CEOC INTERNATIONAL

Appointed Notified Body under the PED Nº 0037

ZURICH®

UKAS INSPECTION N°006

SAFed SAFETY ASSESSMENT FEDERATION

E4

WELDER APPROVAL TEST CERTIFICATE

Designation: ISO 9606-2, Manual 141, P, FW, 23.1, t3, PB, sl

Manufacturer's Welding Procedure:

Inspecting Authority: ZE/WQ/JT/002686

Reference No. LS16-0934

Reference No.	AE 003
Welder's Name:	[redacted]
Identification:	CR
Method of Identification:	Initials
Date and Place of Birth:	03/03/1958 / Cuckfield
Employer:	Altech Engineering Ltd
Code / Testing Standard:	BS EN ISO 9606-2 2004
Job Knowledge:	Not Tested

	Weld Test Details	Range of Approval
Welding Process(es)	Manual TIG (141) wm	Manual 141 wm, nm
Plate or Pipe	Plate (P)	P, T
Type of Joint / Weld	Fillet Weld (FW)	FW Only
Material Group / Sub-Group	23.1	23, 22, 21
Welding Consumable(s)	EN ISO 18273 S AL 5356	AlMg & AISI Fillers
Shielding Gas / Flux	ISO 14175 I1, 99.99% Ar	Compatible Gases
Auxiliaries	AC	AC
Material Thickness	3mm	≥ 3mm
Weld Material Thickness	N/A	-
Pipe Outside Diameter	N/A	≥ 150mm
Welding Postion	Horizontal-Vertical (PB)	PA, PB
Gouging / Backing	N/A	-
Single layer / Multi layer	Single Layer (sl)	sl Only

Supplementary fillet weld test (completed in conjunction with a butt weld qualification): -

Additional information is available on attached sheet / or welding procedure Specification No: AE 003

Type of Test	Performed and Acceptable	Not Required
Visual	Acceptable	-
Radiography	-	Not Required
Penetrant	-	Not Required
Macro	(X2) Acceptable	-
Fracture	Acceptable	-
Bend	-	Not Required
Additional Tests	-	Not Required

[redacted]
Zurich Engineering
126 Hagley Road
Edgbaston, Birmingham
B16 9PF
Tel: 0121 520 5868
ZURICH SAFed/CEOC Member Company

Date of Issue: [redacted]

Qualification Valid Until: [redacted]

PROLONGATION FOR APPROVAL BY INSPECTING AUTHORITY

Date	Signature	Position or Title

PROLONGATION FOR APPROVAL BY EMPLOYER / SUPERVISOR

Date	Signature	Position or Title

*) Append seperate sheet if required

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WELDER APPROVAL TEST CERTIFICATE

Designation: ISO 9606-1, Manual 141, P, FW, FM1, t3, PB, sl

Manufacturer's Welding Procedure:

Inspecting Authority: ZE/WQ/IT/002684

Reference No. LS16-0934

Reference No.	AE 002
Welder's Name:	[redacted]
Identification:	CR
Method of Identification:	Initials
Date and Place of Birth:	03/03/1958 / Cuckfield
Employer:	Altech Engineering Ltd
Code / Testing Standard:	BS EN ISO 9606-1:2013
Job Knowledge:	Not Tested

	Weld Test Details	Range of Approval
Welding Process(es)	Manual TIG (141)	Manual 141, 142, 143, 145
Transfer mode	N/A	-
Plate or Pipe	Plate (P)	P, T
Type of Joint / Weld	Fillet Weld (FW)	FW Only
Material Group / Sub-Group	1.1	1 Through 11
Filler Material Groups(s)	FM1	FM1, FM2
Welding Consumable(s)	EN ISO 636-A W2Ti	-
Shielding Gas / Flux	ISO 14175 I1, 99.99% Ar	Compatible Gases
Auxiliaries	N/A	-
Type of Current and Polarity	DC-VE	-
Material Thickness	3mm	≥ 3mm
Weld Material Thickness	N/A	-
Pipe Outside Diameter	N/A	≥ 75mm
Welding Postion	Horizontal-Vertical (PB)	PA, PB
Gouging / Backing	N/A	-
Single layer / Multi layer	Single Layer (sl)	sl Only

