COPY

QUALITY CERTIFICATE

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. : 16868
L/C No. : M930221
ISSUED DATE : 2014.01.13
COMMODITY : E.R.W. STEEL PIPE
SPECIFICATION : API 5LB PSL-1/ASTM A53B

CERTIFICATE No. : 140113-018
MANUFACTURED No. : 2013-12-218
SUPPLIER : HUSTEEL CO., LTD.
CUSTOMER : PLESA ANAHUAC Y CIAS., S.A. DE C.V.

NO.	HEAT NO	QUANTITY PCS	TYPE *1	NOMINAL SIZE	ORDER SIZE O.D inch *2	W.T inch *2	LENGTH ft *2	WEIGHT lb/ft	TENSILE TEST DIR. *3	TS PSI *4	YS PSI *4	EL % *4	YR % *4	WTS PSI
01	M89827	69	BPEB	14	14.000	0.250	20	36.75	T	68,890	54,242	38	79	71,646
02	M84245	72	BPEB	14	14.000	0.250	20	36.75	T	66,569	52,646	39	79	70,630
03	M89819	68	BPEB	14	14.000	0.250	20	36.75	T	68,600	53,517	40	78	73,966

CHEMICAL COMPOSITION(%) *6

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
01	H	6	1	78	13	6										
	P	6	1	81	14	5	13	9	26	15	9	176	8	10		
	P	6	1	80	13	5	13	7	25	10	8	169	8	10		
02	H	7	1	74	10	5										
	P	6	1	76	8	5	11	5	24	10	14	186	8	10		
	P	6	1	76	8	5	10	5	23	10	13	181	7	10		
03	H	6	1	75	17	7										
	P	7	1	77	17	6	16	11	33	22	7	176	7	10		
	P	7	1	76	17	6	15	10	32	20	7	175	7	10		

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
01	770	5	GOOD	930								
02	770	5	GOOD	930								
03	770	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(45,2013) 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	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, 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 규격용도 와 사용시 안전상 문제가 발생할 수 있으며, 검사증명서 위·변조시 사문서 위조(형법231조)로 불이익을 당하실 수 있습니다.

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					*2				*4					
04	M89459	25	BPEB	14	14.000	0.250	20	36.75	T	66,279	54,532	41	82	70,340
05	M84321	36	BPEB	14	14.000	0.250	20	36.75	T	66,860	50,181	39	75	69,470
06	M89827	159	BPEB	14	14.000	0.312	20	45.65	T	67,440	52,356	41	78	68,745

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
		*6														
04	H	7	2	75	13	5										
	P	6	2	77	12	5	21	8	31	10	13	138	9	10		
05	P	6	1	76	12	5	20	9	32	10	13	143	9	10		
	H	7	2	74	13	3										
06	P	6	1	77	8	4	10	2	27	10	17	207	10	10		
	P	6	1	76	8	4	10	2	25	10	14	198	9	10		
	H	6	1	78	13	6										
	P	6	1	81	14	6	14	11	25	21	7	168	7	10		
	P	6	1	80	14	6	14	11	24	17	6	163	6	10		

NO.	HYDROSTATIC TEST T.P PSI	H.T sec	RESULT *9	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
04	770	5	GOOD	930								
05	770	5	GOOD	930								
06	950	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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