
	P	6	2	77	10	5	15	6	21	10	12	199	8			
	P	6	2	77	10	5	15	6	20	10	12	191	8			

NO.	HYDROSTATIC TEST T.P PSI *9	H.T sec *9	RESULT	HEAT TREATMENT ℃ *10	ZINC COATING TEST WZC g/㎡ *11	ZINC COATING TEST CST TIMES *11	THREADS TPI *12	THREADS ETL inch *12	HARDNESS TEST HV	IMPACT TEST (0)℃ DIV *7	IMPACT TEST Energy (Ind, J)	IMPACT TEST SIZE *8
16	1400	5	GOOD	930								
17	1400	5	GOOD	930								
18	1400	5	GOOD	930								

*13 N·D·T (UT)	FLATTENING OR BEND TEST	VISUAL& DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM
GOOD	GOOD	GOOD	GOOD	GOOD
FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST		

- Latest edition per API 5L(45th,2013) ASTM(2012)
- HARDNESS MAX 22 HRC AS PER NACE MR 0175

NOTE

*1.Type of Pipe Ends

BPE	Black Plain Ends	GPE	Galvanized Plain Ends
BPEB	BPE Bevelled	GPEB	GPE Bevelled
BTX	Black Threaded Ends	GTX	Galvanized Threaded Ends
BTC	BlackThreaded & Coupled	GTC	Galvanized Threaded & Coupled

*2. O.D : Outside Diameter, W.T : Wall Thickness
*3. Direction: L : Longitudinal, T : Transverse
*4. Tensile Test -TS : Tensile Strength, YS : Yield Strength, YR : Yield Ratio, EL : Elongation, WTS : Weld tensile strength, Gauge Length : 2 inch, Y.P method : 0.5% Underload
*5. H : Heat analysis, P : Product analysis
*6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr :Trace
*7. B : Base Metal, W : Weld Line, H : Heat Affected Zone
*8. Specimen Size -A:10x10mm, B:10x7.5mm, C:10x6.6mm, D:10x5.0mm, Direction: Transverse
*9. T.P : Testing Pressure, H.T : Holding Time
*10. Heat Treatment Seam Normalizing
*11. WZC : Weight of Zinc Coating, CST : Copper Sulphate Test
*12. TPI : Threads per inch, ETL : Effective length of threads
*13. NDT : UT, Reference Standard 3.2 ¢ Drilled Hole

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MANAGER OF Q.A TEAM

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COPY

CERTIFICATE OF QUALITY

주식회사 휴스틸
HUSTEEL Co., Ltd.

P/O No. : 20382
L/C No. : 5602600358

ISSUED DATE : 2015.04.13

COMMODITY : E.R.W. STEEL PIPE
SPECIFICATION : API 5L X-42 PSL1/ ASTM A53B

HEAD OFFICE : SHINAN B/D 15F, 943-19, DAECHI-DONG, KANGNAM-GU, SEOUL, KOREA
DAEBUL PLANT : 3RO, DAEBUL INDUSTRIAL COMPLEX, SAMHO-EUP, YEONGAM-GUN, JEOLLANAM-DO, KOREA

CERTIFICATE No. : 150413-101
MANUFACTURED No. : 15-03-212
SUPPLIER : HUSTEEL CO., LTD.
CUSTOMER : PLESA ANAHUAC Y CIAS. SA DE CV

Original certificate can be verified through QRed Application.

NO.	HEAT_NO	QUANTITY PCS	TYPE *1	NOMINAL SIZE	ORDER SIZE O.D inch	ORDER SIZE W.T inch	ORDER SIZE LENGTH ft	WEIGHT lb/ft	TENSILE TEST DIR. *3	TS PSI *4	YS PSI *4	EL %	YR %	WTS PSI
19	SP13813	78	BPEB	16	16.000	0.312	20	52.32	T	74,836	59,173	38	79	79,332
20	SP05451	45	BPEB	16	16.000	0.312	20	52.32	T	73,821	58,593	38	79	80,057
21	306147	26	BPEB	16	16.000	0.375	20	62.64	T	73,821	49,891	42	68	75,126

CHEMICAL COMPOSITION(%)