Supplementary fillet weld test (completed in conjunction with a butt weld qualification): -

Additional information is available on attached sheet / or welding procedure Specification No: AE 002

Type of Test	Performed and Acceptable	Not Required
Visual	Acceptable	-
Radiography	-	Not Required
Magnetic Particle	-	Not Required
Macro	(X2) Acceptable	-
Fracture	Acceptable	-
Bend	-	Not Required
Additional Tests	-	Not Required

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ZURICH
SAFed/CEOC Member Company

Date of Issue: [redacted]

Qualification Valid Until: [redacted]

● Revalidation 9.3 a) ○ Revalidation 9.3 b) ○ Revalidation 9.3 c)

Confirmation of the validity by employer/welding coordinator / examiner for the following 6 months [refer to 9.2]

Date	Signature	Position or Title

*) Append seperate sheet if required

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WELDER APPROVAL TEST CERTIFICATE

Designation: ISO 9606-1, P/Mech 135, P, FW, FM1, S, t6, PB, si

Manufacturer's Welding Procedure:

Reference No. AE 001

Inspecting Authority: ZE/WQ/JT/002682

Reference No. LS16-0934

Welder's Name: [redacted]

Identification: CR

Method of Identification: Initials

Date and Place of Birth: 03/03/1958 / Cuckfield

Employer: Altech Engineering Ltd

Code / Testing Standard: BS EN ISO 9606-1:2013

Job Knowledge: Not Tested

	Weld Test Details	Range of Approval
Welding Process(es)	Partly Mechanised MAG (135)	Partly Mechanised 135, 138
Transfer mode	Dip	Dip, Globular, Spray
Plate or Pipe	Plate (P)	P, T
Type of Joint / Weld	Fillet Weld (FW)	FW Only
Material Group / Sub-Group	1.1	1 Through 11
Filler Material Groups(s)	FM1	FM1, FM2
Welding Consumable(s)	EN ISO 14341-A: G3Si1	-
Shielding Gas / Flux	ISO 14175 M24, Ar+12%CO_2+2%O_2	Compatible Gases
Auxiliaries	Solid Wire (S)	S, M
Type of Current and Polarity	DC+ve	-
Material Thickness	6mm	≥ 3mm
Weld Material Thickness	N/A	-
Pipe Outside Diameter	N/A	≥ 75mm
Welding Position	Horizontal-Vertical (PB)	PA, PB
Gouging / Backing	N/A	-
Single layer / Multi layer	Single Layer (si)	si Only

Supplementary fillet weld test (completed in conjunction with a butt weld qualification): -

Additional information is available on attached sheet / or welding procedure Specification No: AE 001

Type of Test	Performed and Acceptable	Not Required
Visual	Acceptable	-
Radiography	-	Not Required
Magnetic Particle	-	Not Required
Macro	(X2) Acceptable	-
Fracture	Acceptable	-
Bend	-	Not Required
Additional Tests	-	Not Required

[redacted]
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B16 9PF
Tel: 0121 520 5868
ZURICH SAFed/CEOC Member Company

Date of Issue: [redacted]

Qualification Valid Until: [redacted]

● Revalidation 9.3 a) ○ Revalidation 9.3 b) ○ Revalidation 9.3 c)

Confirmation of the validity by employer/welding coordinator / examiner for the following 6 months [refer to 9.2]

Date	Signature	Position or Title

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WELDER APPROVAL TEST CERTIFICATE

Designation: ISO 9606-1, P/Mech 135, P, FW, FM1, S, t6, PB, si

Page 1 of 1

Manufacturer's Welding Procedure:

Inspecting Authority: ZE/WQ/JT/002683

Reference No. LS16-0934

Reference No.	AE 001
Welder's Name:	[redacted]
Identification:	MS
Method of Identification:	Initials
Date and Place of Birth:	04/11/1977 / Cleavland
Employer:	Altech Engineering Ltd
Code / Testing Standard:	BS EN ISO 9606-1:2013
Job Knowledge:	Not Tested

