



INSPECTION CERTIFICATE

Customer : TRANS AM PIPING PRODUCTS LTD. (MILL TEST)
Product : SEAMLESS CARBON STEEL BUTT WELD
Fittings
Spec : ASME SA/ASTM A234 WPB-11a
CSA 245.11-09 Cat I/EN10204 3.1/NACE
MRO175-09/ISO 15156-09/MRO103-10
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 : 00200058-0313
Order No : CI-13409
Date : 2013/11/01

Starting Material				Specification for Inspection						Visual Inspection				Dimensional Inspection			
ASTM A106 GR.B				ASME B16.9-2007						GOOD				GOOD			
Item	Description	Quantity	Heat ID	Heat No.	Raw Certificate No.	NDE	Impact Test			Ave.							
							Test Temp	Size of specimen	Charpy V-Notch Impact Value								
181	ECC RED SMLS S160	2 X 1	5	1068	311068	BAOSHAN 1010080002500											
181	ECC RED SMLS S160	2 X 1	8	6162	616162	TIANJIN 11081701											
182	ECC RED SMLS S160	4 X 2	10	8674	J0L0674	SUMITOMO BYVM8778											
183	ECC RED SMLS S160	4 X 3	20	9380	311938	TIANJIN 12103307											
184	ECC RED SMLS S160	8 X 6	5	9677	J0L9677	SUMITOMO WYYL7835											
Specification	Chemical Composition%											Tension Test			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	%	HB	
Min.		10	29										35000	60000	30		
Max.	22		135	50	58	40	40	40	15	80	20	50		95000		197	
181	18	24	54	5	2	5	4	4	4	<1	<1	29	44836	69600	41	133	620℃ TO 980℃ HOT FORMED
181	15	24	69	12	4	8	3	3	1	0	0	28	42079	66700	38	135	
182	17	22	51	16	10	9	5	18	2	0	0	30	44300	70400	43	139	
183	19	23	58	18	9	5	3	4	1	2	10	31	43675	69600	33	138	
184	17	22	53	15	6	2	1	2	1	0	0	27	36300	66700	42	139	

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.

Chief of Quality Assurance Section

L.S. Tsai