

COPY

P/O No. : 19326
 L/C No. : M931697
 ISSUED DATE : 2014.12.29
 COMMODITY : E.R.W. STEEL PIPE
 SPECIFICATION : API 5L X-42 PSL1/ASTM A53B

QUALITY CERTIFICATE



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. : 141229-473
 MANUFACTURED No. : 14-11-203
 SUPPLIER : HUSTEEL CO., LTD.
 CUSTOMER : PLESA ANAHUAC Y CLAS S.A. DE. C.V.



Original certificate can be verified through QR Application.

NO.	HEAT_NO	QUAN-TITY	TYPE	NOMINAL SIZE	ORDER SIZE			WEIGHT	TENSILE TEST						CHEMICAL COMPOSITION(%)																		
					O.D	W.T	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	%
04	N25990	10	BPEB	12 3/4	12.750	0.250	20	33.41	T	68,745	54,242	37	79	70,485	H	6	1	78	14	5	11	10	20	TR	TR	140	10						
05	N25985	58	BPEB	12 3/4	12.750	0.250	20	33.41	T	68,165	53,662	39	79	70,775	H	6	2	80	14	5	12	7	26	10	12	193	7						
06	N13098	2	BPEB	14	14.000	0.250	20	36.75	T	68,455	55,692	40	81	72,661	H	6	1	78	14	6	11	5	23	10	12	175	7						

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
	T.P	H.T	RESULT		WZC	CST	TPI	ETL		(0) °C							
	PSI	sec			g/m ²	TIMES	inch	inch		HV	DIV	Energy (Ind, J)					
04	1410	5	GOOD	930													
05	1410	5	GOOD	930													
06	1280	5	GOOD	930													

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

***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

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



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YEONGAM-GUN, JEOLLANAM-DO, KOREA

CERTIFICATE No. : 141229-473

MANUFACTURED No. : 14-11-203

SUPPLIER : HUSTEEL CO., LTD.

CUSTOMER : PLESA ANAHUAC Y CLAS S.A. DE. C.V.



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NO.	HEAT_NO	QUAN-TITY PCS	TYPE *1	NOMINAL SIZE	ORDER SIZE			WEIGHT lb/ft	TENSILE TEST					CHEMICAL COMPOSITION(%)																		
					O.D inch	W.T inch	LENGTH ft		DIR.	TS	YS	EL	YR	WTS	DIV	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	CEQ	PCM		
					*2		*4			PSI	%	%	PSI	*6			-4			-5		-3										
07	N24048	5	BPEB	14	14.000	0.250	20	36.75	T	66,860	54,677	41	82	73,531	H	6	1	71	12	4	19	10	30	TR	TR	140	10					
08	N13101	1	BPEB	14	14.000	0.250	20	36.75	T	68,600	56,127	41	82	73,676	P	6	1	76	12	4	16	9	21	20	8	161	5					
09	N25163	76	BPEB	14	14.000	0.250	20	36.75	T	66,424	52,936	41	80	70,195	H	7	1	77	12	5	12	10	20	TR	TR	10	150	10				

NO.	HYDROSTATIC TEST			HEAT TREATMENT °C	ZINC COATING TEST		THREADS		HARDNESS TEST HV	IMPACT TEST (0) °C			*13 N · D · T (UT)	FLATTENING OR BEND TEST	VISUAL & DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM
	T.P	H.T	RESULT		WZC	CST	TPI	ETL		GOOD	GOOD	GOOD	GOOD	GOOD			
	PSI	sec			g/m'	TIMES	inch	inch		FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST					
07	1280	5	GOOD	930													
08	1280	5	GOOD	930													
09	1280	5	GOOD	930													

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- HARDNESS MAX 22 HRC AS PER NACE MR 0175