	Weld Test Details	Range of Approval
Welding Process(es)	Partly Mechanised MAG (135)	Partly Mechanised 135, 138
Transfer mode	Dip	Dip, Globular, Spray
Plate or Pipe	Plate (P)	P, T
Type of Joint / Weld	Fillet Weld (FW)	FW Only
Material Group / Sub-Group	1.1	1 Through 11
Filler Material Groups(s)	FM1	FM1, FM2
Welding Consumable(s)	EN ISO 14341-A: G3Si1	-
Shielding Gas / Flux	ISO 14175 M24, Ar+12%CO^2+2%O^2	Compatible Gases
Auxiliaries	Solid Wire (S)	S, M
Type of Current and Polarity	DC+ve	-
Material Thickness	6mm	≥ 3mm
Weld Material Thickness	N/A	-
Pipe Outside Diameter	N/A	≥ 75mm
Welding Postion	Horizontal-Vertical (PB)	PA, PB
Gouging / Backing	N/A	-
Single layer / Multi layer	Single Layer (si)	si Only

Supplementary fillet weld test (completed in conjunction with a butt weld qualification): -

Additional information is available on attached sheet / or welding procedure Specification No: AE 001

Type of Test	Performed and Acceptable	Not Required
Visual	Acceptable	-
Radiography	-	Not Required
Magnetic Particle	-	Not Required
Macro	(X2) Acceptable	-
Fracture	Acceptable	-
Bend	-	Not Required
Additional Tests	-	Not Required

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Date of Issue: [redacted]

Qualification Valid Until: [redacted]

● Revalidation 9.3 a) ○ Revalidation 9.3 b) ○ Revalidation 9.3 c)

Confirmation of the validity by employer/welding coordinator / examiner for the following 6 months (refer to 9.2)

Date	Signature	Position or Title

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WELDER APPROVAL TEST CERTIFICATE

Designation: ISO 9606-2, Manual 141, P, FW, 23.1, t3, PB, sl

Manufacturer's Welding Procedure:

Inspecting Authority: ZE/WQ/JT/002687

Reference No. LS16-0934

Reference No.	AE 003
Welder's Name:	[redacted]
Identification:	MS
Method of Identification:	Initials
Date and Place of Birth:	04/11/1977 / Cleaviand
Employer:	Altech Engineering Ltd
Code / Testing Standard:	BS EN ISO 9606-2 2004
Job Knowledge:	Not Tested

	Weld Test Details	Range of Approval
Welding Process(es)	Manual TIG (141) wm	Manual 141 wm, nm
Plate or Pipe	Plate (P)	P, T
Type of Joint / Weld	Fillet Weld (FW)	FW Only
Material Group / Sub-Group	23.1	23, 22, 21
Welding Consumable(s)	EN ISO 18273 S AL 5356	AlMg & AISI Fillers
Shielding Gas / Flux	ISO 14175 I1, 99.99% Ar	Compatible Gases
Auxiliaries	AC	AC
Material Thickness	3mm	≥ 3mm
Weld Material Thickness	N/A	-
Pipe Outside Diameter	N/A	≥ 150mm
Welding Postion	Horizontal-Vertical (PB)	PA, PB
Gouging / Backing	N/A	-
Single layer / Multi layer	Single Layer (sl)	sl Only

Supplementary fillet weld test (completed in conjunction with a butt weld qualification): -

Additional information is available on attached sheet / or welding procedure Specification No: AE 003

Type of Test	Performed and Acceptable	Not Required
Visual	Acceptable	-
Radiography	-	Not Required
Penetrant	-	Not Required
Macro	(X2) Acceptable	-
Fracture	Acceptable	-
Bend	-	Not Required
Additional Tests	-	Not Required

[redacted]
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ZURICH SAFed/CEOC Member Company

Date of Issue: [redacted]

Qualification Valid Until: [redacted]

PROLONGATION FOR APPROVAL BY INSPECTING AUTHORITY

Date	Signature	Position or Title

PROLONGATION FOR APPROVAL BY EMPLOYER / SUPERVISOR

Date	Signature	Position or Title

*) Append seperate sheet if required

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N°006

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ASME IX QW-484A WELDER PERFORMANCE QUALIFICATION (WPQ)

(See QW-301, Section IX, ASME Boiler and Pressure Vessel Code)