DIV *5	C -2	Si -2	Mn -2	P -3	S -3	Cu -3	Ni -3	Cr -3	Mo -4	V -4	Nb -4	Ti -4	B -5	CEQ -3	PCM -3
H	6	20	95	14	2	24	11	25	30	TR	180	20			
P	6	22	98	13	1	18	8	30	10	15	249	19			
P	6	22	98	13	1	18	8	30	10	16	240	18			
H	7	19	95	10	2	15	7	17	20	TR	190	20			
P	6	21	99	9	1	10	4	20	10	14	255	25			
P	6	21	98	9	1	10	4	18	10	12	243	24			
H	16	2	80	12	2	10	10	10	50	10	10	10			
P	14	2	85	11	1	4	1	18	10	8	26	8			
P	15	2	84	11	1	4	1	18	10	8	25	8			

NO.	HYDROSTATIC TEST T.P PSI *9	H.T sec *9	RESULT	HEAT TREATMENT ℃ *10	ZINC COATING TEST WZC g/m² *11	CST TIMES *11	THREADS TPI *12	ETL inch *12	HARDNESS TEST HV	IMPACT TEST (0) ℃ DIV *7	Energy (Ind, J)	SIZE *8
19	1400	5	GOOD	930								
20	1400	5	GOOD	930								
21	1680	5	GOOD	950								

*13 N · D · T (UT)	FLATTENING OR BEND TEST	VISUAL& DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM
GOOD	GOOD	GOOD	GOOD	GOOD
FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST		

- Latest edition per API 5L(45th,2013) ASTM(2012)
- HARDNESS MAX 22 HRC AS PER NACE MR 0175

NOTE

*1.Type of Pipe Ends

BPE	Black Plain Ends	GPE	Galvanized Plain Ends
BPEB	BPE Beveled	GPEB	GPE Beveled
BTE	Black Threaded Ends	GTE	Galvanized Threaded Ends
BTC	Black Threaded & Coupled	GTC	Galvanized Threaded & Coupled

*2. O.D : Outside Diameter, W.T : Wall Thickness *3. Direction: L : Longitudinal, T : Transverse
*4. Tensile Test -TS : Tensile Strength, YS : Yield Strength, YR : Yield Ratio, EL : Elongation, WTS : Weld tensile strength, Gauge Length : 2 inch, Y.P method : 0.5% Underload
*5. H : Heat analysis, P : Product analysis *6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr : Trace *7. B : Base Metal, W : Weld Line, H : Heat Affected Zone
*6. Specimen Size -A:10x10mm, B :10x7.5mm, C:10x6.6mm, D:10x5.0mm, Direction: Transverse *9. TP : Testing Pressure, H.T : Holding Time *10. Heat Treatment Seam Normalizing
*11. WZC : Weight of Zinc Coating, CST : Copper Sulphate Test *12. TPI : Threads per inch, ETL : Effective length of threads *13. NDT : UT, Reference Standard 3.2 ø Drilled Hole

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MANAGER OF Q.A TEAM

HMC C-30-05-(21)

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HUSTEEL Co., Ltd.

HEAD OFFICE : SHINAN B/D 15F, 943-19, DAECHI-DONG, KANGNAM-GU, SEOUL, KOREA
DAEBUL PLANT : 3RO, DAEBUL INDUSTRIAL COMPLEX, SAMHO-EUP, YEONGAM-GUN, JEOLLANAM-DO, KOREA

P/O No. : 20382
L/C No. : 5602600358

ISSUED DATE : 2015.04.13

COMMODITY : E.R.W. STEEL PIPE
SPECIFICATION : API 5L X-42 PSL1/ ASTM A53B

CERTIFICATE No. : 150413-101
MANUFACTURED No. : 15-03-212
SUPPLIER : HUSTEEL CO., LTD.
CUSTOMER : PLESA ANAHUAC Y CIAS. SA DE CV

Original certificate can be verified through QRcd Application.