NOTE	*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, YP method : 0.5% Underload				*5. H : Heat analysis, P : Product analysis							
	BPEB	BPE Bevelled	GPEB	GPE Bevelled	*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							
	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 © 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	W.T	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									PSI	%	%	PSI	-2			-3			-4			-5		-3
10	N19653	2	BPEB	14	14.000	0.250	20	36.75	T	69,035	54,532	41	79	73,241	H	6	2	73	16	5	19	10	30	TR	10	150	10				
11	N24052	222	BPEB	14	14.000	0.250	20	36.75	T	66,714	55,257	39	83	74,111	P	7	2	75	16	6	18	9	32	17	11	188	7				
12	N25167	2	BPEB	14	14.000	0.250	20	36.75	T	69,325	56,562	41	82	72,516	P	7	2	74	16	5	18	9	31	13	8	180	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					
	T.P	H.T	RESULT		WZC	CST	TPI	ETL		DIV	Energy (Ind. J)	SIZE						GOOD	GOOD	GOOD	GOOD	GOOD
	PSI	sec			°C	g/m ²																
10	1280	5	GOOD	930																		
11	1280	5	GOOD	930																		
12	1280	5	GOOD	930																		

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 - HARDNESS MAX 22 HRC AS PER NACE MR 0175

N O T E

*1. Type of Pipe Ends <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>BPE</td> <td>Black Plain Ends</td> <td>GPE</td> <td>Galvanized Plain Ends</td> </tr> <tr> <td>BPEB</td> <td>BPE Bevelled</td> <td>GPEB</td> <td>GPE Bevelled</td> </tr> <tr> <td>BTE</td> <td>Black Threaded Ends</td> <td>GTE</td> <td>Galvanized Threaded Ends</td> </tr> <tr> <td>BTC</td> <td>Black Threaded & Coupled</td> <td>GTC</td> <td>Galvanized Threaded & Coupled</td> </tr> </table>	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 *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 *8. Specimen Size -A : 10x10mm, B : 10x7.5mm, C : 10x6.6mm, D : 10x5.0mm, Direction: Transverse *11. WZC : Weight of Zinc Coating, CST : Copper Sulphate Test	*3. Direction- L : Longitudinal, T : Transverse *6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr : Trace *9. T.P : Testing Pressure, H.T : Holding Time *12. TPI : Threads per inch, ETL : Effective length of threads *13. NDT : UT, Reference Standard 3.2 C Drilled Hole	*7. B : Base Metal, W : Weld Line, H : Heat Affected Zone *10. Heat Treatment Seam Normalizing
BPE	Black Plain Ends	GPE	Galvanized Plain Ends																
BPEB	BPE Bevelled	GPEB	GPE Bevelled																
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NO.	HEAT_NO	QUAN-TITY PCS	TYPE *1	NOMINAL SIZE	ORDER SIZE			WEIGHT lb/ft	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									PSI			%	%	PSI	-2			-3			-4			-5		-3	
13	N25996	3	BPEB	14	14.000	0.250	20	36.75	T	68,600	55,837	40	81	72,806	H	6	1	78	14	5	12	10	20	TR	TR	130	10							
14	N27592	47	BPEB	14	14.000	0.250	20	36.75	T	70,485	59,898	39	85	77,157	P	6	2	77	15	5	12	9	25	22	9	156	5							
15	N28622	79	BPEB	16	16.000	0.225	20	37.94	T	70,195	60,043	37	86	71,355	P	6	2	75	16	6	13	10	20	TR	10	140	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	
	T.P	H.T	RESULT		WZC	CST	TPI	ETL		HV	DIV	Energy (Ind, J)	SIZE	GOOD	GOOD	GOOD	GOOD	GOOD
	PSI	sec			°C	g/m ²												
13	1280	5	GOOD	930														
14	1280	5	GOOD	930														
15	1010	5	GOOD	930														

