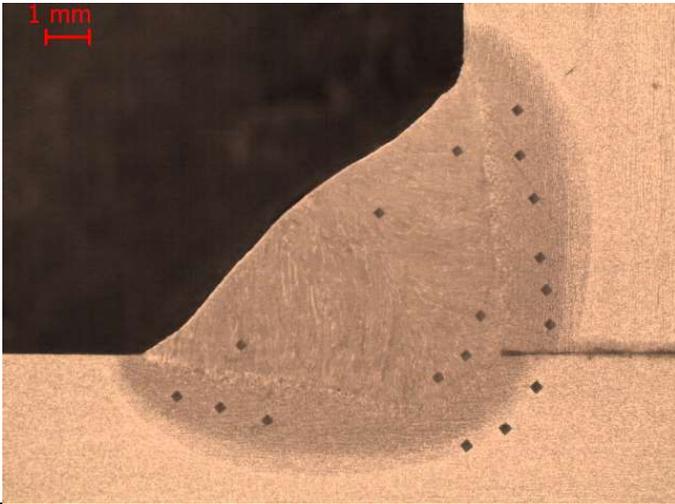


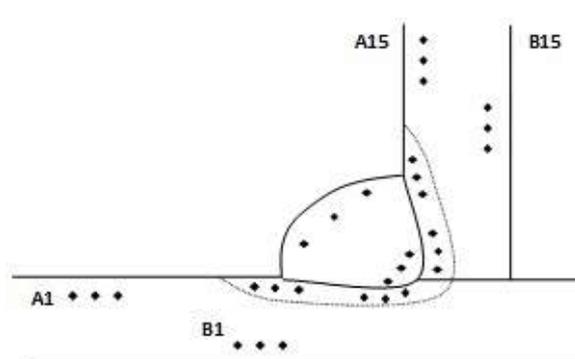
CERTIFICATE OF TEST

<p>Customer : JAFMA MANAGEMENT (NDT) LTD Victoria House 28-32 Desborough Street High Wycombe Buckinghamshire HP11 2NF</p> <p>FAO : Steve Russel</p>	<p>Order No : CONCORDE 20.04.21 W/O No : - Inc Rel Note : - Report No : 0037159/001/E1 Issue No : 1 Test Date : 29-Apr-21 Page : 1 of 5</p>	
<p>Identification : Welder : John Allison (Concorde Glass Ltd) Description : Weld Procedure Approval : CGF-01 Other Info : Single Run Plate Fillet Weld. MAG (135). PB Quantity : 1 No Welds: 1 Material : BS EN 10025: S355J2+N (10mm) Batch/Cast No : - Serial No: - Specification/Procedure : BS EN ISO 15614-1:2017+A1:2019 (Level 2) Acceptance Standard : BS EN ISO 15614-1:2017+A1:2019 (Level 2) / Section 7.5</p>		
<p>Macro Examination Specification : BS EN ISO 17639:2013 Procedure : MCP84 Specimen Location : Weld Section Magnification : X6 Etchant : Nital (10%) Code : MA06 Surface Preparation : Polished to 1200 grit finish Designation : ISO 17639-A-E Inspector Name : Leigh Hobson UNC ± : Cert Comment :</p>		
Sample	Findings	Comments / Status
Macro 2 off	No Defects Visible	Accept
<p>Macro Photo</p> 		

CERTIFICATE OF TEST

Continued

Customer : JAFMA MANAGEMENT (NDT) LTD Victoria House 28-32 Desborough Street High Wycombe Buckinghamshire HP11 2NF FAO : Steve Russel	Order No : CONCORDE 20.04.21 W/O No : - Inc Rel Note : - Report No : 0037159/001/E1 Issue No : 1 Test Date : 29-Apr-21 Page : 2 of 5
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Hardness Survey Description : Vickers Hardness Survey Specification : BS EN ISO 9015-1:2011 Procedure : MCP62 Method : HV Plant No : 2221 Load : 10Kg Inspector Name : Matthew Cross UNC ± : <150 ±5 HV. >150 ±8 HV. Cert Comment :	<p style="text-align: center;"><u>Sketch</u></p> 
--	--