Employer:	Altech Engineering Ltd	Inspection Authority:	ZE/WPQ/JT/000126
Welders Name:	[redacted]	Identification: CR	Reference No. LS16-0934
Date and Place of Birth:	03/03/1958 / Cuckfield		Page No. Page 1 of 1
Method of Identification:	Initials		

Test Description

Identification of WPS Followed: AE 001

☒ Test Coupon ☐ Production Weld

Specification and type/grade or UNS number of base metals(s): EN 10025-2 S275 (Unassigned)

Thickness (mm): 6mm

Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding process(es)	GMAW	GMAW
Type (i.e.; manual, semi automatic) used	Semi-automatic	Semi-automatic
Backing (with / without)	N/A	-
☒ Plate ☐ Pipe (enter diameter, if pipe or tube)	N/A	≥ 73mm
Base metal P- or S- Number to P- or S- Number	Unassigned Material	As Test
Joint Type	Fillet Weld	Fillet Welds
Filler metal or electrode specification(s) (SFA) (info only)	AWS A5.18	-
Filler metal or electrode classification(s) (info only)	ER70S-6	-
Filler metal F-Number(s)	FN°6	FN°6
Consumable insert (GTAW or PAW)	N/A	-
Filler type (solid/metal or flux cored/powder (GTAW or PAW)	N/A	-
Deposit thickness for each process (mm)		
Process 1 N/A (≥ 3 layers) ☐ Yes ☐ No	N/A	-
Process 2 N/A (≥ 3 layers) ☐ Yes ☐ No	N/A	-
Fillet Weld base material thickness	6mm	All
Position qualified (2G, 6G, 3F etc.)	Horizontal-Vertical (2F)	F, H
Vertical progression (uphill or downhill)	N/A	-
Type of fuel gas (OFW)	N/A	-
Inert gas backing (GTAW, PAW, GMAW)	N/A	-
Transfer mode (spray/globular or pulse to short circuit - GMAW)	Short Circuit	Short Circuit
GTAW current type/polarity (AC, DCEP, DCEN)	DCEP	-

RESULTS

Visual Examination of completed Weld; QW-302.4	Acceptable
☐ Transverse face and root bends; QW-462.3 (a)	Not required
☐ Longitudinal bends; QW-462.3 (b)	Not required
☐ Side bends; QW-462.2	Not required
☐ Pipe bend specimen, corrosion-resistant weld metal overlay; QW-462.5 (c)	Not required
☐ Plate bend specimen, corrosion-resistant weld metal overlay; QW-462.5 (d)	Not required
☐ Pipe specimen, macro test for weld metal overlay fusion; QW-462.5 (b)	Not required
☐ Plate specimen, macro test for weld metal overlay fusion; QW-462.5 (e)	Not required
☐ RT or ☐ UT; Alternative Volumetric Examination Results; QW-191	Not required
☒ Fillet welds in plate; QW-462.4 (b)	Acceptable
☐ Fillet welds in pipe; QW-462.4 (c)	Not required
☒ Macro Examination; QW-184	Acceptable

Welding Supervised By: R Chase on behalf of Zurich Engineering

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Inspection Organisation:

Zurich Engineering
126 Hagley Road
Edgbaston, Birmingham
B16 9PF
Tel: 0121 520 5868
ZURICH SAFed/CEOC Member Company

Date of Issue: 06/05/2016

Certified By:

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UKAS INSPECTION N°006

SAFed SAFETY ASSESSMENT FEDERATION

ASME IX QW-484A WELDER PERFORMANCE QUALIFICATION (WPQ)

(See QW-301, Section IX, ASME Boiler and Pressure Vessel Code)

Employer: Altech Engineering Ltd
Welders Name: [redacted] Identification: MS
Date and Place of Birth: 04/11/1977 / Cleaviand
Method of Identification: Initials

Inspection Authority: ZE/WPQ/JT/000127
Reference No. LS16-0934
Page No. Page 1 of 1

Test Description

Identification of WPS Followed: AE 001
Specification and type/grade or UNS number of base metals(s): EN 10025-2 S275 (Unassigned)