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N O T E

<p>*1. Type of Pipe Ends</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>BPE</td> <td>Black Plain Ends</td> <td>GPE</td> <td>Galvanized Plain Ends</td> </tr> <tr> <td>BPEB</td> <td>BPE Bevelled</td> <td>GPEB</td> <td>GPE Bevelled</td> </tr> <tr> <td>BTE</td> <td>Black Threaded Ends</td> <td>GTE</td> <td>Galvanized Threaded Ends</td> </tr> <tr> <td>BTC</td> <td>Black Threaded & Coupled</td> <td>GTC</td> <td>Galvanized Threaded & Coupled</td> </tr> </table>	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	<p>*2. O.D : Outside Diameter, W.T : Wall Thickness</p> <p>*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</p> <p>*5. H : Heat analysis, P : Product analysis</p> <p>*8. Specimen Size -A:10x10mm, B:10x7.5mm, C:10x6.6mm, D:10x5.0mm, Direction: Transverse</p> <p>*11. WZC : Weight of Zinc Coating, CST : Copper Sulphate Test</p>	<p>*3. Direction- L : Longitudinal, T : Transverse</p> <p>*6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr : Trace</p> <p>*9. T.P : Testing Pressure, H.T : Holding Time</p> <p>*12. TPI : Threads per inch, ETL : Effective length of threads</p> <p>*13. NDT : UT, Reference Standard 3.2 C Drilled Hole</p>	<p>*7. B : Base Metal, W : Weld Line, H : Heat Affected Zone</p> <p>*10. Heat Treatment Seam Normalizing</p>
BPE	Black Plain Ends	GPE	Galvanized Plain Ends																
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					O.D inch	WT inch	LENGTH ft		DIR.	TS	YS	EL	YR	WTS	DIV	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	CEQ	PCM	
					*2		*3		*4		*5		*6		-2		-3		-4		-5		-3								
16	N18486	73	BPEB	16	16.000	0.225	20	37.94	T	70,630	60,478	39	86	70,340	H	7	1	78	13	3	17	10	20	TR	10	160	10				
17	N21575	77	BPEB	16	16.000	0.250	20	42.09	T	68,600	59,173	40	86	71,501	P	6	1	80	13	3	15	7	29	10	14	216	8				
18	N16483	47	BPEB	16	16.000	0.250	20	42.09	T	71,065	65,844	36	93	72,516	H	6	1	76	11	5	18	10	20	TR	TR	130	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
	T.P	H.T	RESULT		WZC	CST	TPI	ETL		(0) °C							
	PSI	sec			g/m²	TIMES	inch	inch		HV	DIV	Energy (Ind, J)					
16	1010	5	GOOD	930													
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 CUSTOMER : PLESA ANAHUAC Y CLAS S.A. DE. C.V.



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NO.	HEAT_NO	QUAN-TITY	TYPE	NOMINAL SIZE	ORDER SIZE			WEIGHT	TENSILE TEST					CHEMICAL COMPOSITION(%)																
					O.D	W.T	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									PSI	%	%	PSI	-2			-3			-4			-5	-3
19	N21986	43	BPEB	16	16.000	0.250	20	42.09	T	71,065	61,203	36	86	73,966	H	7	1	74	15	7	19	10	20	TR	TR	160	10			
20	N21583	65	BPEB	16	16.000	0.250	20	42.09	T	69,035	60,188	40	87	72,226	H	8	1	76	16	7	21	9	25	10	12	211	6			
21	N21579	80	BPEB	16	16.000	0.250	20	42.09	T	68,745	58,883	39	86	74,691	H	6	1	74	11	5	11	10	20	TR	TR	140	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
	T.P	H.T	RESULT		WZC	CST	TPI	ETL		(0) °C							
	PSI	sec			g/m ²	TIMES	inch	inch		Energy (Ind, J)	SIZE	FLANGE TEST					
19	1120	5	GOOD	930													
20	1120	5	GOOD	930													
21	1120	5	GOOD	930													

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

*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. W.ZC : Weight of Zinc Coating, CST : 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)

SURVEYOR _____ MANAGER OF Q.A TEAM *[Signature]*



COPY

P/O No. : 19326
L/C No. : M931697

QUALITY CERTIFICATE



CERTIFICATE No. : 141229-473

ISSUED DATE : 2014.12.29

MANUFACTURED No. : 14-11-203

COMMODITY : E.R.W. STEEL PIPE

HEAD OFFICE SHINAN B/D 15F, 943-19, DAECHI-DONG,
KANGNAM-GU, SEOUL, KOREA

SUPPLIER : HUSTEEL CO., LTD.

