



AWAJI MATERIA (THAILAND) CO.,LTD.

INSPECTION CERTIFICATE

EN 10204 3.1 : 2004

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ISO 9001 :2015 Manufacturing Company
Certified by BV. Certificate No. TH013595

Material manufacturer QMS acc.
PED 2014/68/EU Annex1. Par4.3/AD2000-Merkblatt W0
Certified by Lloyd's Register
Certificate No. 50207/1

Purchaser : Industrial Valoo, Inc.

Factory : 81, MOO 4, PRAKASA ROAD, TAMBOL BANGMUANG, AMPHUR MUANG
SAMUTPRAKARN, THAILAND 10270, Tel : (662) 701-5226

Date : SEPTEMBER 27, 2022

Certificate No. : T22-95291

Order No. AT012HA/48		Job No.		Product CARBON STEEL BUTT WELDING FITTINGS		MADE FROM SEAMLESS STEEL PIPE																	
Inspection Standard ASME B16.9-18, ASME B16.25-17 ASTM A980-20 NACE MR-0175/ISO 15156-15 MR-0103-15		Material Standard ASTM A234-19, WPB ASME SA234-21, Sec. II, Part A, except nuclear usage		Visual GOOD	Dimension GOOD	*4 UT Inspection -	Magnetic Particle Test -																
Manufacturing No. (Heat code.) 0Z2M14-1X	Product Code 10D1210	Material WPB	Article & Size XS REDUCER CONCENTRIC 12" x 10"			Quantity 4 Pcs.	Note.																
Specification	*1 Chemical Composition (%)																	*2 Mechanical Test			T	Hardness	
	Min.	C	Si	*3 Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Ti	B	Ca	N	Al	C.E.	Y.S.	T.S.			E
Max.	X100	X100	X100	X1000	X1000	X100	X100	X100	X100	X100	X100	X100	X100	X100000	X100000	x1000	X1000	X100	MPa		%		
Heat No.	30	-	135	50	58	40	40	40	15	8	2	-	5	-	-	-	-	240	415	30	-		
19307207	L	10	24	124	9	2	6	3	6	3	0	0	0	2	16	5	31	33	-	-	-	197	
	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	318	471	48	146	
$C.E. = C + \frac{Mn}{8} + \frac{Cr+Mo+V}{5} + \frac{Ni+Cu}{15}$																						*4 UT = Ultrasonic thickness inspection	

*1 Equivalent for A234 WPB
*2 Y.S.= Yield Strength (0.2% offset), T.S. = Tensile Strength, E = Elongation (in 50mm), L = Longitudinal, T = Transverse
*3 As per foot note D of ASME SA234 Table 1.

L = Ladle Analysis, P = Product Analysis

Material is free mercury contamination and no weld repair was performed
Killed steel & fine grain.

ELBOW / Forming temperature 850°C-945°C and cooled in still air

TEE, REDUCER & CAP / Normalizing (cold Forming) : 910°C (Holding Time : (Nominal Wall Thickness/1mm) x 1.5 min.)

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

Surveyor to

QA. ASST.GM. /Work Inspector S. KITTISAK
Kittisak@awaji.co.th

AT-24(2)29