



INSPECTION CERTIFICATE

Customer : WFF FITTINGS & FLANGES (CANADA) LTD.
Product : SEAMLESS CARBON STEEL BUTT WELD FITTINGS
Spec : ASME SA 234/ASTM A234-13 WPB SS
NACE MR0175/ISO15156-2 Sour Service
Region 3 Annex A, MR0103 Sour**

(MILL TEST)
ACCORDANCE WITH EN 10204-3.1
CHUP HSIN ENTERPRISE CO., LTD.
17, TUNG LI ROAD HSIAO KANG,
KAOHSIUNG, TAIWAN, R.O.C.
TEL: (07)831-9157 FAX: (07)821-7500, 831-2942

Certificate No : 00300165-0201
Order No : 23265/D000532
Date : 2015/02/09

Starting Material		Specification for Inspection					Visual Inspection			Dimensional Inspection					
ASTM A106 GR.B		ASME B16.9-2012					GOOD			GOOD					
Item	Description		Quantity		Heat ID		Heat No		Raw Certificate No.		NDE	Test Temp	Size of specimen	Charpy V.-Notch Impact Value	Ave.
5	90 E/L SMLS S160		3	250	B390	14303290	BAOSHAN 1410090008800								
6	45 E/L/R SMLS S120		4	60	0390	14300390	BAOSHAN 1404210003100								
7	90 E/L/R SMLS S120		4	325	0390	14300390	BAOSHAN 1404210003100								
11	90 E/L/R SMLS S120		8	487	B348	14304348	BAOSHAN 1412150003600								
12	90 E/L/R SMLS S120		16	59	601V	1435601V	HENGYANG C201437910-1								
Specifi- cation	Chemical Composition%										Hardness Test		Heat Treatment		REMARK
	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	C.E	Y.S	T.S	
	X100	X100	X100	X1000	X1000	X100	X100	X100	X100	X1000	X1000	X100	P.S.I	P.S.I	%
Min.		10	29										35000	60000	30
Max.	22		135	50	58	40	40	40	15	80	20	50		95000	
5	13	25	125	8	1	3	3	3	1	<1	1	35	49769	69900	39.7
6	18	24	56	9	2	2	2	6	1	<1	<1	29	44546	69500	37.3
7	18	24	56	9	2	2	2	6	1	<1	<1	29	44546	69500	37.3
11	13	25	124	9	1	2	2	6	2	<1	1	35	42224	70200	46.0
12	16	24	86	9	7	11	3	4	0.6	2	1	32	41934	63800	39.5
										Heat Treatment		620°C TO 980°C HOT FORMED		**Service/ CSA Z245.11 GR 241 CAT I SS Region 3 Annex A.	

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

We hereby certify that the material herein described has been manufactured, sampled, tested and inspected in accordance with, and was found to meet, the requirements of above specifications and purchaser's order.

L.S. Tsai

Chief of Quality Assurance Section