

DATE OF ISSUE : JULY. 24. 2010  
 CUSTOMER : BROWNSVILLE STEEL CITY LLC

# INSPECTION CERTIFICATE

(EN 10204:2004 3.1)

ST&H CORPORATION  
 1270-4 Jwa3dong, Haeundaegu, Busan, Korea  
 Tel : 82.51.7444680 (5 line) Fax : 82.51.7444680

발주번호 P/O NO.			원 재료 RAW MATERIAL											성적서 번호 CERTIFICATE NO.									
BSC 2010 - 222 (PSJ5724)			MADE FROM SEAMLESS PIPE											QA100724 - 02									
재료규격 Spec. for Material			검사규격 Spec. for Inspection					외관 및 치수검사 Surface & Dimension				비파괴검사 N.D.E.		열 처리 HEAT TREATMENT									
ASTM A234-05/ASME SA234-05 WPB NACE MR-0175			ASME B16.9					GOOD				MT : GOOD		620°C ~ 980°C									
STD	제품번호 STAMP NO.	화 학 성 분 CHEMICAL COMPOSITION (%)												인 장 시 험 Tensile Test				굴곡시험 Bending Test ( )	편평시험 flattening Test	경도시험 Hardness Test(HB)	충격시험 Impact Test	수압시험 Hydrostatic Test	C.E
		C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	Nb	N	Y-S Mpa	T-S Mpa	EL %	RA %						
SPEC	수량 Q'TY	MIN	0.40	0.29										240	415	22							
		MAX	0.30		1.06	0.05	0.058	0.40	0.15	0.40	0.40	0.08											
LR 90D ELBOW STD			0.23	0.19	0.50	0.019	0.010	0.03	0.01	0.017	0.019	0.01		285	475	30						197	
5"	25	26812																				<197	0.33
LR 90D ELBOW STD			0.23	0.19	0.50	0.019	0.010	0.03	0.01	0.017	0.019	0.01		285	475	30						<197	0.33
5"	19	27325																				<197	0.33
LR 90D ELBOW STD			0.18	0.20	0.51	0.019	0.026	0.02	0.01	0.02	0.018	0.01		305	490	31						<197	0.28
8"	165	6259																				<197	0.28
LR 90D ELBOW STD			0.23	0.20	0.55	0.019	0.021	0.019	0.01	0.02	0.016	0.01		305	505	30						<197	0.33
10"	85	3325																				<197	0.33
LR 90D ELBOW STD			0.23	0.20	0.55	0.019	0.021	0.019	0.01	0.02	0.016	0.01		305	505	30						<197	0.33
12"	20	4332																				<197	0.33

We hereby certify that the material herein has been made and tested in accordance with the above specification and also with the requirements called for by the above order.

QUALITY INSPECTED AND SUPPLY BY ST&H CORP  
 MANUFACTURED BY PUSAN COUPLING CO.LTD

양식번호 : QMS-8102-11

IMP<sub>a</sub> = 145.037 psi  
 IMP<sub>a</sub> = 0.145037 ksi  
 Ipsi = 0.00689 Mpa  
 Uksi = 6.89476 Mpa

C.E. = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

PUSAN COUPLING CO.,LTD

품질보증부  
 QUALITY ASSURANCE DEPT

(株) 釜山 카프링

김영준

B.J. KIM/Q.A - GENERAL MANAGER