		Results				
Indentation	Sample Location	Row A	Row B	Row C	Row D	Comments / Status
1	Parent Material	160	156	-	-	Accept
2	Parent Material	158	158	-	-	Accept
3	Parent Material	158	159	-	-	Accept
4	Heat Affected Zone	221	188	-	-	Accept
5	Heat Affected Zone	219	182	-	-	Accept
6	Heat Affected Zone	220	180	-	-	Accept
7	Weld	244	231	-	-	Accept
8	Weld	243	237	-	-	Accept
9	Weld	236	236	-	-	Accept
10	Heat Affected Zone	228	212	-	-	Accept
11	Heat Affected Zone	227	211	-	-	Accept
12	Heat Affected Zone	219	223	-	-	Accept
13	Parent Material	158	158	-	-	Accept
14	Parent Material	158	157	-	-	Accept
15	Parent Material	160	159	-	-	Accept

CERTIFICATE OF TEST

Continued

Customer : JAFMA MANAGEMENT (NDT) LTD Victoria House 28-32 Desborough Street High Wycombe Buckinghamshire HP11 2NF FAO : Steve Russel	Order No : CONCORDE 20.04.21 W/O No : - Inc Rel Note : - Report No : 0037159/001/E1 Issue No : 1 Test Date : 29-Apr-21 Page : 3 of 5
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Comments

Visual Examination - Acceptable
Magnetic Particle Inspection - Acceptable
Test results conform to specification/s stated above.

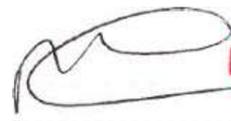
The reported expanded uncertainty (U) is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%

THIS CERTIFICATE SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT APPROVAL OF NDT SERVICES LTD. RESULTS RELATE ONLY TO THE ITEMS TESTED

For **ndt services limited**

Issue Date: 29-Apr-21

Matthew Cross



VISUAL INSPECTION REPORT

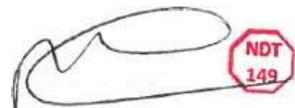
Customer : JAFMA MANAGEMENT (NDT) LTD Victoria House 28-32 Desborough Street High Wycombe Buckinghamshire HP11 2NF FAO : Steve Russel		Order No : CONCORDE 20.04.21 W/O No : - Inc Rel Note : - Report No : 0037159/001/E1 Issue No : 1 Test Date : 21-Apr-21 Page : 4 of 5
Location of Item : Victory Road Laboratory		
Identification : Welder : John Allison (Concorde Glass Ltd) Description : Weld Procedure Approval : CGF-01 Other Info : Single Run Plate Fillet Weld. MAG (135). PB Quantity : 1 No Welds: 1 Material : BS EN 10025: S355J2+N (10mm) Batch/Cast No : - Serial No: - Stage of Test : As Welded Part of Item Tested: 100% Welds Surface Preparation : As Welded Visual Aids : 1000 Lux Minimum Inspector Name & Qualification : Roger Berry Hopkins CSWIP		
Specification/Procedure : BS EN ISO 15614-1:2017+A1:2019 (Level 2) Additional Specification : - Test Specification : BS EN ISO 17637:2016 Company Procedure : MCP71 Acceptance Standard : BS EN ISO 15614-1:2017+A1:2019 (Level 2) Additional Acceptance : Section 7.5		
Results The items as detailed above have been examined by the specified inspection method(s) in accordance with the above stated procedure(s). Quantity Accepted 1 Findings: No Defects Visible Quantity Rejected 0 Comments		

THIS CERTIFICATE SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT APPROVAL OF NDT SERVICES LTD. RESULTS RELATE ONLY TO THE ITEMS TESTED