NO.	HEAT NO	QUANTITY PCS	TYPE *1	NOMINAL SIZE	ORDER SIZE O.D inch	ORDER SIZE W.T inch	ORDER SIZE LENGTH ft *2	WEIGHT lb/ft	TENSILE TEST DIR. *3	TS PSI *4	YS PSI *4	EL %	YR %	WTS PSI
22	306124	48	BPEB	16	16.000	0.375	20	62.64	T	72,661	51,631	40	71	76,432
23	306123	84	BPEB	16	16.000	0.375	20	62.64	T	74,111	49,021	39	66	75,271
24	N39433	42	BPEB	18	18.000	0.250	20	47.44	T	69,180	61,058	38	88	73,241

CHEMICAL COMPOSITION(%)

NO.	DIV *5	C -2	Si -2	Mn -2	P -3	S -3	Cu -3	Ni -3	Cr -3	Mo -4	V -4	Nb -4	Ti -4	B -5	CEQ -3	PCM -3
22	H	16	2	83	13	3	10	10	10	50	10	10	10			
	P	14	2	85	11	2	3	2	15	10	8	27	9			
	P-	14	2	86	11	2	2	1	15	10	9	25	9			
23	H	16	2	82	13	2	10	10	10	50	10	10	10			
	P	14	2	85	11	1	3	1	19	10	8	29	8			
	P	15	2	84	11	1	3	1	18	10	9	24	8			
24	H	6	1	78	13	5	11	10	20	TR	TR	140	10			
	P	6	1	80	14	5	11	5	22	10	9	178	6			
	P	7	1	79	14	5	11	5	20	10	6	168	5			

NO.	HYDROSTATIC TEST TP PSI	HYDROSTATIC TEST H.T sec *9	HYDROSTATIC TEST RESULT	HEAT TREATMENT ℃ *10	ZINC COATING TEST WZC g/m² *11	ZINC COATING TEST CST TIMES *11	THREADS TPI *12	THREADS ETL inch *12	HARDNESS TEST HV	IMPACT TEST (0)℃ DIV *7	IMPACT TEST Energy (Ind, J)	IMPACT TEST SIZE *8
22	1680	5	GOOD	950								
23	1680	5	GOOD	950								
24	1000	5	GOOD	930								

*13 N·D·T (UT)	FLATTENING OR BEND TEST	VISUAL & DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM
GOOD	GOOD	GOOD	GOOD	GOOD
FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST		

- Latest edition per API 5L(45th,2013) ASTM(2012)
- HARDNESS MAX 22 HRC AS PER NACE MR 0175

NOTE

*1.Type of Pipe Ends

BPE	Black Plain Ends	GPE	Galvanized Plain Ends
BPEB	BPE Bevelled	GPEB	GPE Bevelled
BTE	Black Threaded Ends	GTE	Galvanized Threaded Ends
BTC	Black Threaded & Coupled	GTC	Galvanized Threaded & Coupled

*2. O.D : Outside Diameter, W.T : Wall Thickness *3. Direction L : Longitudinal, T : Transverse
*4. Tensile Test -TS : Tensile Strength, YS : Yield Strength, YR : Yield Ratio, EL : Elongation, WTS : Weld tensile strength, Gauge Length : 2 inch, Y.P method : 0.5% Underload
*5. H : Heat analysis, P : Product analysis *6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr : Trace *7. B : Base Metal, W : Weld Line, H : Heat Affected Zone
*8. Specimen Size -A:10x10mm, B:10x7.5mm, C:10x6.6mm, D:10x5.0mm, Direction: Transverse *9. T.P : Testing Pressure, H.T : Holding Time *10. Heat Treatment Seam Normalizing
*11. WZC : Weight of Zinc Coating, CST : Copper Sulphate Test *12. TPI : Threads per inch, ETL : Effective length of threads *13. NDT : UT, Reference Standard 3.2 ¢ Drilled Hole

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DAEBUL PLANT : 3RO, DAEBUL INDUSTRIAL COMPLEX, SAMHO-EUP, YEONGAM-GUN, JEOLLANAM-DO, KOREA

P/O No. : 20382
L/C No. : 5602600358
ISSUED DATE : 2015.04.13
COMMODITY : E.R.W. STEEL PIPE
SPECIFICATION : API 5L X-42 PSL1/ ASTM A53B

CERTIFICATE No. : 150413-101
MANUFACTURED No. : 15-03-212
SUPPLIER : HUSTEEL CO., LTD.
CUSTOMER : PLESA ANAHUAC Y CIAS. SA DE CV

※ Original certificate can be verified through QRcal Application.

