

P/O No. : 21589  
L/C No. : M933065

# QUALITY CERTIFICATE



CERTIFICATE No. : 151007-223

MANUFACTURED No. : 15-09-201

SUPPLIER : HUSTEEL CO., LTD.

CUSTOMER : PLESA ANAHUAC Y CIAS., S.A. DE C.V.



Original certificate can be verified through QR Application.

ISSUED DATE : 2015.10.07

COMMODITY : E.R.W. STEEL PIPE

SPECIFICATION : API 5L X-42 PSL-1 / ASTM A53B

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

NO.	HEAT_NO	QUAN-TITY	TYPE	NOMINAL SIZE	ORDER SIZE			WEIGHT	TENSILE TEST						CHEMICAL COMPOSITION(%)																															
					O.D	WT	LENGTH		DIR.	TS	YS	EL	YR	WTS	DIV	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	CEQ	PCM																
					inch	inch	ft																								lb/ft	PSI	%	%	PSI	-2			-3			-4			-5	-3
					*2																										*3	*4			*5	*6										
01	N59203	122	BPEB	12 3/4	12.750	0.225	20	30.13	T	68,745	57,142	38	83	77,882	H	7	2	78	15	3	12	TR	20	TR	10	160	10																			
02	N61660	56	BPEB	12 3/4	12.750	0.225	20	30.13	T	67,295	54,822	39	81	75,416	P	5	2	76	15	4	14	9	26	36	15	191	8																			
03	N56677	44	BPEB	12 3/4	12.750	0.312	20	41.48	T	67,440	58,593	38	87	74,401	P	5	2	76	14	4	13	10	25	32	11	182	8																			

NO.	HYDROSTATIC TEST			HEAT TREATMENT	ZINC COATING TEST		THREADS		HARDNESS TEST	IMPACT TEST			*13 N · D · T ( UT )	FLATTENING OR BEND TEST	VISUAL& DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM					
	TP	H.T	RESULT		WZC	CST	TPI	ETL		HV	DIV	Energy (Ind, J)						SIZE				
	PSI	sec																	°C	g/m <sup>2</sup>	TIMES	inch
	*9																		*10		*11	
01	1270	5	GOOD	930																		
02	1270	5	GOOD	930																		
03	1760	5	GOOD	930																		

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

**N O T E**

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

\*1. Type of Pipe Ends      \*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. W.ZC : Weight of Zinc Coating, C.S.T : Copper Sulphate Test      \*12. T.P.I : Threads per inch, E.T.L : Effective length of threads      \*13. N.D.T : UT, Reference Standard 3.2 C Drilled Hole

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)

*[Signature]*  
MANAGER OF Q.A TEAM

P/O No. : 21589  
L/C No. : M933065

# QUALITY CERTIFICATE



CERTIFICATE No. : 151007-223  
MANUFACTURED No. : 15-09-201  
SUPPLIER : HUSTEEL CO., LTD.  
CUSTOMER : PLESA ANAHUAC Y CIAS., S.A. DE C.V.



Original certificate can be verified through QR Application.

ISSUED DATE : 2015.10.07  
COMMODITY : E.R.W. STEEL PIPE  
SPECIFICATION : API 5L X-42 PSL-1 / ASTM A53B

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

NO.	HEAT_NO	QUAN-TITY	TYPE	NOMINAL SIZE	ORDER SIZE			WEIGHT	TENSILE TEST						CHEMICAL COMPOSITION(%)																															
					O.D	WT	LENGTH		DIR.	TS	YS	EL	YR	WTS	DIV	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	CEQ	PCM																
					inch	inch	ft																								lb/ft	PSI	%	%	PSI	-2			-3			-4			-5	-3
					*2																										*3	*4			*5	*6										
04	N59203	23	BPEB	12 3/4	12.750	0.312	20	41.48	T	70,050	57,287	39	82	75,271	H	7	2	78	15	3	12	TR	20	TR	10	160	10																			
05	N57294	56	BPEB	12 3/4	12.750	0.312	20	41.48	T	63,959	54,242	39	85	70,920	H	6	1	76	13	5	13	10	30	10	TR	140	10																			
06	N62348	3	BPEB	14	14.000	0.312	20	45.65	T	71,210	61,058	36	86	75,271	H	7	1	74	9	7	20	10	20	TR	TR	300	10																			