For **ndt services limited**

Issue Date: 21-Apr-21

Matthew Cross



MAGNETIC PARTICLE TECHNICAL REPORT

Customer : JAFMA MANAGEMENT (NDT) LTD Victoria House 28-32 Desborough Street High Wycombe Buckinghamshire HP11 2NF FAO : Steve Russel		Order No : CONCORDE 20.04.21 W/O No : - Inc Rel Note : - Report No : 0037159/001/E1 Issue No : 1 Test Date : 21-Apr-21 Page : 5 of 5	
Location of Item : Victory Road Laboratory			
Identification : Welder : John Allison (Concorde Glass Ltd) Description : Weld Procedure Approval : CGF-01 Other Info : Single Run Plate Fillet Weld. MAG (135). PB Quantity : 1 No Welds: 1 Material : BS EN 10025: S355J2+N (10mm) Batch/Cast No : - Serial No: - Stage of Test : As Welded Part of Item Tested: 100% Welds Surface Preparation : As Welded Visual Aids : 1000 Lux Minimum @ X3 Magnification Inspector Name & Qualification : Roger Berry Hopkins (No 304313) PCN Level II			
Specification/Procedure : BS EN ISO 15614-1:2017+A1:2019 (Level 2) Additional Specification : - Test Specification : BS EN ISO 17638:2016 Company Procedure : QAP MT-350 Issue 6 Test Media : Ardrox 8032 / 8903W Batch No: C232029280/232028998 Equipment : Electromagnetic Yoke (Plant No 2349) Method of Magnetisation : Magnetic Flow Test Amperage : N/A Field Strength: 4.5KG Lift Test Type of Test Strip Used : N/A Viewing : 1000 LUX Minimum Acceptance Standard : BS EN ISO 15614-1:2017+A1:2019 (Level 2) Additional Acceptance : Section 7.5			
Results The items as detailed above have been examined by the specified inspection method(s) in accordance with the above stated procedure(s). Quantity Accepted 1 Findings: No Defects Visible Quantity Rejected 0 Comments			

THIS CERTIFICATE SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT APPROVAL OF NDT SERVICES LTD. RESULTS RELATE ONLY TO THE ITEMS TESTED

For ndt services limited



Issue Date: 21-Apr-21

Matthew Cross

Welding Procedure Qualification Record form (WPQR)

Welding procedure qualification - Test certificate

Manufacturer's WPQR No: CGF-01
Manufacturer: CONCORDE GLASS LTD
Address: Link House
Waterloo Road
Mablethorpe
Lincolnshire
LN12 1LE
Code/Testing Standard: BS EN ISO 15614-1:2017
Date of Welding: 25-Mar-21

Examiner or examining body: ndt services limited

Ref No: 0037159/001E1

Date of Issue: 04-May-21

Level: 2

Range of Qualification

Product form:	Plate + Pipe		
Welding Processes used:	No 1: MAG (135)	No 2: N/A	No 3: N/A
Deposited metal thickness (mm):			
Type of Joint and weld:	Fillet Welds		
Parent material group(s) and sub group(s):	1.2 (1.1, 1.4) Materials with a specified min design yield ≤ 355 Mpa		
Parent material thickness:	3 - 20mm		
Throat thickness:	4.3 - 8.6mm		
Single layer / Multi-run:	Single run		
Outside pipe diameter (mm):	≥ 500 mm		
Filler material designation:	BS EN ISO 14341-A G 46 4 M21 / 42 3 C1 3Si1 or compatible		
Filler material make:	Any		
Filler material size:	Any size compliant with stated heat input range		
Designation of shielding gas / flux:	BS EN ISO 14175: M14 (CO ₂ 4 - 6%)		
Designation of backing gas:	N/A		
Type of welding current and polarity:	DC+		
Transfer mode:	Spray, Pulse & Globular		
Heat input:	0.80 - 1.50 kJ/mm		
Welding positions:	PB		
Preheat temperature:	Min 5°C		
Interpass temperature:	N/A		
Post-Heating:	Cool in still air		
Post-Weld heat-treatment:	N/A		
Other information:	None		

We confirm that the statements in this record are correct and that the test pieces were prepared, welded, tested and have fulfilled the requirements in accordance with ISO 15614-1:2017.

