

ORIGINAL

CERTIFICATE OF QUALITY

주식회사 휴스틸
(HUSTEEL CO.,LTD.)

계약서번호
P/O No. : 12994
L/C No. : 0173610610272655
발급일자
ISSUED DATE : 2012. 10. 04.
제품명
COMMODITY : E.R.W. STEEL PIPES
제품규격
SPECIFICATION : API 5L-B / ASTM A53B

HEAD OFFICE : Shinan B/D 15F, 943-19, Daechi-dong
Kangnam-ku, SEOUL 135-845, KOREA
DANGJIN PLANT: 569-1,BUGOK-RI,SONGAK-MYEON, DANGJIN-GUN,
CHUNGHEONGNAM-DO,KOREA
DAEBUL PLANT: 150,DAEBULSANDAN3-RO, YOUNGAM-GUN
JOLLANAM-DO, KOREA

증명서번호
CERTIFICATE No. : 20121004-324
제조번호
MANUFACTURED No. : 2012-07-211
공급자
SUPPLIER : HUSTEEL CO.,LTD
수요자
CUSTOMER : PLESA ANAHUAC Y
CIAS, S.A. DE C.V.

ITEM NO.	HEAT NO. (LOT)	관종 TYPE	수량 QUANTITY (PIECES)	호칭경 NOMINAL SIZE (inch)	주문치수 ORDER SIZE			중량 WEIGHT (lb/ft)	인장시험 TENSILE TEST				화학성분 CHEMICAL COMPOSITION(%)																
					바깥지름 O.D (mm)	두께 W.T. (in)	길이 LENGTH (ft)		인장강도 TS (psi)	항복강도 YS (psi)	연신율 EL (%)	항복비 YR (YS/TS)	C	Si	Mn	P	S	Cu	Cr	Ni	Mo	V	Nb	Ti	B	PCM	CEQ		
					②	③			(psi)	(psi)	(%)	(YS/TS)	-2	-3	-2	-3				-4				-3					
1	29287	BPEB	4	12 3/4	323.9	0.250	20'	33.41	69905	49891	36		16	8	69	15	5	13	25	8	78	6	13	1	1				
2	389462	BPEB		12 3/4	323.9	0.250	20'	33.41	68455	47135	41		17	15	83	14	2	6	19	7	17	4	21	5	1				
3	M51436	BPEB	16	14	355.6	0.250	20'	36.75	67730	54532	40		6	9	80	12	4	12	3	1	6	181	6	1					
4	281650	BPEB	12	14	355.6	0.225	20'	33.11	70050	46700	38		12	15	87	8	1	2	17	1	1	9	31	8	1				
5	389275	BPEB	59	14	355.6	0.225	20'	33.11	67875	44525	40		12	7	86	3	1	1	14	1	1	6	17	5	1				
6	M55344	BPEB	72	14	355.6	0.225	20'	33.11	69325	54242	38		7	7	76	8	6	22	21	7	10	8	180	3	1				
7	M51431	BPEB	14	14	355.6	0.375	20'	54.62	64539	48586	39		7	12	77	14	5	15	17	4	5	5	262	5	1				
8	M51434	BPEB	27	14	355.6	0.375	20'	54.62	69470	49456	41		6	11	79	13	5	14	19	6	8	7	245	7	1				
9	280493	BPEB	3	16	406.4	0.250	20'	42.09	70485	45685	40		17	13	84	17	2	11	15	6	15	4	24	7	1				
10	M50530	BPEB	1	16	406.4	0.375	20'	62.64	70630	56272	40		7	15	82	17	4	15	24	7	22	7	287	7	1				

ITEM NO.	수압시험 HYDROSTATIC TEST		열처리온도 HEAT TREATMENT (°C)	비파괴 시험 NDT (U.T)	경도시험 HARDNESS TEST (HV)	외주장 CIRCUMFERENCE		용접부인장강도 TENSILE STRENGTH OF WELDS (psi)	아연도금시험 ZINC COATING TEST		VISUAL & DIMEN-SION	FLATT-ENING (BEND) TEST	W D T	R G T	M G T	S.T (%)	충격시험 IMPATC TEST		Res. Mag.	비 고 REMARKS
	TP (psi)	RE-SULT				END	BODY		WZC (g/m²)	CST (TIMES)							P	ENERGY(J) SIZE: ⑩		
	⑤								⑦								⑨ () °C			
1	840	GOOD	930	ACCEPT				73966			ACCEPT	GOOD			GOOD	0.1		17		
2	840	GOOD	930	ACCEPT				72516			ACCEPT	GOOD			GOOD	0.1		16		
3	770	GOOD	930	ACCEPT				71791			ACCEPT	GOOD			GOOD	0.1		16		
4	690	GOOD	930	ACCEPT				74111			ACCEPT	GOOD			GOOD	0.1		16		
5	690	GOOD	930	ACCEPT				71936			ACCEPT	GOOD			GOOD	0.1		17		
6	690	GOOD	930	ACCEPT				73386			ACCEPT	GOOD			GOOD	0.1		16		
7	1150	GOOD	950	ACCEPT				68600			ACCEPT	GOOD			GOOD	0.1		16		
8	1150	GOOD	950	ACCEPT				73531			ACCEPT	GOOD			GOOD	0.1		17		
9	670	GOOD	930	ACCEPT				74546			ACCEPT	GOOD			GOOD	0.1		16		
10	1000	GOOD	950	ACCEPT				74691			ACCEPT	GOOD			GOOD	0.1		16		

