

ORIGINAL

# CERTIFICATE OF QUALITY

**주식회사 휴스틸**  
(HUSTEEL CO.,LTD.)

계약서번호  
P/O No. : 12994  
L/C No. :  
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,  
CHUNGCHEONGNAM-DO, KOREA  
 DAEBUL PLANT : 150, DAEBULSANDAN3-RO, YOUNGAM-GUN  
JOLLANAM-DO, KOREA

증명서번호  
CERTIFICATE No. : 20121004-325  
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 ①	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	-2	-3			-4			-3														
1	29287	BPEB	93	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	34	14	355.6	0.250	20'	36.75	67730	54532	40		6	9	80	12	4	12	21	3	1	6	181	6	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 & DIMENSION	FLATTENING (BEND) TEST	W D T	R G T	M G T	S.T (%)	충격시험 IMPACT TEST		Res. Mag.	비고 REMARKS
	TP (psi)	RE-SULT				END	BODY		WZC (g/m²)	CST (TIMES)							P	ENERGY(J) SIZE: ⑩		
	⑤	⑥																		
1	840	GOOD	930	ACCEPT				73966			ACCEPT	GOOD							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	

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 \_\_\_\_\_  
 SURVEYOR TO: \_\_\_\_\_  
 HMS C-30-05-(21)

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