NO.	HYDROSTATIC TEST			HEAT TREATMENT	ZINC COATING TEST		THREADS		HARDNESS TEST	IMPACT TEST			*13 N · D · T ( UT )	FLATTENING OR BEND TEST	VISUAL& DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM					
	TP	H.T	RESULT		WZC	CST	TPI	ETL		HV	DIV	Energy (Ind, J)						SIZE				
	PSI	sec																	°C	g/m <sup>2</sup>	TIMES	inch
	*9																		*10		*11	
04	1760	5	GOOD	930								GOOD	GOOD	GOOD	GOOD	GOOD						
05	1760	5	GOOD	930								GOOD	GOOD	GOOD	GOOD	GOOD						
06	1600	5	GOOD	930								GOOD	GOOD	GOOD	GOOD	GOOD						

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

**N O T E**

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

\*1. Type of Pipe Ends      \*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. W.ZC : Weight of Zinc Coating, C.S.T : Copper Sulphate Test      \*12. T.P.I : Threads per inch, E.T.L : Effective length of threads      \*13. N.D.T : UT, Reference Standard 3.2 C Drilled Hole

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MANAGER OF Q.A TEAM



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YEONGAM-GUN, JEOLLANAM-DO, KOREA

NO.	HEAT_NO	QUAN-TITY	TYPE	NOMINAL SIZE	ORDER SIZE			WEIGHT	TENSILE TEST						CHEMICAL COMPOSITION(%)																															
					O.D	WT	LENGTH		DIR.	TS	YS	EL	YR	WTS	DIV	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	CEQ	PCM																
					inch	inch	ft																								lb/ft	PSI	%	%	PSI	-2			-3			-4			-5	-3
					*2																										*3	*4			*5	*6										
07	N59203	74	BPEB	14	14.000	0.312	20	45.65	T	69,905	56,272	39	80	75,416	H	7	2	78	15	3	12	TR	20	TR	10	160	10																			
08	N52433	35	BPEB	16	16.000	0.500	20	82.85	T	65,989	54,822	45	83	76,287	H	7	2	77	16	4	11	7	22	23	9	197	5																			
09	N40081	3	BPEB	16	16.000	0.500	20	82.85	T	78,317	64,829	43	83	82,088	H	6	16	95	10	2	16	10	20	TR	10	140	20																			

NO.	HYDROSTATIC TEST			HEAT TREATMENT	ZINC COATING TEST		THREADS		HARDNESS TEST	IMPACT TEST			*13 N · D · T ( UT )	FLATTENING OR BEND TEST	VISUAL& DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM					
	TP	H.T	RESULT		WZC	CST	TPI	ETL		HV	DIV	Energy (Ind, J)						SIZE				
	PSI	sec																	°C	g/m <sup>2</sup>	TIMES	inch
	*9																		*10		*11	
07	1600	5	GOOD	930								GOOD	GOOD	GOOD	GOOD	GOOD						
08	2240	5	GOOD	950								GOOD	GOOD	GOOD	GOOD	GOOD						
09	2240	5	GOOD	950								GOOD	GOOD	GOOD	GOOD	GOOD						

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

N O T E	*1.Type of Pipe Ends				*2. O.D : Outside Diameter, W.T : Wall Thickness				*3. Direction- L : Longitudinal, T : Transverse			
	BPE	Black Plain Ends	GPE	Galvanized Plain Ends	*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			
	BPEB	BPE Bevelled	GPEB	GPE Bevelled	*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 C Drilled Hole			
	BTE	Black Threaded Ends	GTE	Galvanized Threaded Ends								
	BTC	BlackThreaded & Coupled	GTC	Galvanized Threaded& Coupled								

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NO.	HEAT_NO	QUAN-TITY	TYPE	NOMINAL SIZE	ORDER SIZE			WEIGHT	TENSILE TEST						CHEMICAL COMPOSITION(%)																															
					O.D	WT	LENGTH		DIR.	TS	YS	EL	YR	WTS	DIV	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	CEQ	PCM																
					inch	inch	ft																								lb/ft	PSI	%	%	PSI	-2			-3			-4			-5	-3
					*2																										*3	*4			*5	*6										
10	N44261	38	BPEB	18	18.000	0.375	20	70.65	T	68,600	54,677	43	80	73,096	H	6	2	76	13	5	16	10	10	TR	10	220	10																			
11	N55489	5	BPEB	18	18.000	0.375	20	70.65	T	71,936	58,013	41	81	76,722	P	6	2	77	14	4	14	10	21	32	14	212	6																			
12	N56170	1	BPEB	18	18.000	0.375	20	70.65	T	70,485	57,287	40	81	77,447	P	6	2	77	14	4	13	10	20	31	12	206	5																			
															H	6	1	73	15	4	13	10	20	TR	TR	220	10																			
															P	6	2	73	16	5	15	8	23	43	10	273	6																			
															P	6	2	73	16	5	15	8	23	43	10	270	6																			
															H	7	2	76	13	4	15	10	20	TR	TR	240	20																			
															P	7	2	75	13	6	16	6	19	36	9	286	5																			
															P	7	2	75	13	6	15	5	19	32	9	280	4																			