NO.	HEAT NO	QUAN-TITY PCS	TYPE *1	NOMINAL SIZE	ORDER SIZE O.D inch	W.T inch	LENGTH ft	WEIGHT lb/ft	TENSILE TEST DIR. *3	TS PSI	YS PSI	EL %	YR %	WTS PSI
25	N35288	65	BPEB	18	18.000	0.250	20	47.44	T	69,760	54,677	37	78	69,325
26	N12441	1	BPEB	18	18.000	0.250	20	47.44	T	70,195	59,173	35	84	76,432
27	N12436	4	BPEB	18	18.000	0.250	20	47.44	T	69,470	59,028	34	85	75,126

CHEMICAL COMPOSITION(%) *5 *6

DIV	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	CEQ	PCM
	-2			-3					-4				-5	-3	
H	6	2	75	12	6	22	10	30	TR	10	150	10			
P	6	2	78	12	6	21	10	32	10	13	205	8			
P	6	2	77	12	5	20	10	31	10	11	194	7			
H	6	1	77	12	8	16	10	20	TR	TR	150	10			
P	6	2	79	13	8	16	7	24	10	14	218	9			
P	6	2	78	13	8	15	7	23	10	12	205	9			
H	6	1	78	12	8	18	10	20	TR	TR	150	20			
P	6	2	78	13	7	15	6	22	10	12	206	9			
P	6	2	78	12	8	15	7	22	10	10	200	9			

NO.	HYDROSTATIC TEST T.P PSI *9	H.T sec	RESULT	HEAT TREATMENT ℃ *10	ZINC COATING TEST WZC g/㎡ *11	CST TIMES	THREADS TPI *12	ETL inch	HARDNESS TEST HV	IMPACT TEST (0)℃ DIV *7	Energy (Ind, J)	SIZE *8
25	1000	5	GOOD	930								
26	1000	5	GOOD	930								
27	1000	5	GOOD	930								

*13 N·D·T (UT)	FLATTENING OR BEND TEST	VISUAL& DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM
GOOD	GOOD	GOOD	GOOD	GOOD
FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST		

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BPE	Black Plain Ends	GPE	Galvanized Plain Ends
BPEB	BPE Bevelled	GPEB	GPE Bevelled
BTE	Black Threaded Ends	GTE	Galvanized Threaded Ends
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*5. H : Heat analysis, P : Product analysis *6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr : Trace *7. B : Base Metal, W : Weld Line, H : Heat Affected Zone
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*11. WZC : Weight of Zinc Coating, CST : Copper Sulphate Test *12. TPI : Threads per inch, ETL : Effective length of threads *13. NDT : UT, Reference Standard 3.2 ¢ Drilled Hole

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DAEBUL PLANT : 3RO, DAEBUL INDUSTRIAL COMPLEX, SAMHO-EUP, YEONGAM-GUN, JEOLLANAM-DO, KOREA

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CUSTOMER : PLESA ANAHUAC Y CIAS. SA DE CV

HUSTEEL
※참고 Original certificate can be verified through QRcod Application.

NO.	HEAT NO	QUANTITY PCS	TYPE *1	NOMINAL SIZE	ORDER SIZE O.D inch	ORDER SIZE W.T inch	ORDER SIZE LENGTH ft *2	WEIGHT lb/ft	TENSILE TEST DIR. *3	TS PSI *4	YS PSI *4	EL %	YR %	WTS PSI
28	N38085	18	BPEB	20	20.000	0.375	20	78.67	T	70,775	58,303	41	82	76,867
29	N38079	25	BPEB	20	20.000	0.375	20	78.67	T	71,646	59,608	40	83	72,661
30	N41413	20	BPEB	24	24.000	0.375	20	94.71	T	69,035	56,272	41	82	74,546

CHEMICAL COMPOSITION(%)

NO.	DIV *5	C -2	Si -2	Mn -2	P -3	S -3	Cu -3	Ni -3	Cr -3	Mo -4	V -4	Nb -4	Ti -4	B -5	CEQ -3	PCM -3
28	H	6	2	77	14	5	20	10	20	TR	TR	240	10			
	P	6	2	79	14	4	19	4	22	10	9	274	8			
	P	7	2	79	14	4	19	4	22	10	9	270	8			
29	H	7	1	74	16	7	15	10	20	TR	TR	230	10			
	P	7	1	76	17	6	13	4	26	20	8	272	7			
	P	8	1	75	17	6	13	4	25	12	6	265	6			
30	H	7	2	76	16	5	17	10	20	TR	10	230	10			
	P	6	2	79	16	4	15	6	26	10	11	270	15			
	P	6	2	78	16	4	15	6	25	10	10	260	14			

