



MILL TEST CERTIFICATE

PANTECH STAINLESS & ALLOY INDUSTRIES SDN. BHD. (733428W)

(A MEMBER OF PANTECH GROUP HOLDINGS BERHAD, LISTED ON MAIN MARKET OF BURSA MALAYSIA)

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MATERIAL MANUFACTURER APPROVAL ACCORDING TO PED 2014/68/EU, ANNEX 1, PARA 4.3. PED CERTIFICATE NO.: 0038/PED/MUM/1110006/1

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Customer: Unimech Engineering (M) Sdn Bhd
Product: Welded Austenitic Stainless Steel Fitting

Certificate No: PSA2-FT-4198
Date: 22 Jan 2021

| PO No. | Invoice No. | Product Specification | Dimension & Inspection Specification | Delivery Condition | |
|-----------------|-----------------------------------|--|--|--------------------------------------|---------|
| AP0-2101-0043 | L000011121 | ASTM A403/A403M - 20 / ASME SA 403/SA403M - 19 | ASME B16.9 - 18 / ASTM A960/A960M - 20 / ASME SA 960/SA960M - 19 | Solution Treated, Pickled-Passivated | |
| Heat No. | Product & Size | Quantity (pcs) | Material Grade | Visual / Dimension / PMI Examination | Remarks |
| IYA070-02-112CR | 1" X 1/2" SCH 10s CON-REDUCER | 100 | WP304/304L-W | PASSED | - |
| IGA033-01-182CR | 1 1/4" X 1/2" SCH 10s CON-REDUCER | 30 | WP304/304L-W | PASSED | - |
| BFA059-01-112CR | 1 1/4" X 1" SCH 40s CON-REDUCER | 10 | WP304/304L-W | PASSED | - |
| FEA150-01-112CR | 1 1/2" X 1" SCH 10s CON-REDUCER | 100 | WP304/304L-W | PASSED | - |
| IYA142-01-112CR | 2" X 1" SCH 10s CON-REDUCER | 150 | WP304/304L-W | PASSED | - |
| BDA121-02-112CR | 2" X 1 1/4" SCH 10s CON-REDUCER | 30 | WP304/304L-W | PASSED | - |
| JG098-1 | 2 1/2" X 2" SCH 10s CON-REDUCER | 20 | WP304/304L-W | PASSED | - |
| JSA418-03-112CR | 2 1/2" X 2" SCH 10s CON-REDUCER | 78 | WP304/304L-W | PASSED | - |
| JSA427-02-112CR | 2 1/2" X 2" SCH 10s CON-REDUCER | 102 | WP304/304L-W | PASSED | - |
| IDA261-01-112CR | 3" X 2" SCH 10s CON-REDUCER | 2 | WP304/304L-W | PASSED | - |

| Specification | Chemical Composition (%) | | | | | | | | | Tensile Test ^{*1} | | | Hardness (HRB) | Inter-granular corrosion test |
|-----------------|--------------------------|-------|------|-------|-------|-------|-------|--------|----------------|----------------------------|-------|----|----------------|-------------------------------|
| | C | Si | Mn | P | S | Cr | Ni | Pb | YS (KSI / MPa) | TS (KSI / MPa) | E (%) | | | |
| | Max | 0.030 | 1.00 | 2.00 | 0.045 | 0.030 | 20.00 | 11.00 | - | - | - | 90 | | |
| Heat No. | - | - | - | - | - | 18.00 | 8.00 | - | - | 205 | 515 | 28 | - | - |
| IYA070-02-112CR | 0.019 | 0.46 | 1.80 | 0.030 | 0.001 | 18.00 | 8.00 | < 0.01 | - | 345 | 640 | 54 | 83 | PASSED |
| IGA033-01-182CR | 0.018 | 0.50 | 1.12 | 0.028 | 0.002 | 18.34 | 8.03 | < 0.01 | - | 462 | 670 | 51 | 82 | PASSED |
| BFA059-01-112CR | 0.027 | 0.52 | 0.99 | 0.032 | 0.004 | 18.13 | 8.01 | < 0.01 | - | 397 | 708 | 56 | 82 | PASSED |
| FEA150-01-112CR | 0.018 | 0.36 | 0.94 | 0.038 | 0.001 | 18.00 | 8.07 | < 0.01 | - | 406 | 718 | 57 | 89 | PASSED |
| IYA142-01-112CR | 0.022 | 0.37 | 1.59 | 0.030 | 0.002 | 18.10 | 8.00 | < 0.01 | - | 372 | 655 | 56 | 85 | PASSED |
| BDA121-02-112CR | 0.022 | 0.44 | 1.44 | 0.026 | 0.004 | 18.03 | 8.01 | < 0.01 | - | 417 | 669 | 56 | 89 | PASSED |
| JG098-1 | 0.022 | 0.41 | 1.13 | 0.030 | 0.002 | 18.08 | 8.03 | < 0.01 | - | 348 | 671 | 50 | 77 | PASSED |
| JSA418-03-112CR | 0.012 | 0.54 | 1.11 | 0.028 | 0.003 | 18.05 | 8.01 | < 0.01 | - | 353 | 659 | 49 | 84 | PASSED |
| JSA427-02-112CR | 0.017 | 0.50 | 1.16 | 0.031 | 0.001 | 18.06 | 8.01 | < 0.01 | - | 388 | 669 | 48 | 85 | PASSED |
| IDA261-01-112CR | 0.021 | 0.42 | 1.59 | 0.027 | 0.005 | 18.06 | 8.01 | < 0.01 | - | 387 | 677 | 61 | 84 | PASSED |