SPECIFICATION : API 5L X-42 PSL1/ASTM A53B

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

CUSTOMER : PLESA ANAHUAC Y CLAS S.A. DE. C.V.



Original certificate can be verified through QR Application.

NO.	HEAT_NO	QUAN-TITY PCS	TYPE *1	NOMINAL SIZE	ORDER SIZE			WEIGHT lb/ft	TENSILE TEST					CHEMICAL COMPOSITION(%)																				
					O.D	W.T	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																								PSI	%	%	PSI
22	N28622	50	BPEB	16	16.000	0.312	20	52.32	T	70,195	56,417	37	80	73,531	H	7	2	75	11	4	18	10	20	TR	10	160	10							
23	N27689	28	BPEB	16	16.000	0.312	20	52.32	T	68,455	59,173	38	86	78,462	H	6	2	79	12	4	20	8	28	10	17	283	9							
24	N25182	47	BPEB	16	16.000	0.312	20	52.32	T	67,005	53,807	38	80	69,035	H	7	1	74	11	6	18	10	20	TR	TR	140	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						
	T.P	H.T	RESULT		WZC	CST	TPI	ETL		(0) °C	DIV	Energy (Ind, J)						SIZE	GOOD	GOOD	GOOD	GOOD	GOOD
	PSI	sec																					
22	1400	5	GOOD	*10	*11	*12																	
23	1400	5	GOOD	930																			
24	1400	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

<p>*1. Type of Pipe Ends</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>BPE</td> <td>Black Plain Ends</td> <td>GPE</td> <td>Galvanized Plain Ends</td> </tr> <tr> <td>BPEB</td> <td>BPE Bevelled</td> <td>GPEB</td> <td>GPE Bevelled</td> </tr> <tr> <td>BTE</td> <td>Black Threaded Ends</td> <td>GTE</td> <td>Galvanized Threaded Ends</td> </tr> <tr> <td>BTC</td> <td>Black Threaded & Coupled</td> <td>GTC</td> <td>Galvanized Threaded & Coupled</td> </tr> </table>	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	<p>*2. O.D : Outside Diameter, W.T : Wall Thickness</p> <p>*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</p> <p>*5. H : Heat analysis, P : Product analysis</p> <p>*8. Specimen Size -A:10x10mm, B:10x7.5mm, C:10x6.6mm, D:10x5.0mm, Direction: Transverse</p> <p>*11. WZC : Weight of Zinc Coating, CST : Copper Sulphate Test</p>	<p>*3. Direction- L : Longitudinal, T : Transverse</p> <p>*6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr : Trace</p> <p>*9. T.P : Testing Pressure, H.T : Holding Time</p> <p>*12. TPI : Threads per inch, ETL : Effective length of threads</p> <p>*13. NDT : UT, Reference Standard 3.2 C Drilled Hole</p>
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															

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 QA TEAM

COPY

QUALITY CERTIFICATE



P/O No. : 19326
L/C No. : M931697

ISSUED DATE : 2014.12.29

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. : 141229-473

MANUFACTURED No. : 14-11-203

SUPPLIER : HUSTEEL CO., LTD.

CUSTOMER : PLESA ANAHUAC Y CLAS S.A. DE. C.V.



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	DIV	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	CEQ	PCM	
					inch	inch	ft									-2		-3			-4			-5		-3					
25	SP76887	7	BPEB	20	20.000	0.250	20	52.78	T	67,295	44,960	38	67	71,791	H	14	1	69	8	6	22	10	20	TR	TR	10	10				
26	N28568	28	BPEB	20	20.000	0.250	20	52.78	T	65,844	53,227	39	81	69,905	P	13	1	69	8	6	19	6	21	10	9	34	5				
27	N25231	72	BPEB	20	20.000	0.250	20	52.78	T	67,295	56,852	42	84	71,355	P	14	1	69	8	6	19	6	20	10	9	27	5				