NO.	HYDROSTATIC TEST T.P PSI	HYDROSTATIC TEST H.T sec	HYDROSTATIC TEST RESULT *9	HEAT TREATMENT ℃ *10	ZINC COATING TEST WZC g/㎡ *11	ZINC COATING TEST CST TIMES *11	THREADS TPI *12	THREADS ETL inch *12	HARDNESS TEST HV	IMPACT TEST (0) ℃ DIV *7	IMPACT TEST Energy (Ind. J)	IMPACT TEST SIZE *8
28	1430	10	GOOD	950								
29	1430	10	GOOD	950								
30	1190	10	GOOD	950								

*13 N·D·T (UT)	FLATTENING OR BEND TEST	VISUAL & DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM
GOOD	GOOD	GOOD	GOOD	GOOD
FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST		

- Latest edition per API 5L(45th,2013) ASTM(2012)
- HARDNESS MAX 22 HRC AS PER NACE MR 0175

NOTE

*1.Type of Pipe Ends

BPE	Black Plain Ends	GPE	Galvanized Plain Ends
BPEB	BPE Bevelled	GPEB	GPE Bevelled
BTE	Black Threaded Ends	GTE	Galvanized Threaded Ends
BTC	Black Threaded & Coupled	GTC	Galvanized Threaded & Coupled

*2. O.D : Outside Diameter, W.T : Wall Thickness *3. Direction: L : Longitudinal, T : Transverse
*4. Tensile Test -TS : Tensile Strength, YS : Yield Strength, YR : Yield Ratio, EL : Elongation, WTS : Weld tensile strength, Gauge Length : 2 inch, Y.P method : 0.5% Underload
*5. H : Heat analysis, P : Product analysis *6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr :Trace *7. B : Base Metal, W : Weld Line, H : Heat Affected Zone
*8. Specimen Size -A:10x10mm, B :10x7.5mm, C:10x6.6mm, D:10x5.0mm, Direction: Transverse *9. T.P : Testing Pressure, H.T : Holding Time *10. Heat Treatment: Seam Normalizing
*11. WZC : Weight of Zinc Coating, CST : Copper Sulphate Test *12. TPI : Threads per inch, ETL : Effective length of threads *13. NDT : UT, Reference Standard 3.2 ¢ Drilled Hole

SURVEYOR

WE HEREBY CERTIFY THAT THE MATERIAL HEREIN HAS BEEN MADE AND TESTED IN ACCORDANCE WITH THE ORDER AND ABOVE SPECIFICATION
THIS CERTIFICATE IS ISSUED ACCORDING TO EN 10204 3.1(ISO 10474 3.1 B)

MANAGER OF Q.A TEAM

HMC C-30-05-(21)

본 검사증명서에 명기된 규격등도 외 사용시 안전상 문제가 발생할 수 있으며, 검사증명서 위·변조시 사문서 위조(형법231조)로 불이익을 당하실 수 있습니다.

COPY

CERTIFICATE OF QUALITY

주식회사 휴스틸
HUSTEEL Co., Ltd.

HEAD OFFICE : SHINAN B/D 15F, 943-19, DAECHI-DONG, KANGNAM-GU, SEOUL, KOREA
DAEBUL PLANT : 3RO, DAEBUL INDUSTRIAL COMPLEX, SAMHO-EUP, YEONGAM-GUN, JEOLLANAM-DO, KOREA

P/O No. : 20382
L/C No. : 5602600358
ISSUED DATE : 2015.04.13
COMMODITY : E.R.W. STEEL PIPE
SPECIFICATION : API 5L X-42 PSL1/ ASTM A53B

CERTIFICATE No. : 150413-101
MANUFACTURED No. : 15-03-212
SUPPLIER : HUSTEEL CO., LTD.
CUSTOMER : PLESA ANAHUAC Y CIAS. SA DE CV

[참고] Original certificate can be verified through QHeal Application.