☒ Test Coupon ☐ Production Weld
Thickness (mm): 6mm

Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding process(es)	GMAW	GMAW
Type (i.e.; manual, semi automatic) used	Semi-automatic	Semi-automatic
Backing (with / without)	N/A	-
☒ Plate ☐ Pipe (enter diameter, if pipe or tube)	N/A	≥ 73mm
Base metal P- or S- Number to P- or S- Number	Unassigned Material	As Test
Joint Type	Fillet Weld	Fillet Welds
Filler metal or electrode specification(s) (SFA) (info only)	AWS A5.18	-
Filler metal or electrode classification(s) (info only)	ER70S-6	-
Filler metal F-Number(s)	FN°6	FN°6
Consumable insert (GTAW or PAW)	N/A	-
Filler type (solid/metal or flux cored/powder (GTAW or PAW)	N/A	-
Deposit thickness for each process (mm)		
Process 1 N/A (≥ 3 layers) ☐ Yes ☐ No	N/A	-
Process 2 N/A (≥ 3 layers) ☐ Yes ☐ No	N/A	-
Fillet Weld base material thickness	6mm	All
Position qualified (2G, 6G, 3F etc.)	Horizontal-Vertical (2F)	F, H
Vertical progression (uphill or downhill)	N/A	-
Type of fuel gas (OFW)	N/A	-
Inert gas backing (GTAW, PAW, GMAW)	N/A	-
Transfer mode (spray/globular or pulse to short circuit - GMAW)	Short Circuit	Short Circuit
GTAW current type/polarity (AC, DCEP, DCEN)	DCEP	-

RESULTS

Visual Examination of completed Weld; QW-302.4	Acceptable
☐ Transverse face and root bends; QW-462.3 (a)	Not required
☐ Longitudinal bends; QW-462.3 (b)	Not required
☐ Side bends; QW-462.2	Not required
☐ Pipe bend specimen, corrosion-resistant weld metal overlay; QW-462.5 (c)	Not required
☐ Plate bend specimen, corrosion-resistant weld metal overlay; QW-462.5 (d)	Not required
☐ Pipe specimen, macro test for weld metal overlay fusion; QW-462.5 (b)	Not required
☐ Plate specimen, macro test for weld metal overlay fusion; QW-462.5 (e)	Not required
☐ RT or ☐ UT; Alternative Volumetric Examination Results; QW-191	Not required
☒ Fillet welds in plate; QW-462.4 (b)	Acceptable
☒ Fillet welds in pipe; QW-462.4 (c)	Acceptable
☒ Macro Examination; QW-184	Acceptable

Welding Supervised By: R Chase on behalf of Zurich Engineering

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Inspection Organisation:

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Date of Issue: 06/05/2016

Certified By:

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ASME IX QW-484A WELDER PERFORMANCE QUALIFICATION (WPQ)

(See QW-301, Section IX, ASME Boiler and Pressure Vessel Code)

Employer:	Altech Engineering Ltd	Inspection Authority:	ZE/WPQ/JT/000128
Welders Name:	[redacted]	Identification: CR	Reference No. LS16-0934
Date and Place of Birth:	03/03/1958 / Cuckfield		Page No. Page 1 of 1
Method of Identification:	Initials		

Test Description

Identification of WPS Followed: AE 002

☒ Test Coupon ☐ Production Weld

Specification and type/grade or UNS number of base metals(s): EN 10025-2 S275 (Unassigned) Thickness (mm): 3mm

Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding process(es)	GTAW	GTAW
Type (i.e.; manual, semi automatic) used	Manual	Manual
Backing (with / without)	N/A	-
☒ Plate ☐ Pipe (enter diameter, if pipe or tube)	N/A	≥ 73mm
Base metal P- or S- Number to P- or S- Number	Unassigned Meterial	As Test
Joint Type	Fillet Weld	Fillet Welds
Filler metal or electrode specification(s) (SFA) (info only)	AWS A5.18	-
Filler metal or electrode classification(s) (info only)	ER70S-2	-
Filler metal F-Number(s)	FN°6	FN°6
Consumable insert (GTAW or PAW)	Without	With, Without
Filler type (solid/metal or flux cored/powder (GTAW or PAW)	Solid	Solid, Metal Cored
Deposit thickness for each process (mm)		
Process 1 N/A (≥ 3 layers) ☐ Yes ☐ No	N/A	-
Process 2 N/A (≥ 3 layers) ☐ Yes ☐ No	N/A	-
Fillet Weld base material thickness	3mm	3mm - 6mm
Position qualified (2G, 6G, 3F etc.)	Horizontal-Vertical (2F)	F, H
Vertical progression (uphill or downhill)	N/A	-
Type of fuel gas (OFW)	N/A	-
Inert gas backing (GTAW, PAW, GMAW)	N/A	-
Transfer mode (spray/globular or pulse to short circuit - GMAW)	N/A	-
GTAW current type/polarity (AC, DCEP, DCEN)	DCEN	DCEN

