

PO#: 400 Pack#: 300587 Order#: 957388 Lot#: AWA.53145 Desc: 4 STD SMLS LR 45 A/SA420 WPL6 AWA



**INSPECTION CERTIFICATE**

EN 10204 3.1 : 2004

**AWAJI MATERIA (THAILAND) CO.,LTD.**

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

ISO 9001:2008 Manufacturing Company  
Certified by BV. Certificate No. TH004636

Material manufacturer QMS acc.  
PED 97/23/EC, Annex 1, Part 3/AD2000W  
Certified by Lloyd's Register  
Certificate No. 90207/1

Date: JULY 27, 2015

Purchaser: FORINGS FLANGES & FITTINGS LTD.		MADE FROM SEAMLESS STEEL PIPE				Certificate No.: T15-72240																	
Order No. 205781/14	Job No. -	Product CARBON STEEL BUTT WELDING FITTINGS				Raw Material Pipe Maker NIPPON STEEL & SUMITOMO METAL CORPORATION. (JAPAN)																	
Inspection Standard ASME B16.9-12, ASME B16.25-07 ASTM A880-14a NACE MR-0175/ISO 15156-09 MR-0101-12		Material Standard ASTM A420-14, WPL6 ASME SA420-13, WPL6 except nuclear usage		Visual GOOD	Dimension GOOD	*5 UT Inspection W.T. INSPECTED	Magnetic Particle Test -																
Manufacturing No. (Heat code) 53145	Product Code -	Material WPL6	Article & Size STD 45 LONG RADIUS ELBOW 4"			Quantity 2 Pos.	Note.																
Specification	*1 Chemical Composition (%)														*2 Mechanical Test								
	O	SI	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	Ce	N	Al	C.E.	Y.S.	T.S.	E	Hardness	Impact Test	
Min.	X100	X100	X100	X10000	X1000	X100	X100	X100	X100	X1000	X100	X10000	X10000	X1000	X1000	X100		MPa	%	HB	J		
Max.	-	15	50	-	-	-	-	-	-	-	-	-	-	-	-	-		240	415	25.5	-	-50°C	
Heat No.	30	40	135	35	400	40	40	30	12	8	20	-	-	-	-	-		-	865	-	197	5	
J4KB243	L	12	28	128	10	11	1	3	12	1	0	0	2	1	21	3	33	36	321	474	43.8	148	*4 E 132.20 E 143.91 E 189.44 A 148.35
	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				153		

C.E. =  $C + \frac{Mn}{8} + \frac{Cr+Mo+V}{5} + \frac{Ni+Cu}{16}$  \*5 UT = Ultrasonic thickness inspection

\*1 Equivalent for A420 WPL6  
\*2 Y.S. = Yield Strength (0.25 offset), T.S. = Tensile Strength, E = Elongation (in 50mm)  
L = Leds Analysis, P = Product Analysis  
Weld repair is not applied to our products.  
Steel Making by Vacuum degassed, fully silicon aluminum killed & fine grain.

Country of Melt: JAPAN

\*3 Size of Specimen A E \*4  
F: 10.0 by 10.0 17.8 13.8 E = Each Test  
7: 10.0 by 7.5 13.8 10.8 A = Average Value  
6: 10.0 by 6.0 9.5 7.0  
2: 10.0 by 2.5 5.4 4.1

ELBOW, TEE, REDUCER & CAP / Normalizing : 910°C Dfolding Time : (Nominal Wall Thickness / mm) x 1.5 min.)

AT-24C224

\*We certify that the fittings was manufactured, sampled, tested and inspected in accordance with the specification and was found to meet the requirements.

Material complies with ASTM A/SA834 WPR (14)

Surveyor is

QA QM / Work Inspector S. MAEKAWA  
Maekawa@awaji.co.th