NO.	HEAT_NO	QUANTITY PCS	TYPE *1	NOMINAL SIZE	ORDER SIZE O.D inch	ORDER SIZE W.T inch	ORDER SIZE LENGTH ft *2	WEIGHT lb/ft	TENSILE TEST DIR. *3	TS PSI *4	YS PSI *4	EL %	YR %	WTS PSI
31	N37314	9	BPEB	24	24.000	0.375	20	94.71	T	69,615	56,272	39	81	74,691
32	N37310	30	BPEB	24	24.000	0.375	20	94.71	T	67,150	53,807	41	80	74,111
33	N30678	7	BPEB	24	24.000	0.375	20	94.71	T	69,180	55,982	39	81	73,386

CHEMICAL COMPOSITION(%)

DIV *5	C -2	Si -2	Mn -2	P -3	S -3	Cu -3	Ni -3	Cr -3	Mo -4	V -4	Nb -4	Ti -4	B -5	CEQ -3	PCM -3
H	6	1	76	13	5	14	10	30	TR	TR	220	10			
P	5	2	81	13	5	13	4	27	10	8	261	7			
P	5	2	80	13	5	13	4	26	10	8	255	7			
H	6	1	75	11	5	17	10	20	TR	TR	220	10			
P	5	1	75	11	4	14	4	22	10	6	221	7			
P	6	1	75	10	4	13	3	21	10	4	210	7			
H	7	2	74	12	4	29	10	30	TR	10	240	10			
P	6	2	77	12	6	20	7	28	10	9	236	7			
P	7	2	77	12	6	20	8	28	10	9	235	6			

NO.	HYDROSTATIC TEST TP PSI *9	HYDROSTATIC TEST H.T sec *9	HYDROSTATIC TEST RESULT *9	HEAT TREATMENT ℃ *10	ZINC COATING TEST WZC g/m² *11	ZINC COATING TEST CST TIMES *11	THREADS TPI *12	THREADS ETL inch *12	HARDNESS TEST HV	IMPACT TEST (0)℃ DIV *7	IMPACT TEST Energy (Ind, J)	IMPACT TEST SIZE *8
31	1190	10	GOOD	950								
32	1190	10	GOOD	950								
33	1190	10	GOOD	950								

*13 N-D-T (UT)	FLATTENING OR BEND TEST	VISUAL & DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM
GOOD	GOOD	GOOD	GOOD	GOOD
FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST		

- Latest edition per API 5L(45th,2013) ASTM(2012)
- HARDNESS MAX 22 HRC AS PER NACE MR 0175

NOTE

*1.Type of Pipe Ends

BPE	Black Plain Ends	GPE	Galvanized Plain Ends
BPEB	BPE Beveled	GPEB	GPE Beveled
BTE	Black Threaded Ends	GTE	Galvanized Threaded Ends
BTC	Black Threaded & Coupled	GTC	Galvanized Threaded & Coupled

*2. O.D : Outside Diameter, W.T : Wall Thickness *3. Direction L : Longitudinal, T : Transverse
*4. Tensile Test -TS : Tensile Strength, YS : Yield Strength, YR : Yield Ratio, EL : Elongation, WTS : Weld tensile strength, Gauge Length : 2 inch, Y.P method : 0.5% Underload
*5. H : Heat analysis, P : Product analysis *6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr : Trace *7. B : Base Metal, W : Weld Line, H : Heat Affected Zone
*8. Specimen Size-A:10x10mm, B:10x7.5mm, C:10x5.6mm, D:10x5.0mm, Direction: Transverse *9. T.P : Testing Pressure, H.T : Holding Time *10. Heat Treatment Sann Normalizing
*11. WZC : Weight of Zinc Coating, CST : Copper Sulphate Test *12. TPI : Threads per inch, ETL : Effective length of threads *13. NDT : UT, Reference Standard 3.2 ¢ Drilled Hole

SURVEYOR

WE HEREBY CERTIFY THAT THE MATERIAL HEREIN HAS BEEN MADE AND TESTED IN ACCORDANCE WITH THE ORDER AND ABOVE SPECIFICATION
THIS CERTIFICATE IS ISSUED ACCORDING TO EN 10204 3.1(ISO 10474 3.1 B)

MANAGER OF Q.A TEAM

HMC C-30-05-(21)

본 검사증명서에 명기된 규격외의 사용시 안전상 문제가 발생할 수 있으며, 검사증명서 위·변조시 사문서 위조(형법231조)로 불이익을 당하실 수 있습니다.

COPY

CERTIFICATE OF QUALITY

주식회사 휴스틸
HUSTEEL Co., Ltd.