NO.	HYDROSTATIC TEST			HEAT TREATMENT	ZINC COATING TEST		THREADS		HARDNESS TEST	IMPACT TEST			*13 N · D · T ( UT )	FLATTENING OR BEND TEST	VISUAL& DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM					
	TP	H.T	RESULT		WZC	CST	TPI	ETL		HV	DIV	Energy (Ind, J)						SIZE				
	PSI	sec																	°C	g/m <sup>2</sup>	TIMES	inch
	*9																		*10		*11	
10	1500	5	GOOD	950								GOOD	GOOD	GOOD	GOOD	GOOD						
11	1500	5	GOOD	950								GOOD	GOOD	GOOD	GOOD	GOOD						
12	1500	5	GOOD	950								GOOD	GOOD	GOOD	GOOD	GOOD						

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

N O T E	*1.Type of Pipe Ends				*2. O.D : Outside Diameter, WT : Wall Thickness				*3. Direction- L : Longitudinal, T : Transverse			
	BPE	Black Plain Ends	GPE	Galvanized Plain Ends	*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			
	BPEB	BPE Bevelled	GPEB	GPE Bevelled	*8. Specimen Size -A:10x10mm, B:10x7.5mm, C:10x6.6mm, D:10x5.0mm, Direction: Transverse *9. TP : Testing Pressure, HT : 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 C Drilled Hole			
	BTE	Black Threaded Ends	GTE	Galvanized Threaded Ends								
	BTC	Black Threaded & Coupled	GTC	Galvanized Threaded & Coupled								

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NO.	HEAT_NO	QUAN-TITY	TYPE	NOMINAL SIZE	ORDER SIZE			WEIGHT	TENSILE TEST						CHEMICAL COMPOSITION(%)																															
					O.D	WT	LENGTH		DIR.	TS	YS	EL	YR	WTS	DIV	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	CEQ	PCM																
					inch	inch	ft																								lb/ft	PSI	%	%	PSI	-2			-3			-4			-5	-3
					*2																										*3	*4			*5	*6										
13	N52134	86	BPEB	20	20.000	0.250	20	52.78	T	68,890	54,677	37	79	71,791	H	6	2	75	13	6	12	10	50	TR	TR	140	10																			
14	N52082	49	BPEB	20	20.000	0.250	20	52.78	T	67,005	56,272	41	84	77,592	H	7	2	76	16	6	15	8	42	35	11	228	6																			
15	N49837	50	BPEB	20	20.000	0.250	20	52.78	T	69,035	57,432	41	83	77,302	H	7	2	75	11	6	16	8	16	27	6	193	10																			

NO.	HYDROSTATIC TEST			HEAT TREATMENT	ZINC COATING TEST		THREADS		HARDNESS TEST	IMPACT TEST			*13 N · D · T ( UT )	FLATTENING OR BEND TEST	VISUAL & DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM			
	TP	H.T	RESULT		WZC	CST	TPI	ETL		DIV	Energy (Ind, J)	SIZE						FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST
	PSI	sec																		
	*9				*10	*11		*12		*6. Latest edition per API 5L(45th,2013) ASTM(2012) *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 C Drilled Hole										
13	950	10	GOOD	930																
14	950	10	GOOD	930																
15	950	10	GOOD	930																