Location: Workshop

For **ndt services limited**

Tom Nash  

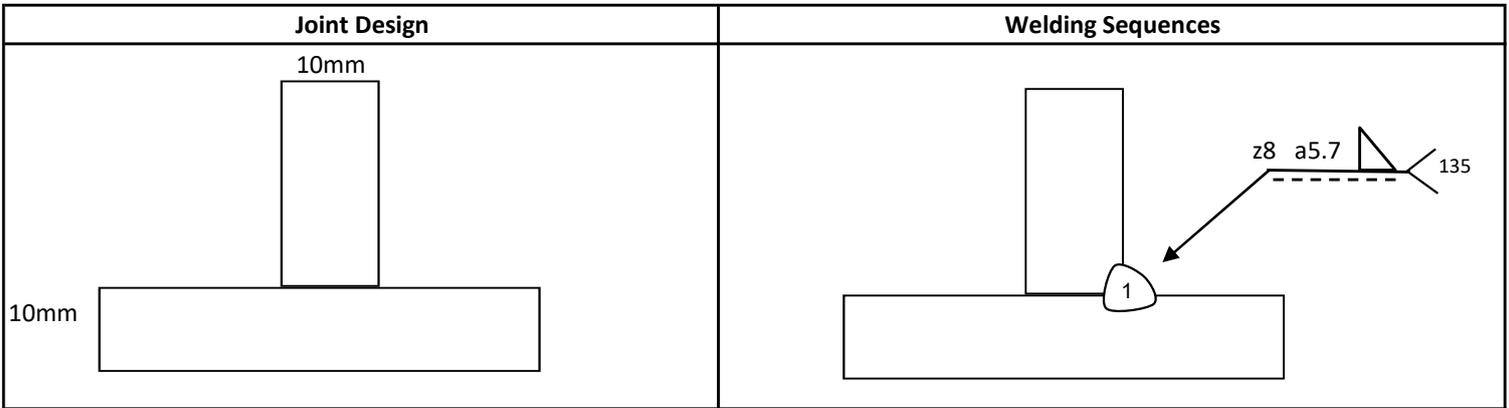
Date: 04-May-21



Record of Weld Test

Location: Workshop	Examiner or examining body: ndt services limited
Manufacturer's pWPS No: CGF-01	Ref No: 0037159/001E1
Manufacturer's WPQR No: CGF-01	
Manufacturer: CONCORDE GLASS LTD	Method of preparation and cleaning: Cut/Machine/Degrease
Welder's Name: John Allison	Parent material specification: BS EN 10025: S355J2+N
Joint type and weld: Single Run Plate Fillet	
	Material Thickness: 10mm
	Outside pipe diameter: N/A
	Welding position: PB (Horizontal-Vertical)

Weld Preparation Details (Sketch)



Welding Details

Run	Welding Process	Size of filler material	Current (A)	Voltage (V)	Type of current / Polarity	Wire feed speed (m/min)	Travel speed (mm/min)	Heat input (kJ/mm)	Metal transfer
1	135	1mm	220 - 240	26 - 27	DC+	-	259	1.06 - 1.20	Spray

Filler material designation & make: BS EN ISO 14341-A G 46 4 M21 / 42 3 C1 3Si1

Any special baking or drying: Dry Store

Gas/Flux : **Shielding:** BS EN ISO 14175: M14
(CO₂ 5% / O₂ 3% / Ar Bal)

Gas flow rate: **Shielding:** 15 LPM
Backing: N/A

Tungsten electrode Type/Size: N/A

Details of back gouging/backing: None

Preheat temperature: Min 10°C

Interpass temperature: N/A

Post-Heating: Cool in still air to retard cooling

Post-weld heat treatment (PWHT): N/A

Time, temperature, method: N/A

Heating and cooling rates: N/A

Weaving (Max width of run): Stringer Bead

Oscillation: (Amplitude, frequency, dwell time) N/A

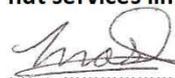
Pulse welding details: N/A

Distance contact tube/workpiece: 3 - 5mm

Plasma welding details: N/A

Torch angle: 45°

For **ndt services limited**

Tom Nash  

Metallurgical Services

Date: 04-May-21

Test Results

Manufacturer's WPQR No:	CGF-01	Examiner or examining body:	ndt services limited
		Ref No:	0037159/001E1
Visual Examination:	Acceptable	Radiography:	Not required
Pentrant/Magnetic Particle:	Acceptable	Ultrasonic:	Not required
		Temperature:	Ambient

Tensile Tests

Type / No.	Re (N/mm ²)	Rm (N/mm ²)	A % on	Z %	Fracture Location	Remarks
Transverse 1	-		-	-		Not required
Transverse 2	-		-	-		Not required