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED & INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE SPECIFICATION & PURCHASE ORDER;

AND WAS FOUND SATISFIED TO THE REQUIREMENTS. MATERIAL IS FREE FROM MERCURY & RADIOACTIVE CONTAMINATION.

TENSILE REQUIREMENT: CONFORMS TO ASTM A370-12a STANDARD, SPECIMEN GAUGE WIDTH 19.2MM FOR 3" ABOVE & 3" BELOW DONE SIMULATION TEST FROM PIPE. LONGITUDINAL DIRECTION, GAUGE LENGTH 2" (50mm)

NOTE: MADE IN MALAYSIA STEEL MAKING PROCESS: AOD / VOD

PIPE RAW MATERIAL - WELDED BY ELECTRIC FUSION WELDING PROCESS WITH NO FILLER METAL

INTERGRANULAR CORROSION TEST ACCORDING TO ASTM A262-10 PRACTICE E

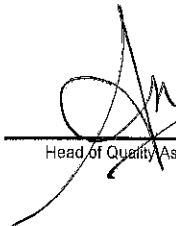

HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156-2015 & NACE-MR0103-2015

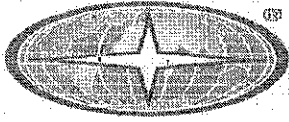
HEAT TREATMENT: SOLUTION TREATED AT MINIMUM 1050°C, RAPIDLY COOLED WITH WATER

CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIAL'S HEAT ANALYSIS

*1: YS: YIELD STRENGTH TS: TENSILE STRENGTH E: ELONGATION

MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN

Hand of Quality Assurance Department





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Certified to NSF/ANSI 61

Cert. No.: ISO9001-0047465

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SIRIM Cert. No.: PC005078

INSPECTION DOCUMENT: EN 10204: 2004 Type 3.1

Customer: Unimech Engineering (M) Sdn Bhd
Product: Welded Austenitic Stainless Steel Fitting

Certificate No: PSA2-FT-4149
Date: 16 Dec 2020

| PO No. | Invoice No. | Product Specification | Dimension & Inspection Specification | Delivery Condition | | | |
|-----------------|-----------------|--|--|--------------------------------------|----------------|--------------------------------------|---------|
| APO-2011-0175 | L000010876 | ASTM A403/A403M - 20 / ASME SA 403/SA403M - 19 | ASME B16.9 - 18 / ASTM A960/A960M - 20 / ASME SA 960/SA960M - 19 | Solution Treated, Pickled-Passivated | | | |
| Heat No. | Product & Size | | | Quantity (pcs) | Material Grade | Visual / Dimension / PMI Examination | Remarks |
| JS001-1 | 1/2" | SCH 10s 90° LR ELBOW | 250 | WP304/304L-W | PASSED | - | |
| ISA359-05-112LR | 1 1/2" | SCH 10s 90° LR ELBOW | 216 | WP304/304L-W | PASSED | - | |
| JGA077-01-112LR | 1 1/2" | SCH 10s 90° LR ELBOW | 52 | WP304/304L-W | PASSED | - | |
| JGA113-01-112LR | 1 1/2" | SCH 10s 90° LR ELBOW | 432 | WP304/304L-W | PASSED | - | |
| IYA070-02-112CR | 1" X 1/2" | SCH 10s CON-REDUCER | 220 | WP304/304L-W | PASSED | - | |
| IYA118-02-112CR | 1" X 3/4" | SCH 40s CON-REDUCER | 20 | WP304/304L-W | PASSED | - | |
| HSA296-01-112CR | 2 1/2" X 1" | SCH 10s CON-REDUCER | 20 | WP304/304L-W | PASSED | - | |
| ISA356-04-112CR | 2 1/2" X 1 1/2" | SCH 10s CON-REDUCER | 100 | WP304/304L-W | PASSED | - | |
| JSA427-02-112CR | 2 1/2" X 2" | SCH 10s CON-REDUCER | 30 | WP304/304L-W | PASSED | - | |
| JSA420-01-112CR | 3" X 1 1/2" | SCH 10s CON-REDUCER | 20 | WP304/304L-W | PASSED | - | |