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				
	T.P	H.T	RESULT		WZC	CST	TPI	ETL		(0) °C	GOOD						GOOD	GOOD	GOOD	GOOD
	PSI	sec			°C	g/m ²														
25	950	10	GOOD	930																
26	950	10	GOOD	930																
27	950	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

<p>*1. Type of Pipe Ends</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>BPE</td> <td>Black Plain Ends</td> <td>GPE</td> <td>Galvanized Plain Ends</td> </tr> <tr> <td>BPEB</td> <td>BPE Bevelled</td> <td>GPEB</td> <td>GPE Bevelled</td> </tr> <tr> <td>BTE</td> <td>Black Threaded Ends</td> <td>GTE</td> <td>Galvanized Threaded Ends</td> </tr> <tr> <td>BTC</td> <td>Black Threaded & Coupled</td> <td>GTC</td> <td>Galvanized Threaded & Coupled</td> </tr> </table>	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	<p>*2. O.D : Outside Diameter, WT : Wall Thickness</p> <p>*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</p> <p>*5. H : Heat analysis, P : Product analysis</p> <p>*8. Specimen Size -A:10x10mm, B:10x7.5mm, C:10x6.6mm, D:10x5.0mm, Direction: Transverse</p> <p>*11. WZC : Weight of Zinc Coating, CST : Copper Sulphate Test</p>	<p>*3. Direction- L : Longitudinal, T : Transverse</p> <p>*6. -2 : x1/100, -3 : x1/1000, -4 : x1/10000, -5 : x1/100000, Tr : Trace</p> <p>*7. B : Base Metal, W : Weld Line, H : Heat Affected Zone</p> <p>*9. T.P : Testing Pressure, H.T : Holding Time</p> <p>*12. TPI : Threads per inch, ETL : Effective length of threads</p> <p>*13. NDT : UT, Reference Standard 3.2 C Drilled Hole</p>	<p>*10. Heat Treatment Seam Normalizing</p>
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																

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THIS CERTIFICATE IS ISSUED ACCORDING TO EN 10204 3.1(ISO 10474 3.1 B)

MANAGER OF QA TEAM

COPY

QUALITY CERTIFICATE

P/O No. : 19326
L/C No. : M931697



CERTIFICATE No. : 141229-473



ISSUED DATE : 2014.12.29

MANUFACTURED No. : 14-11-203

COMMODITY : E.R.W. STEEL PIPE

HEAD OFFICE SHINAN B/D 15F, 943-19, DAECHEI-DONG,
KANGNAM-GU, SEOUL, KOREA

SUPPLIER : HUSTEEL CO., LTD.

SPECIFICATION : API 5L X-42 PSL1/ASTM A53B

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

CUSTOMER : PLESA ANAHUAC Y CLAS S.A. DE. C.V.

Original certificate can be verified through QR Application.

NO.	HEAT_NO	QUAN-TITY PCS	TYPE	NOMINAL SIZE	ORDER SIZE			WEIGHT lb/ft	TENSILE TEST					CHEMICAL COMPOSITION(%)																				
					O.D	W.T	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																								PSI	%	%	PSI
28	N25226	70	BPEB	20	20.000	0.250	20	52.78	T	65,989	55,547	42	84	70,050	H	6	2	76	16	6	20	10	30	TR	10	140	10							
29	N21764	9	BPEB	20	20.000	0.250	20	52.78	T	68,310	55,112	41	81	70,920	P	7	2	79	17	7	20	9	31	19	13	171	7							
30	09311	1	BPEB	20	20.000	0.250	20	52.78	T	64,829	51,486	41	79	72,806	P	6	2	78	17	7	19	9	29	13	12	156	6							
															H	6	1	75	14	5	13	10	20	TR	10	170	10							
															P	7	2	77	15	6	14	9	30	17	12	229	8							
															P	8	2	77	15	6	13	8	29	10	11	221	7							
															H	15	1	66	13	5	20	20	33	100	TR	TR	10							
															P	14	1	70	13	4	21	12	35	67	11	37	7							
															P	14	1	69	13	4	20	10	34	64	10	27	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						
	T.P	H.T	RESULT		WZC	CST	TPI	ETL		(0) °C	DIV	Energy (Ind. J)						SIZE	GOOD	GOOD	GOOD	GOOD	GOOD
	PSI	sec			°C	g/m ²																	
28	950	10	GOOD	930																			
29	950	10	GOOD	930																			
30	950	10	GOOD	930																			

