COPY

QUALITY CERTIFICATE

주식회사 휴스틸
HUSTEEL Co., Ltd.

HEAD OFFICE : SHINAN B/D 15F, 943-19, DAECHI-DONG, KANGNAM-GU, SEOUL, KOREA
DANGJIN PLANT 131, BUGOKGONGDAN STREET, SONGAK-EUP, DANGJIN-SI, CHUNGCHEONGNAM-DO, KOREA

P/O No. : 16868
L/C No. : M930221

ISSUED DATE : 2013.12.30

COMMODITY : E.R.W. STEEL PIPE

SPECIFICATION : API 5LB PSL-1/ASTM A53B

CERTIFICATE No. : 131230-A863

MANUFACTURED No. : 13-12-030

SUPPLIER : HUSTEEL CO., LTD.

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

NO.	HEAT_NO	QUAN-TITY	TYPE	NOMINAL SIZE	ORDER SIZE O.D	ORDER SIZE W.T	ORDER SIZE LENGTH	WEIGHT
		PCS	*1		inch	inch	ft	lb/ft
					*2			
01	M87732	113	BPEB	10.75	10.750	0.250	20	28.06
	M90537	252	BPEB	10.75	10.750	0.250	20	28.06
02	M91155	70	BPEB	12.75	12.750	0.225	20	30.10

NO.	TENSILE TEST DIR.	TS	YS	EL	YR	WTS
	*3	PSI *4		%	%	PSI
01	T	64,974	52,646	40	81	69,180
	T	65,989	55,112	36	84	70,195
02	T	64,829	51,921	37	80	69,035

CHEMICAL COMPOSITION(%)

NO.	DIV *5	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	CEQ	PCM
		-2			-3					-4				-5	-3	
		*6														
01	H	6	1	77	13	5										
	P	6	1	77	14	5	13	9	22	14	17	132	10			
	P	7	1	77	13	5	13	11	22	15	17	132	10			
	H	6	1	77	15	5										
	P	6	1	78	15	6	14	11	22	12	15	150	9			
	P	6	1	78	15	6	15	11	22	13	15	147	9			
02	H	7	1	73	13	4										
	P	7	1	74	13	5	12	11	19	10	20	123	7			
	P	7	1	73	13	5	13	11	20	10	21	123	7			

NO.	HYDROSTATIC TEST T.P	H.T	RESULT	HEAT TREATMENT	ZINC COATING TEST WZC	CST	THREADS TPI	ETL	HARDNESS TEST	IMPACT TEST (0) ℃ DIV	Energy (Ind, J)	SIZE
	PSI	sec		℃	g/㎡	TIMES		mm	HV	*7		*8
	*9			*10	*11		*12					
01	980	5	GOOD	900								
	980	5	GOOD	900								
02	752	5	GOOD	900								

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

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

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	BlackThreaded &Coupled	GTC	Galvanized Threaded&Coupled

* 2. **O.D** : Outsid 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** : x1/10000, **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 Or ECT,

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)

Jong Seob. Ki

MANAGER OF Q.A TEAM

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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		PCS	*1		inch	inch	ft	lb/ft	*3	PSI		%	%	PSI
					*2					*4				
	M92558	532	BPEB	12.75	12.750	0.225	20	30.10	T	67,005	54,677	37	82	71,210

NO.	DIV	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	CEQ	PCM
	*5	-2			-3					-4				-5	-3	
		*6														
	H	7	1	77	15	6										
	P	7	1	77	16	7	20	13	25	13	20	159	10			
	P	7	1	77	15	7	20	14	25	14	20	160	10			

NO.	HYDROSTATIC TEST T.P	H.T	RESULT	HEAT TREATMENT	ZINC COATING TEST WZC	CST	THREADS TPI	ETL	HARDNESS TEST	IMPACT TEST (0) ℃ DIV	Energy (Ind, J)	SIZE
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GOOD	GOOD	GOOD	GOOD	GOOD
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