RESULTS

Visual Examination of completed Weld; QW-302.4	Acceptable
☐ Transverse face and root bends; QW-462.3 (a)	Not required
☐ Longitudinal bends; QW-462.3 (b)	Not required
☐ Side bends; QW-462.2	Not required
☐ Pipe bend specimen, corrosion-resistant weld metal overlay; QW-462.5 (c)	Not required
☐ Plate bend specimen, corrosion-resistant weld metal overlay; QW-462.5 (d)	Not required
☐ Pipe specimen, macro test for weld metal overlay fusion; QW-462.5 (b)	Not required
☐ Plate specimen, macro test for weld metal overlay fusion; QW-462.5 (e)	Not required
☐ RT or ☐ UT; Alternative Volumetric Examination Results; QW-191	Not required
☒ Fillet welds in plate; QW-462.4 (b)	Acceptable
☐ Fillet welds in pipe; QW-462.4 (c)	Not required
☒ Macro Examination; QW-184	Acceptable

Welding Supervised By: R Chase on behalf of Zurich Engineering

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Inspection Organisation:

Zurich Engineering
126 Hagley Road
Edgbaston, Birmingham
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Tel: 0121 520 5868
ZURICH SAFed/CEOC Member Company

Date of Issue: 06/05/2016

Certified By:

Appointed Notified Body under the PED N° 0037

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ASME IX QW-484A WELDER PERFORMANCE QUALIFICATION (WPQ)

(See QW-301, Section IX, ASME Boiler and Pressure Vessel Code)

Employer:	Altech Engineering Ltd	Inspection Authority:	ZE/WPQ/JT/000129
Welders Name:	[redacted]	Identification: MS	Reference No. LS16-0934
Date and Place of Birth:	04/11/1977 / Cleevland		Page No. Page 1 of 1
Method of Identification:	Initials		

Test Description

Identification of WPS Followed: AE 002 ☒ Test Coupon ☐ Production Weld

Specification and type/grade or UNS number of base metals(s): EN 10025-2 S275 (Unassigned) Thickness (mm): 3mm

Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding process(es)	GTAW	GTAW
Type (i.e.; manual, semi automatic) used	Manual	Manual
Backing (with / without)	N/A	-
☒ Plate ☐ Pipe (enter diameter, if pipe or tube)	N/A	≥ 73mm
Base metal P- or S- Number to P- or S- Number	Unassigned Material	As Test
Joint Type	Fillet Weld	Fillet Welds
Filler metal or electrode specification(s) (SFA) (info only)	AWS A5.18	-
Filler metal or electrode classification(s) (info only)	ER70S-2	-
Filler metal F-Number(s)	FN°6	FN°6
Consumable insert (GTAW or PAW)	Without	With, Without
Filler type (solid/metal or flux cored/powder (GTAW or PAW)	Solid	Solid, Metal Cored
Deposit thickness for each process (mm)		
Process 1 N/A (≥ 3 layers) ☐ Yes ☐ No	N/A	-
Process 2 N/A (≥ 3 layers) ☐ Yes ☐ No	N/A	-
Fillet Weld base material thickness	3mm	3mm - 6mm
Position qualified (2G, 6G, 3F etc.)	Horizontal-Vertical (2F)	F, H
Vertical progression (uphill or downhill)	N/A	-
Type of fuel gas (OFW)	N/A	-
Inert gas backing (GTAW, PAW, GMAW)	N/A	-
Transfer mode (spray/globular or pulse to short circuit - GMAW)	N/A	-
GTAW current type/polarity (AC, DCEP, DCEN)	DCEN	DCEN