HEAD OFFICE : SHINAN B/D 15F, 943-19, DAECHI-DONG, KANGNAM-GU, SEOUL, KOREA
DAEBUL PLANT : 3RO, DAEBUL INDUSTRIAL COMPLEX, SAMHO-EUP, YEONGAM-GUN, JEOLLANAM-DO, KOREA

P/O No. : 20382
L/C No. : 5602600358
ISSUED DATE : 2015.04.13
COMMODITY : E.R.W. STEEL PIPE
SPECIFICATION : API 5L X-42 PSL1/ ASTM A53B

CERTIFICATE No. : 150413-101
MANUFACTURED No. : 15-03-212
SUPPLIER : HUSTEEL CO., LTD.
CUSTOMER : PLESA ANAHUAC Y CIAS. SA DE CV

※ Original certificate can be verified through QRcal Application.

NO.	HEAT_NO	QUANTITY PCS	TYPE *1	NOMINAL SIZE	ORDER SIZE O.D inch	ORDER SIZE W.T inch	ORDER SIZE LENGTH ft *2	WEIGHT lb/ft	TENSILE TEST DIR. *3	TS PSI *4	YS PSI *4	EL %	YR %	WTS PSI
34	N32056	4	BPEB	24	24.000	0.375	20	94.71	T	71,501	55,982	38	78	76,142
35	N41407	12	BPEB	24	24.000	0.500	20	125.61	T	69,180	56,852	42	82	76,577
36	N40622	8	BPEB	24	24.000	0.500	20	125.61	T	68,745	56,272	44	82	72,516

CHEMICAL COMPOSITION(%)

NO.	DIV *5	C -2	Si -2	Mn -2	P -3	S -3	Cu -3	Ni -3	Cr -3	Mo -4	V -4	Nb -4	Ti -4	B -5	CEQ -3	PCM -3
34	H	7	2	79	13	4	17	10	20	TR	TR	220	10			
	P	6	2	82	14	4	15	8	30	10	12	271	9			
	P	6	2	82	13	4	15	8	29	10	12	268	9			
35	H	7	2	73	13	6	13	10	30	TR	TR	210	10			
	P	6	2	75	12	5	11	4	28	10	9	259	8			
	P	7	2	74	12	5	11	4	27	10	8	254	8			
36	H	6	2	75	14	4	13	10	20	TR	10	220	10			
	P	6	2	77	14	4	10	3	26	10	9	264	9			
	P	6	2	77	14	4	10	3	25	10	8	258	8			

NO.	HYDROSTATIC TEST TP PSI *9	H.T sec	RESULT	HEAT TREATMENT ℃ *10	ZINC COATING TEST WZC g/m² *11	CST TIMES	THREADS TPI *12	ETL inch	HARDNESS TEST HV	IMPACT TEST (0)℃ DIV *7	Energy (Ind. J)	SIZE *8
34	1190	10	GOOD	950								
35	1580	10	GOOD	950								
36	1580	10	GOOD	950								

*13 N·D·T (UT)	FLATTENING OR BEND TEST	VISUAL& DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM
GOOD	GOOD	GOOD	GOOD	GOOD
FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST		

- Latest edition per API 5L(45th,2013) ASTM(2012)
- HARDNESS MAX 22 HRC AS PER NACE MR 0175

NOTE

*1.Type of Pipe Ends

BPE	Black Plain Ends	GPE	Galvanized Plain Ends
BPEB	BPE Beveled	GPEB	GPE Beveled
BTE	Black Threaded Ends	GTE	Galvanized Threaded Ends
BTC	BlackThreaded & Coupled	GTC	Galvanized Threaded & Coupled

*2. O.D : Outside Diameter, W.T : Wall Thickness *3. Direction: L : Longitudinal, T : Transverse
*4. Tensile Test -TS : Tensile Strength, YS : Yield Strength, YR : Yield Ratio, EL : Elongation, WTS : Weld tensile strength, Gauge Length : 2 inch, Y.P method : 0.5% Underload
*5. H : Heat analysis, P : Product analysis *6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr : Trace *7. B : Base Metal, W : Weld Line, H : Heat Affected Zone
*8. Specimen Size -A:10x10mm, B:10x7.5mm, C:10x6.6mm, D:10x5.0mm, Direction: Transverse *9. T.P : Testing Pressure, H.T : Holding Time *10. Heat Treatment Sann Normalizing
*11. WZC : Weight of Zinc Coating, CST : Copper Sulphate Test *12. TPI : Threads per inch, ETL : Effective length of threads *13. NDT : UT, Reference Standard 3.2℃ Drilled Hole

SURVEYOR

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MANAGER OF Q.A TEAM

HMC C-30-05-(21)

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COPY

CERTIFICATE OF QUALITY

주식회사 휴스틸
HUSTEEL Co., Ltd.

