

43778

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

Awaji

ASK

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

Material manufacturer QMS acc.
 PED 97/23/EC. Annex1. Par4.3/AD2000W0
 Certified by TÜV Rheinland
 Certificate No. 01 202 ROC/Q-10 0230

Date : APRIL 26, 2012

Certificate No. : T12-41082

Purchaser : FORGINGS FLANGES & FITTINGS, INC.

MADE FROM SEAMLESS STEEL PIPE

| | | | | | | | | | | | | | |
|---|-------------------|---|--|---|--|-------------------|-----------------------|--|--|-----------------------|--|--------------------------------|--|
| Order No. 172867/14 | | Job No. - | | Product CARBON STEEL BUTT WELDING FITTINGS | | | | Raw Material Pipe Maker SUMITOMO METAL INDUSTRIES, LTD. (JAPAN) | | | | | |
| Inspection Standard ASME B16.9-07, ASME B16.25-07 ASTM A980-10 NACE MR-0175/ISO 15156-09 MR-0103-10 | | Material Standard ASTM A234-11. WPB ASME SA234-10. WPB except nuclear usage | | Visual GOOD | | Dimension GOOD | | Pipe Heat No. : J1K8009 | | *4 UT Inspection - | | Magnetic Particle Test GOOD | |
| Manufacturing No. (Heat code.) 22518 | Product Code - | Material WPB | Article & Size ① STD REDUCING TEE 4" x 2-1/2" | | | | Quantity ⑥ 97 Pcs. | Note | | | | | |

| Specification | *1 Chemical Composition (%) | | | | | | | | | | | | | | | | | *2 Mechanical Test | | | Hardness | |
|---------------|-----------------------------|------|-------|-------|-------|------|------|------|------|------|------|------|--------|--------|-------|-------|------|--------------------|------|-----|----------|-----|
| | C | Si | *3 Mn | P | S | Cu | Ni | Cr | Mo | V | Nb | Ti | B | Ca | N | Al | C.E. | Y.S. | T.S. | E | | |
| Min. | X100 | X100 | X100 | X1000 | X1000 | X100 | X100 | X100 | X100 | X100 | X100 | X100 | X10000 | X10000 | X1000 | X1000 | | MPa | | | % | HB |
| Max. | - | 10 | 29 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 240 | 415 | 24 | - | |
| Heat No. | 30 | - | 106 | 50 | 58 | 40 | 40 | 40 | 15 | 8 | 2 | - | - | - | - | - | - | - | - | - | 197 | |
| J1K8009 | L | 19 | 22 | 67 | 18 | 6 | 1 | 2 | 5 | 1 | 0 | 0 | 0 | 1 | 11 | 6 | 15 | 32 | 325 | 477 | 37.9 | 135 |
| | P | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

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

*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)

*3 As per foot note D of ASTM A234 Table 1.

L = Ladle Analysis, P = Product Analysis

Weld repair is not applied to our products.

Steel Making by Vacuum degassed, killed steel.

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

TEE, REDUCER & CAP / Normalizing : 910°C

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

Surveyor to


 QA. GM. /Work Inspector S. MAEKAWA

AT-24(2)15