N O T E	*1. Type of Pipe Ends				*2. O.D : Outside Diameter, W.T : Wall Thickness				*3. Direction- L : Longitudinal, T : Transverse			
	BPE	Black Plain Ends	GPE	Galvanized Plain Ends	*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			
	BPEB	BPE Bevelled	GPEB	GPE Bevelled	*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 C Drilled Hole			
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NO.	HEAT_NO	QUAN-TITY PCS	TYPE	NOMINAL SIZE	ORDER SIZE			WEIGHT lb/ft	TENSILE TEST						CHEMICAL COMPOSITION(%)																													
					O.D	WT	LENGTH		DIR.	TS	YS	EL	YR	WTS	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	CEQ	PCM															
					inch	inch	ft																							PSI	%	%	PSI	-2			-3			-4			-5	-3
					*2																									*3	*4			*5	*6									
16	664311	1	BPEB	20	20.000	0.250	20	52.78	T	70,485	48,295	39	69	74,256	H	16	1	86	17	3	10	10	20	60	10	10																		
17	N57281	45	BPEB	24	24.000	0.250	20	63.47	T	65,844	51,486	39	78	70,630	P	16	1	86	13	2	4	7	9	10	2	7	5																	
18	N53734	2	BPEB	24	24.000	0.250	20	63.47	T	66,569	55,982	39	84	66,569	P	15	1	85	13	2	4	7	8	10	2	7	4																	
															H	7	2	76	17	4	11	10	20	TR	TR	160	10																	
															P	7	1	75	11	5	18	10	23	39	10	204	6																	
															P	7	1	75	11	5	18	10	23	30	9	197	5																	
															H	6	1	74	11	5	16	10	10	TR	10	170	10																	
															P	8	2	74	13	6	17	8	20	36	10	231	13																	
															P	8	2	73	13	6	16	7	18	28	9	217	12																	

NO.	HYDROSTATIC TEST			HEAT TREATMENT	ZINC COATING TEST		THREADS		HARDNESS TEST	IMPACT TEST			*13 N · D · T ( UT )	FLATTENING OR BEND TEST	VISUAL & DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM										
	TP	H.T	RESULT		WZC	CST	TPI	ETL		HV	DIV	Energy (Ind, J)						SIZE	FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST						
	PSI	sec																						°C	g/m <sup>2</sup>	TIMES	inch
	*9																							*10	*11	*12	*7
16	950	10	GOOD	930																							
17	790	10	GOOD	930																							
18	790	10	GOOD	930																							

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

N O T E	*1. Type of Pipe Ends				*2. O.D : Outside Diameter, W.T : Wall Thickness				*3. Direction- L : Longitudinal, T : Transverse						
	BPE	Black Plain Ends	GPE	Galvanized Plain Ends	*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				*7. B : Base Metal, W : Weld Line, H : Heat Affected Zone						
	BPEB	BPE Bevelled	GPEB	GPE Bevelled	*5. H : Heat analysis, P : Product analysis				*6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr : Trace						
	BTE	Black Threaded Ends	GTE	Galvanized Threaded Ends	*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						
BTC	Black Threaded & Coupled	GTC	Galvanized Threaded & Coupled	*11. W.ZC : Weight of Zinc Coating, C.S.T : Copper Sulphate Test				*12. T.P.I : Threads per inch, E.T.L : Effective length of threads				*13. N.D.T : UT, Reference Standard 3.2 C Drilled Hole			

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)

*[Signature]*  
MANAGER OF Q.A TEAM

P/O No. : 21589  
L/C No. : M933065

# QUALITY CERTIFICATE



CERTIFICATE No. : 151007-223

MANUFACTURED No. : 15-09-201

SUPPLIER : HUSTEEL CO., LTD.

CUSTOMER : PLESA ANAHUAC Y CIAS., S.A. DE C.V.



Original certificate can be verified through QR Application.

ISSUED DATE : 2015.10.07

COMMODITY : E.R.W. STEEL PIPE

SPECIFICATION : API 5L X-42 PSL-1 / ASTM A53B

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

NO.	HEAT_NO	QUAN-TITY	TYPE	NOMINAL SIZE	ORDER SIZE			WEIGHT	TENSILE TEST						CHEMICAL COMPOSITION(%)																															
					O.D	WT	LENGTH		DIR.	TS	YS	EL	YR	WTS	DIV	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	CEQ	PCM																
					inch	inch	ft																								lb/ft	PSI	%	%	PSI	-2			-3			-4			-5	-3
					*2																										lb/ft	*4			PSI	*6										
19	N52082	46	BPEB	24	24.000	0.250	20	63.47	T	66,279	57,432	41	87	75,996	H	6	1	76	14	5	15	10	30	TR	10	130	10																			
20	N62234	3	BPEB	24	24.000	0.250	20	63.47	T	77,447	65,119	38	84	79,042	H	6	2	79	14	5	16	10	30	44	11	184	6																			
21	N57291	52	BPEB	24	24.000	0.250	20	63.47	T	65,989	51,341	40	78	71,210	H	6	2	78	14	5	16	9	29	43	9	180	5																			
															H	6	16	101	14	2	15	10	30	TR	10	310	20																			
															H	6	19	103	15	2	19	10	31	45	13	373	18																			
															H	6	19	102	15	2	19	11	30	45	12	368	17																			
															H	6	1	75	10	5	17	10	20	TR	TR	160	10																			
															H	7	1	76	11	5	18	10	24	43	12	210	6																			
															H	7	1	75	11	4	18	10	24	44	11	203	6																			