N ①TYPE BPE BLACK PLAIN ENDS BPEB BPE BEVELLED BTE BLACK THREADED ENDS BTC BLACK THREADED & COUPLED GPE GALVANIZED PLAIN ENDS GTE GALVANIZED THREADED ENDS GTC GALVANIZED THREAD & COUPLED
O ②O.D. OUTSIDE DIAMETER ③W.T. WALL THICKNESS ④CHEMICAL COMPOSITION CHECK-ANALYSIS/UNIT -2:1×100 -3:1×1000 -4:1×10000 TR TRACE ⑤TP TESTING PRESSURE ⑥NDT NON-DESTRUCTIVE TEST
T E.T EDDY CURRENT TEST U.T ULTRASONIC TEST ⑦WZC WEIGHT OF ZINC COATING CST COPPER SULPHATE TEST ⑧WDT WELD DUCTILITY TEST RGT RING GAGE TEST MGT METALLOGRAPHIC TEST ⑨S.T STRAIGHTNESS
E ⑩P=Position B:Base Metal, CL:Center Line ⑪SPECIMEN SIZE, A:10x10mm, B:10x7.5mm, C:10x6.7mm, D:10x5.0mm, ⑫RES.MAG.: RESIDUAL MAGNETISM

SIGNATURE _____
본 제품은 관련 규격이 정한 시험 및 검사에 합격하였음을 증명합니다.
WE HEREBY CERTIFY THAT THE PRODUCTS HEREIN HAVE BEEN MADE AND TESTED IN ACCORDANCE WITH THE ABOVE SPECIFICATION AND ALSO WITH THE REQUIREMENTS CALLED FOR THE ORDER.
SIGNATURE *[Signature]*
MANAGER OF QUALITY ASSURANCE TEAM

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					바깥지름 O.D (mm)	두께 W.T. (in)	길이 LENGTH (ft)		인장강도 TS (psi)	항복강도 YS (psi)	연신율 EL (%)	항복비 YR (YS/TS)	C	Si	Mn	P	S	Cu	Cr	Ni	Mo	V	Nb	Ti	B	PCM	CEQ
													-2	-3	-2	-3				-4				-3			
11	28746	BPEB	7	24	610.0	0.250	20'	63.47	70340	45250	39		16	13	86	16	3	6	14	4	16	11	21	4	1		
12	579605	BPEB	11	24	610.0	0.250	20'	63.47	72226	48586	41		14	8	81	10	2	4	9	3	4	8	16	3	1		
13	664324	BPEB	7	24	610.0	0.250	20'	63.47	72516	48731	33		16	12	85	15	3	7	13	4	15	10	17	4	1		
14	M33287	BPEB	1	24	610.0	0.250	20'	63.47	66424	58013	36		7	13	75	12	5	14	23	4	3	6	183	4	1		
15	M36086	BPEB	1	24	610.0	0.250	20'	63.47	66714	58738	37		7	18	76	11	3	15	22	3	5	7	194	5	1		
16	M40255	BPEB	1	24	610.0	0.250	20'	63.47	65409	53807	40		6	16	79	13	7	19	20	6	7	8	164	7	1		
17	M41261	BPEB	1	24	610.0	0.250	20'	63.47	63814	55402	40		7	11	72	11	6	17	21	5	9	9	187	6	1		
18	M48848	BPEB	3	24	610.0	0.250	20'	63.47	70775	46845	39		15	13	87	16	4	8	15	6	17	10	28	5	1		
19	SQ39072	BPEB	2	24	610.0	0.250	20'	63.47	70340	47860	38		15	7	69	11	6	17	12	8	2	4	24	2	1		

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	TP (psi)	RE-SULT				END	BODY		WZC (g/m²)	CST (TIMES)							P	ENERGY(J) SIZE: ⑩		
11	450	GOOD	930	ACCEPT				74401			ACCEPT	GOOD							17	
12	450	GOOD	930	ACCEPT				76287			ACCEPT	GOOD							16	
13	450	GOOD	930	ACCEPT				76577			ACCEPT	GOOD							16	
14	450	GOOD	930	ACCEPT				70485			ACCEPT	GOOD							17	
15	450	GOOD	930	ACCEPT				70775			ACCEPT	GOOD							16	
16	450	GOOD	930	ACCEPT				69470			ACCEPT	GOOD							17	
17	450	GOOD	930	ACCEPT				67875			ACCEPT	GOOD							16	
18	450	GOOD	930	ACCEPT				74836			ACCEPT	GOOD							16	
19	450	GOOD	930	ACCEPT				74401			ACCEPT	GOOD							17	

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E ⑫P=Position B:Base Metal. CL:Center Line ⑬SPECIMEN SIZE, A:10x10mm, B:10x7.5mm, C:10x6.7mm, D:10x5.0mm, ⑭RES. MAG. : RESIDUAL MAGNITISM

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HMS C-30-05-(21)