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

NOTE	*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			
	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 *7. B : Base Metal, W : Weld Line, H : Heat Affected Zone			
	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 *10. Heat Treatment Seam Normalizing Reference Standard 3.2 C Drilled Hole			
	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,			

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THIS CERTIFICATE IS ISSUED ACCORDING TO EN 10204 3.1 (ISO 10474 3.1 B)

SURVEYOR _____ MANAGER OF QA TEAM *[Signature]*

COPY

QUALITY CERTIFICATE



P/O No. : 19326
 L/C No. : M931697
 ISSUED DATE : 2014.12.29
 COMMODITY : E.R.W. STEEL PIPE
 SPECIFICATION : API 5L X-42 PSL1/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

CERTIFICATE No. : 141229-473
 MANUFACTURED No. : 14-11-203
 SUPPLIER : HUSTEEL CO., LTD.
 CUSTOMER : PLESA ANAHUAC Y CLAS S.A. DE. C.V.



Original certificate can be verified through QR Application.

NO.	HEAT_NO	QUAN-TITY PCS	TYPE	NOMINAL SIZE	ORDER SIZE			WEIGHT lb/ft	TENSILE TEST					CHEMICAL COMPOSITION(%)																	
					O.D inch	W.T inch	LENGTH ft		DIR	TS PSI	YS PSI	EL %	YR %	WTS PSI	DIV	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	CEQ	PCM	
					*2				*3	*4				*5	-2			-3			-4			-5		-3					
					*6																										
31	N28576	7	BPEB	20	20.000	0.375	20	78.67	T	70,485	57,868	40	82	76,287	H	7	1	77	14	4	17	10	20	TR	TR	220	10				
32	N28572	36	BPEB	20	20.000	0.375	20	78.67	T	70,050	56,417	40	81	72,371	P	4	2	81	13	4	16	8	30	10	13	287	8				
33	N25269	79	BPEB	24	24.000	0.250	20	63.47	T	66,714	59,898	41	90	72,371	H	7	2	77	16	4	22	10	20	TR	10	240	10				
															P	5	2	77	16	4	20	8	27	10	11	291	8				
															P	5	2	77	16	4	20	7	26	10	11	286	8				
															H	6	1	74	13	6	22	10	30	TR	TR	140	10				
															P	6	2	76	14	5	21	9	33	10	14	206	8				
															P	6	1	76	14	5	21	9	32	10	12	194	7				

NO.	HYDROSTATIC TEST			HEAT TREATMENT °C	ZINC COATING TEST		THREADS		HARDNESS TEST HV	IMPACT TEST (0) °C			*13 N · D · T (UT)	FLATTENING OR BEND TEST	VISUAL & DIMENSION	METALLOGRAPHIC TEST	RESIDUAL MAGNETISM
	T.P	H.T	RESULT		WZC	CST	TPI	ETL		GOOD	GOOD	GOOD	GOOD	GOOD	GOOD		
	PSI	sec			g/m ²	TIMES	inch	inch		FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST					
	*9				*10	*11	*12			*7	Energy (Ind. J)	SIZE *8					
31	1430	10	GOOD	950													
32	1430	10	GOOD	950													
33	790	10	GOOD	930													

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

***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.** W.ZC : Weight of Zinc Coating, CST : Copper Sulphate Test ***12.** T.P.I : Threads per inch, E.T.L : Effective length of threads ***13.** N.D.T, Reference Standard 3.2 © Drilled Hole

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MANAGER OF Q.A TEAM

COPY

QUALITY CERTIFICATE

P/O No. : 19326
L/C No. : M931697



CERTIFICATE No. : 141229-473

ISSUED DATE : 2014.12.29

MANUFACTURED No. : 14-11-203

COMMODITY : E.R.W. STEEL PIPE

HEAD OFFICE SHINAN B/D 15F, 943-19, DAECHI-DONG,
KANGNAM-GU, SEOUL, KOREA

SUPPLIER : HUSTEEL CO., LTD.