	RESULTS
Visual Examination of completed Weld; QW-302.4	Acceptable
☐ Transverse face and root bends; QW-462.3 (a)	Not required
☐ Longitudinal bends; QW-462.3 (b)	Not required
☐ Side bends; QW-462.2	Not required
☐ Pipe bend specimen, corrosion-resistant weld metal overlay; QW-462.5 (c)	Not required
☐ Plate bend specimen, corrosion-resistant weld metal overlay; QW-462.5 (d)	Not required
☐ Pipe specimen, macro test for weld metal overlay fusion; QW-462.5 (b)	Not required
☐ Plate specimen, macro test for weld metal overlay fusion; QW-462.5 (e)	Not required
☐ RT or ☐ UT; Alternative Volumetric Examination Results; QW-191	Not required
☒ Fillet welds in plate; QW-462.4 (b)	Acceptable
☐ Fillet welds in pipe; QW-462.4 (c)	Not required
☒ Macro Examination; QW-184	Acceptable

Welding Supervised By: R Chase on behalf of Zurich Engineering

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

Inspection Organisation:

Zurich Engineering
126 Hagley Road
Edgbaston, Birmingham
B16 9PF
Tel: 0121 520 5868
ZURICH SAFed/CEOC Member Company

Date of Issue: 06/05/2016

Certified By:

Appointed Notified Body under the PED N⁰ 0037

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UKAS INSPECTION N°006

SAFed SAFETY ASSESSMENT FEDERATION

ASME IX QW-484A WELDER PERFORMANCE QUALIFICATION (WPQ)

(See QW-301, Section IX, ASME Boiler and Pressure Vessel Code)

Employer:	Altech Engineering Ltd	Inspection Authority:	ZE/WPQ/JT/000130
Welders Name:	[redacted]	Identification: CR	Reference No. LS16-0934
Date and Place of Birth:	03/03/1958 / Cuckfield		Page No. Page 1 of 1
Method of Identification:	Initials		

Test Description

Identification of WPS Followed: AE 003 ☒ Test Coupon ☐ Production Weld

Specification and type/grade or UNS number of base metals(s): Al Mg 5251 (Unassigned) Thickness (mm): 3mm

Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding process(es)	GTAW	GTAW
Type (i.e.; manual, semi automatic) used	Manual	Manual
Backing (with / without)	N/A	-
☒ Plate ☐ Pipe (enter diameter, if pipe or tube)	N/A	≥ 73mm
Base metal P- or S- Number to P- or S- Number	Unassigned Material	As Test
Joint Type	Fillet Weld	Fillet Welds
Filler metal or electrode specification(s) (SFA) (info only)	AWS A5.10	-
Filler metal or electrode classification(s) (info only)	ER5356	-
Filler metal F-Number(s)	FN°22	FN°21-26
Consumable insert (GTAW or PAW)	Without	With, Without
Filler type (solid/metal or flux cored/powder (GTAW or PAW)	Solid	Solid, Metal Cored
Deposit thickness for each process (mm)		
Process 1 N/A (≥ 3 layers) ☐ Yes ☐ No	N/A	-
Process 2 N/A (≥ 3 layers) ☐ Yes ☐ No	N/A	-
Fillet Weld base material thickness	3mm	3mm - 6mm
Position qualified (2G, 6G, 3F etc.)	Horizontal-Vertical (2F)	F, H
Vertical progression (uphill or downhill)	N/A	-
Type of fuel gas (OFW)	N/A	-
Inert gas backing (GTAW, PAW, GMAW)	N/A	-
Transfer mode (spray/globular or pulse to short circuit - GMAW)	N/A	-
GTAW current type/polarity (AC, DCEP, DCEN)	AC	AC

	RESULTS
Visual Examination of completed Weld; QW-302.4	Acceptable
☐ Transverse face and root bends; QW-462.3 (a)	Not required
☐ Longitudinal bends; QW-462.3 (b)	Not required
☐ Side bends; QW-462.2	Not required
☐ Pipe bend specimen, corrosion-resistant weld metal overlay; QW-462.5 (c)	Not required
☐ Plate bend specimen, corrosion-resistant weld metal overlay; QW-462.5 (d)	Not required
☐ Pipe specimen, macro test for weld metal overlay fusion; QW-462.5 (b)	Not required
☐ Plate specimen, macro test for weld metal overlay fusion; QW-462.5 (e)	Not required
☐ RT or ☐ UT; Alternative Volumetric Examination Results; QW-191	Not required
☒ Fillet welds in plate; QW-462.4 (b)	Acceptable
☐ Fillet welds in pipe; QW-462.4 (c)	Not required
☒ Macro Examination; QW-184	Acceptable

