



# BOTH-WELL STEEL FITTINGS CO., LTD.

NO.303, REN-SIN ROAD, REN-WU DISTRICT, KAOHSIUNG CITY TAIWAN R.O.C.(81460)  
TEL : (886)7-3711536, 3710497, 3720260 FAX : (886)7-3713864, 3713886  
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## MILL TEST & INSPECTION CERTIFICATE

ACCORDING TO EN 10204 3.1

CUSTOMER : SILBO INDUSTRIES, INC.  
CERT NO : 143763  
ORDER NO : 66133

INVOICE NO : 5200004122  
L/C NO :

PAGE : 53  
DATE : 12/03/2014  
ORIGIN : TAIWAN

ITEM	RAW HEAT NO. HEAT CODE	QTY	DESC/GRADE OR SPECIFICATION NO.	
			CHEMICAL COMPOSITION(%)	MECHANICAL PROPERTIES. SUPPLIER.
48	5651 4206A	12 PCS	45D ELBOW A105 4" 3000# S/W	
			C:0.20 SI:0.31 MN:1.04 P:0.030 S:0.018 CU:0.00 CR:0.06 NI:0.00 MO:0.00 V:0.003 NB:0.000 N:- CE:0.386	
			TS(KSI):75.6 YS 0.2%(KSI):52.2 EL(%):33.2 R.A.(%):67.3 HARDNESS1(HBW):144 HARDNESS2(HBW):146	

### REMARK :

THE MATERIAL SUPPLIED IDENTIFIED AS ASTM A105N -13, ASME SA105N-2013ED  
THE FITTING SUPPLIED IDENTIFIED AS ASME B16.11 - 2011  
THE PRODUCT SUPPLIED WAS INSPECTED IN ACCORDANCE WITH SPECIFICATION(SURFACE & DIM) : GOOD  
FULLY KILLED AND FINE GRAIN PRACTICE

	C	Si	Mn	P	S	Cu	Cr	Ni	Mo	V	Cb(Nb)
MIN	-	0.10	0.60	-	-	-	-	-	-	-	-
MAX	0.35	0.35	1.05	0.035	0.040	0.40	0.30	0.40	0.12	0.08	-
	N	Al	Ti	Zr	CE	TS(KSI)	YS	YS 0.2%(KSI)	EL(%)	R of A(%)	HARDNESS(H)
MIN	-	-	-	-	-	70	-	36	22	30	-
MAX	-	-	-	-	0.43	-	-	-	-	-	187

HEAT TREATMENT : NORMALIZED: 900°C(1652°F) A.C.

STEEL MAKING PROCESS : ELECTRIC FURNACE

CONFORMS TO NACE MR0175-09/ISO15156-09/MRO103-12

PED 97/23/EC CERTIFIED BY TUV

MATERIAL MERCURY FREE AND DETECTED FREE FROM RADIOACTIVE CONTAMINATION.

WE CERTIFY THE ABOVE MENTIONED FITTINGS HAVE BEEN MANUFACTURED,  
SAMPLED, TESTED, AND INSPECTED IN ACCORDANCE WITH THE  
SPECIFICATIONS SHOWN

*C.C. Huang*  
Q.C. MANAGER

*C.L. Ko*  
INSPECTOR