SPECIFICATION : API 5L X-42 PSL1/ASTM A53B

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

CUSTOMER : PLESA ANAHUAC Y CLAS S.A. DE. C.V.



Original certificate can be verified through QR Application.

NO.	HEAT_NO	QUAN-TITY	TYPE	NOMINAL SIZE	ORDER SIZE			WEIGHT	TENSILE TEST					CHEMICAL COMPOSITION(%)																				
					O.D	W.T	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									PSI	%	%	PSI	-2			-3			-4			-5			-3		
34	N25266	46	BPEB	24	24.000	0.250	20	63.47	T	65,989	60,043	40	91	70,050	H	7	1	74	12	5	25	10	20	TR	10	150	10							
35	N17338	1	BPEB	24	24.000	0.250	20	63.47	T	68,020	59,608	40	88	73,096	H	7	2	77	11	5	23	8	29	10	16	208	8							
36	M94178	3	BPEB	24	24.000	0.250	20	63.47	T	67,730	59,028	38	87	71,646	H	6	1	76	16	7	15	10	30	TR	10	150	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		
	T.P	H.T	RESULT		WZC	CST	TPI	ETL		(0) °C	GOOD	GOOD	GOOD					GOOD	GOOD
	PSI	sec			g/m ²	TIMES	inch	inch		Energy (Ind, J)	FLANGE TEST	REVERSE FLATTENING TEST	CRUSH TEST						
34	790	10	GOOD	930															
35	790	10	GOOD	930															
36	790	10	GOOD	930															

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

***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 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)

MANAGER OF Q.A TEAM

COPY

QUALITY CERTIFICATE



P/O No. : 19326
L/C No. : M931697

ISSUED DATE : 2014.12.29

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. : 141229-473

MANUFACTURED No. : 14-11-203

SUPPLIER : HUSTEEL CO., LTD.

CUSTOMER : PLESA ANAHUAC Y CLAS S.A. DE. C.V.



Original certificate can be verified through QR Real Application.

NO.	HEAT_NO	QUAN-TITY PCS	TYPE	NOMINAL SIZE	ORDER SIZE			WEIGHT lb/ft	TENSILE TEST					CHEMICAL COMPOSITION(%)																	
					O.D inch	W.T inch	LENGTH ft		DIR.	TS	YS	EL	YR	WTS	DIV	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	CEQ	PCM	
					*2		*3		*4		*5		*6			-2			-3			-4			-5		-3				
37	N28572	17	BPEB	24	24.000	0.375	20	94.71	T	69,470	59,173	40	85	76,142	H	7	2	77	16	4	22	10	20	TR	10	240	10				
38	N28576	24	BPEB	24	24.000	0.375	20	94.71	T	71,065	60,333	41	85	74,691	P	7	2	79	17	4	21	8	29	10	15	316	9				
															H	7	1	77	14	4	17	10	20	TR	14	220	10				
															P	6	2	79	16	4	21	7	29	10	14	313	10				
															P	6	2	78	16	4	21	6	28	10	13	308	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
	T.P	H.T	RESULT		WZC	CST	TPI	ETL		(0) °C							
	PSI	sec	°C		g/m ²	TIMES	inch	inch		Energy (Ind, J)	SIZE	FLANGE TEST					
37	1190	10	GOOD	950													
38	1190	10	GOOD	950													

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- HARDNESS MAX 22 HRC AS PER NACE MR 0175

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THIS CERTIFICATE IS ISSUED ACCORDING TO EN 10204 3.1(ISO 10474 3.1 B)

SURVEYOR _____ MANAGER OF QA TEAM *[Signature]*