NO.	HYDROSTATIC TEST			HEAT TREATMENT	ZINC COATING TEST		THREADS		HARDNESS TEST	IMPACT TEST			*13 N · D · T ( UT )	FLATTENING OR BEND TEST	VISUAL & DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM	
	TP	H.T	RESULT		WZC	CST	TPI	ETL		( 0 ) °C	DIV	Energy (Ind, J)						SIZE
	PSI	sec																
	*9				*10	*11		*12										
19	790	10	GOOD	930														
20	790	10	GOOD	930														
21	790	10	GOOD	930														

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- HARDNESS MAX 22 HRC AS PER NACE MR 0175

N O T E	*1. Type of Pipe Ends				*2. O.D : Outside Diameter, W.T : Wall Thickness				*3. Direction- L : Longitudinal, T : Transverse						
	BPE	Black Plain Ends	GPE	Galvanized Plain Ends	*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				*7. B : Base Metal, W : Weld Line, H : Heat Affected Zone						
	BPEB	BPE Bevelled	GPEB	GPE Bevelled	*5. H : Heat analysis, P : Product analysis				*6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr : Trace						
	BTE	Black Threaded Ends	GTE	Galvanized Threaded Ends	*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						
BTC	Black Threaded & Coupled	GTC	Galvanized Threaded & Coupled	*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 C Drilled Hole			

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SURVEYOR

MANAGER OF Q.A TEAM

P/O No. : 21589  
L/C No. : M933065

# QUALITY CERTIFICATE



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NO.	HEAT_NO	QUAN-TITY	TYPE	NOMINAL SIZE	ORDER SIZE			WEIGHT	TENSILE TEST						CHEMICAL COMPOSITION(%)																															
					O.D	WT	LENGTH		DIR.	TS	YS	EL	YR	WTS	DIV	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	CEQ	PCM																
					inch	inch	ft																								lb/ft	PSI	%	%	PSI	-2			-3			-4			-5	-3
					*2																										*3	*4			*5	*6										
22	N59284	27	BPEB	24	24.000	0.500	20	125.61	T	69,180	57,142	43	83	78,752	H	7	1	76	15	5	12	10	20	TR	10	220	10																			
23	N20910	1	BPEB	24	24.000	0.500	20	125.61	T	67,295	54,097	44	80	71,936	P	7	2	79	15	5	12	8	22	31	10	275	9																			
															P	7	1	77	14	5	10	5	17	10	4	238	7																			
															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																			

NO.	HYDROSTATIC TEST			HEAT TREATMENT	ZINC COATING TEST		THREADS		HARDNESS TEST	IMPACT TEST			*13 N · D · T ( UT )	FLATTENING OR BEND TEST	VISUAL & DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM						
	TP	H.T	RESULT		WZC	CST	TPI	ETL		( 0 ) °C	DIV	Energy (Ind, J)						SIZE					
	PSI	sec			°C	g/m <sup>2</sup>													TIMES	inch	HV	*7	*8
	*9				*11														*12		*6		
22	1580	10	GOOD	950																			
23	1580	10	GOOD	950																			

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N O T E	*1. Type of Pipe Ends				*2. O.D : Outside Diameter, W.T : Wall Thickness				*3. Direction- L : Longitudinal, T : Transverse							
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	BPEB	BPE Bevelled	GPEB	GPE Bevelled	*5. H : Heat analysis, P : Product analysis				*6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr : Trace				*9. T.P : Testing Pressure, H.T : Holding Time			
	BTE	Black Threaded Ends	GTE	Galvanized Threaded Ends	*8. Specimen Size -A:10x10mm, B:10x7.5mm, C:10x6.6mm, D:10x5.0mm, Direction: Transverse				*10. Heat Treatment Seam Normalizing							
	BTC	Black Threaded & Coupled	GTC	Galvanized Threaded & Coupled	*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 C Drilled Hole			

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