| Specification | Chemical Composition (%) | | | | | | | | Tensile Test ¹ | | | Hardness (HRB) | Inter-granular corrosion test |
|-----------------|--------------------------|------|------|-------|-------|-------|-------|--------|---------------------------|----------------|-------|----------------|-------------------------------|
| | C | Si | Mn | P | S | Cr | Ni | Pb | YS (KSI / MPa) | TS (KSI / MPa) | E (%) | | |
| | Max | Min | | | | | | | | | | | |
| Heat No. | 0.030 | 1.00 | 2.00 | 0.045 | 0.030 | 20.00 | 11.00 | - | - | - | - | 90 | |
| JS001-1 | 0.018 | 0.48 | 1.04 | 0.032 | 0.001 | 18.10 | 8.02 | < 0.01 | 205 | 515 | 28 | - | PASSED |
| ISA359-05-112LR | 0.020 | 0.30 | 1.45 | 0.030 | 0.001 | 18.19 | 8.07 | < 0.01 | 391 | 679 | 54 | 86 | PASSED |
| JGA077-01-112LR | 0.020 | 0.46 | 1.16 | 0.028 | 0.001 | 18.20 | 8.02 | < 0.01 | 407 | 683 | 56 | 87 | PASSED |
| JGA113-01-112LR | 0.024 | 0.40 | 1.14 | 0.028 | 0.002 | 18.14 | 8.03 | < 0.01 | 416 | 677 | 47 | 85 | PASSED |
| IYA070-02-112CR | 0.019 | 0.46 | 1.60 | 0.030 | 0.001 | 18.00 | 8.00 | < 0.01 | 373 | 685 | 52 | 82 | PASSED |
| IYA118-02-112CR | 0.022 | 0.47 | 1.60 | 0.020 | 0.001 | 18.20 | 8.10 | < 0.01 | 345 | 640 | 54 | 83 | PASSED |
| HSA296-01-112CR | 0.015 | 0.51 | 1.05 | 0.030 | 0.001 | 18.16 | 8.05 | < 0.01 | 345 | 632 | 56 | 86 | PASSED |
| ISA356-04-112CR | 0.017 | 0.40 | 1.05 | 0.034 | 0.001 | 18.09 | 8.03 | < 0.01 | 366 | 650 | 49 | 89 | PASSED |
| JSA427-02-112CR | 0.017 | 0.50 | 1.16 | 0.031 | 0.001 | 18.06 | 8.01 | < 0.01 | 380 | 669 | 55 | 85 | PASSED |
| JSA420-01-112CR | 0.013 | 0.39 | 1.17 | 0.030 | 0.002 | 18.04 | 8.02 | < 0.01 | 388 | 669 | 48 | 85 | PASSED |
| JSA420-01-112CR | 0.013 | 0.39 | 1.17 | 0.030 | 0.002 | 18.04 | 8.02 | < 0.01 | 349 | 651 | 54 | 82 | PASSED |

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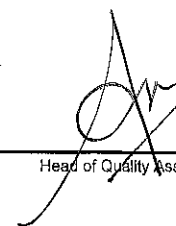
HARDNESS ACCORDING TO NACE-MR0175-2015 / ISO 15156-2015 & NACE-MR0103-2015

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CHEMICAL COMPOSITION CAPTURED FROM RAW MATERIAL'S HEAT ANALYSIS

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MATERIAL CONFORMS TO THE SPECIFICATION / STANDARD SHOWN


 QAQC MANAGER
 HASSANUDDIN
 Head of Quality Assurance Department