Welding Supervised By: R Chase on behalf of Zurich Engineering

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

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SAFed SAFETY ASSESSMENT FEDERATION

ASME IX QW-484A WELDER PERFORMANCE QUALIFICATION (WPQ)

(See QW-301, Section IX, ASME Boiler and Pressure Vessel Code)

Employer:	Altech Engineering Ltd	Inspection Authority:	ZE/WPQ/JT/000131
Welders Name:	[redacted]	Reference No.	LS16-0934
Date and Place of Birth:	04/11/1977 / Cleavland	Page No.	Page 1 of 1
Method of Identification:	Initials		

Identification: MS

Test Description

Identification of WPS Followed: AE 003

☒ Test Coupon ☐ Production Weld

Specification and type/grade or UNS number of base metals(s): Al Mg 5251 (Unassigned)

Thickness (mm): 3mm

Testing Conditions and Qualification Limits

Welding Variables (QW-350)	Actual Values	Range Qualified
Welding process(es)	GTAW	GTAW
Type (i.e.; manual, semi automatic) used	Manual	Manual
Backing (with / without)	N/A	-
☒ Plate ☐ Pipe (enter diameter, if pipe or tube)	N/A	≥ 73mm
Base metal P- or S- Number to P- or S- Number	Unassigned Material	As Test
Joint Type	Fillet Weld	Fillet Welds
Filler metal or electrode specification(s) (SFA) (info only)	AWS A5.10	-
Filler metal or electrode classification(s) (info only)	ER5356	-
Filler metal F-Number(s)	FN°22	FN°21-26
Consumable insert (GTAW or PAW)	Without	With, Without
Filler type (solid/metal or flux cored/powder (GTAW or PAW)	Solid	Solid, Metal Cored
Deposit thickness for each process (mm)		
Process 1 N/A (≥ 3 layers) ☐ Yes ☐ No	N/A	-
Process 2 N/A (≥ 3 layers) ☐ Yes ☐ No	N/A	-
Fillet Weld base material thickness	3mm	3mm - 6mm
Position qualified (2G, 6G, 3F etc.)	Horizontal-Vertical (2F)	F, H
Vertical progression (uphill or downhill)	N/A	-
Type of fuel gas (OFW)	N/A	-
Inert gas backing (GTAW, PAW, GMAW)	N/A	-
Transfer mode (spray/globular or pulse to short circuit - GMAW)	N/A	-
GTAW current type/polarity (AC, DCEP, DCEN)	AC	AC

RESULTS

Visual Examination of completed Weld; QW-302.4	Acceptable
☐ Transverse face and root bends; QW-462.3 (a)	Not required
☐ Longitudinal bends; QW-462.3 (b)	Not required
☐ Side bends; QW-462.2	Not required
☐ Pipe bend specimen, corrosion-resistant weld metal overlay; QW-462.5 (c)	Not required
☐ Plate bend specimen, corrosion-resistant weld metal overlay; QW-462.5 (d)	Not required
☐ Pipe specimen, macro test for weld metal overlay fusion; QW-462.5 (b)	Not required
☐ Plate specimen, macro test for weld metal overlay fusion; QW-462.5 (e)	Not required
☐ RT or ☐ UT; Alternative Volumetric Examination Results; QW-191	Not required
☒ Fillet welds in plate; QW-462.4 (b)	Acceptable
☐ Fillet welds in pipe; QW-462.4 (c)	Not required
☒ Macro Examination; QW-184	Acceptable

Welding Supervised By: R Chase on behalf of Zurich Engineering

We certify that the statements in this record are correct and that the test coupons were prepared, welded, and tested in accordance with the requirements of section IX of the ASME BOILER AND PRESSURE VESSEL CODE.

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