

**Awaji**

# INSPECTION CERTIFICATE

AWAJI MATERIA (THAILAND) CO.,LTD.  
 81,MOO4, PRAKASA ROAD, TAMBOL BANGMUANG, AMPHUR MUANG  
 SAMUTPRAKARN THAILAND 10270, Tel : (662)701-5226

Date : MAY 26, 2010

Certificate No. : T10-51873/1

Purchaser : ALLIED FITTING CORP.

Order No.		Job No.		Product												Raw Material Pipe Maker					
120709AW/16				CARBON STEEL BUTT WELDING FITTINGS												SUMITOMO METAL INDUSTRIES, LTD.					
Inspection Standard		Material Standard		Appearance	GOOD	Dimension	GOOD	Quantity	Note			*3 U.T. W.T. INSPECTED									
ASME B16.9-07 ASTM A980-08a NACE MR-0175-03, MR-0103-05		ASTM A234-07 WPB ASME SA234-07 WPB except nuclear usage							Note			"ALL FITTING MANUFACTURED BY AWAJI MATERIA (THAILAND) CO.,LTD. ARE PRODUCED FROM A106 GRB SEAMLESS PIPE"									
Manufacturing No.	Product code	Material	Article & Size												Quantity	Note					
03869		WPB	S80 90 LONG RADIUS ELBOW 10"												12 Pos.						
Specification	Chemical Composition (%)																*1 Mechanical Test			Hardness	
	C	Si	*2Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	Ca	N	Al	C.E.	Y.S.	T.S.		E
	X100	X100	X100	X1000	X1000	X100	X100	X100	X100	X100	X100	X100	X10000	X10000	X1000	X1000	X100	MPa	%		HB
	Min.	10	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240	415		30
Max.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	855	-	197
Pipe Charge No.	30	-	106	50	58	40	40	40	16	8	2	2	5	65	8	-	-	-	-	-	-
JOL2730	20	20	63	13	4	1	2	4	1	0	0	0	1	12	8	18	32	308	479	50.9	137

C.E. =  $C + \frac{Mn}{6} + \frac{Cr+Mo+V}{5} + \frac{Ni+Cu}{15}$

Inspection Certificate : ACCORDING TO EN 10204, 3.1 : 2004

ISO 9001: 2008 Manufacturing Company  
 Certified by BV, Certificate No. TH10000101

\*1 Y.S.= Yield Strength. T.S.= Tensile Strength. E = Elongation. \*2 UT = Ultrasonic thickness inspection.

\*2 For each reduction of 0.01% below the specified carbon(C) Maximum, an increase of 0.06% manganese(Mn) above specified maximum will be permitted, up to a maximum of 1.35% as per foot note D of ASTM A234/A234M-07 Table 1.

AT-24(2)12

ELBOW / Forming temperature 780°C - 930°C and cooled in still air  
 TEE, REDUCER & CAP / Normalizing : 900°C

"We hereby certify that the material described herein has been duly  
 inspected and conforms to the standard as specified above."

Surveyor to

Chief of Inspection Section

S.MAEKAWA