HEAD OFFICE : SHINAN B/D 15F, 943-19, DAECHI-DONG, KANGNAM-GU, SEOUL, KOREA
DAEBUL PLANT : 3RO, DAEBUL INDUSTRIAL COMPLEX, SAMHO-EUP, YEONGAM-GUN, JEOLLANAM-DO, KOREA

P/O No. : 20382
L/C No. : 5602600358
ISSUED DATE : 2015.04.13
COMMODITY : E.R.W. STEEL PIPE
SPECIFICATION : API 5L X-42 PSL1/ ASTM A53B

CERTIFICATE No. : 150413-101
MANUFACTURED No. : 15-03-212
SUPPLIER : HUSTEEL CO., LTD.
CUSTOMER : PLESA ANAHUAC Y CIAS. SA DE CV

※ Original certificate can be verified through Qbase Application.

NO.	HEAT NO	QUANTITY PCS	TYPE *1	NOMINAL SIZE	ORDER SIZE O.D inch	ORDER SIZE WT inch	ORDER SIZE LENGTH ft	WEIGHT lb/ft	TENSILE TEST DIR. *3	TS PSI *4	YS PSI *4	EL %	YR %	WTS PSI
37	N20910	1	BPEB	24	24.000	0.500	20	125.61	T	67,295	54,097	44	80	71,936
38	M74516	6	BPEB	24	24.000	0.500	20	125.61	T	70,050	54,822	41	78	79,912

NO.	DIV *5	C -2	Si -2	Mn -2	P -3	S -3	Cu -3	Ni -3	Cr -3	Mo -4	V -4	Nb -4	Ti -4	B -5	CEQ -3	PCM -3
		*6														
37	H	6	1	78	15	4	14	10	20	TR	10	200	10			
	P	6	2	78	15	4	12	7	24	10	9	222	7			
	P	6	2	77	14	4	12	7	22	10	7	212	6			
38	H	6	1	77	16	6	15	10	20	TR	TR	220	10			
	P	5	1	80	16	6	14	6	26	10	8	261	7			
	P	5	1	79	16	6	14	6	25	10	7	256	7			

NO.	HYDROSTATIC TEST T.P PSI *9	H.T sec *9	RESULT *9	HEAT TREATMENT ℃ *10	ZINC COATING TEST WZC g/㎡ *11	ZINC COATING TEST CST TIMES *11	THREADS TPI *12	THREADS ETL inch *12	HARDNESS TEST HV	IMPACT TEST (0)℃ DIV *7	IMPACT TEST Energy (Ind, J)	IMPACT TEST SIZE *8
37	1580	10	GOOD	950								
38	1580	10	GOOD	950								

*13 N·D·T (UT)	FLATTENING OR BEND TEST	VISUAL & DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM
GOOD	GOOD	GOOD	GOOD	GOOD
FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST		

- Latest edition per API 5L(45th,2013) ASTM(2012)
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NOTE

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BPE	Black Plain Ends	GPE	Galvanized Plain Ends
BPEB	BPE Bevelled	GPEB	GPE Bevelled
BTE	Black Threaded Ends	GTE	Galvanized Threaded Ends
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*5. H : Heat analysis, P : Product analysis
*6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr : Trace
*7. B : Base Metal, W : Weld Line, H : Heat Affected Zone
*8. Specimen Size -A:10x10mm, B:10x7.5mm, C:10x6.6mm, D:10x5.0mm, Direction: Transverse
*9. T.P : Testing Pressure, H.T : Holding Time
*10. Heat Treatment Seam Normalizing
*11. WZC : Weight of Zinc Coating, CST : Copper Sulphate Test
*12. TPI : Threads per inch, ETL : Effective length of threads
*13. NDT : UT, Reference Standard 3.2 ϕ Drilled Hole

SURVEYOR

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MANAGER OF Q.A TEAM

HMC C-30-05-(21)

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HUSTEEL

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