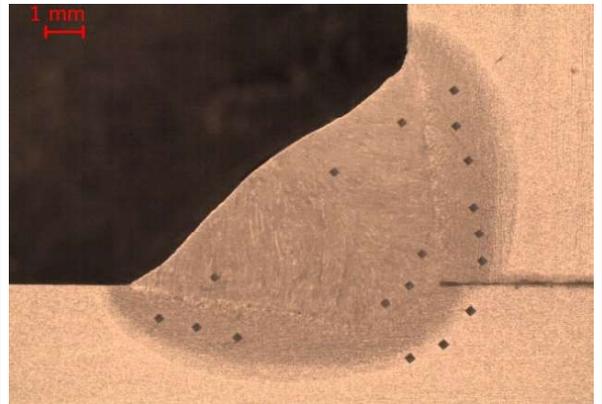
Impact Test

Notch Location/Direction	Type : Charpy V Size: 10 x 10mm				Requirement :	
	Value 1	Value 2	Value 3	Average	LE / % Shear	Remarks
Weld Centre Line				0	-	Not required
Heat Affected Zone				0	-	Not required

Bend Tests

Type / No.	Former Diameter :			Remarks
	Bend Angle	Elongation		
Face Bend x 2	180°	-		Not required
Root Bend x 2	180°	-		Not required

Macroscopic Examination: Acceptable



Vickers Hardness Test (HV10Kg)

Location of readings - see photo :

Parent Metal 1 :	157 - 160
HAZ 1 :	211 - 228
Weld Metal :	231 - 244
HAZ 2 :	180 - 221
Parent Metal 2 :	156 - 160

Other Tests :

Remarks :

Tests carried out in accordance with the requirements of BS EN ISO 15614-1:2017

Laboratory Report Ref No: 0037159/001E1

Test results were **Acceptable** / ~~Not Acceptable~~

For **ndt services limited**

Testing carried out in the presence of : N/A

Tom Nash  
Metallurgical Services

Date: 04-May-21

Welder's Qualification Test Certificate

Designation: ISO9606-1 135 P FW FM1 S t10 PB sl

WPS - Reference No	: CGF-01	Examiner or test body:	ndt services limited
Welder's Name	: John Allison	Reference No:	0037159/001E1
Identification	: Company records	Photograph <i>(If required)</i>	
Method of identification	: Confirmed by employer		
Date and place of birth	:		
Employer	: CONCORDE GLASS LTD		
Code / Testing Standard	: BS EN ISO 9606-1:2017		
Job Knowledge:	Acceptable Not tested <i>(Delete as necessary)</i>		

	Weld test details		Range of approval
Welding process(es)	MAG	135	135 + 138 (MAG)
Transfer mode	Spray		Spray + Globular
Product Type (Plate or pipe)	Plate	P	Plate / Pipe
Type of weld	Fillet	FW	Fillet welds
Parent material group(s)	Steel Group 1.2	1.2	-----
Filler material group(s)	FM1	FM1	FM1 + FM2
Filler material (Designation)	BS EN ISO 14341: G3Si1	S	Compatible fillers, S + M
Shielding gas	BS EN ISO 14175: M14		Similar / Compatible
Auxiliaries	N/A		-----
Type of current and polarity	DC+		-----
Material thickness (mm)	10mm	t10	≥3mm
Deposited thickness (mm)	N/A		N/A
Outside pipe diameter (mm)	N/A		≥500mm (Fixed Pipe) / ≥75mm (Rotated)
Welding position	Horizontal / Vertical	PB	PA + PB
Weld details	Single sided, Single run		-----
Multi-layer/Single layer	Single layer	sl	sl

Supplementary fillet weld test (completed in conjunction with a butt weld qualification): **Acceptable** / ~~Not Acceptable~~

Type of test	Performed & Accepted	Not required
Visual testing	X	
Radiographic testing		X
Fracture test		X
Bend test		X
Notch tensile test		X
Macroscopic examination	X	
Additional tests:	X	

Name: Tom Nash

Signature:

Examiner or test body: **ndt services limited**

Date of issue: 04-May-21

Place of welding: Clients premises

Date of welding: 25-Mar-21

Revalidation	Valid until	Revalidation	Valid until	Revalidation	Valid until
9.3a	25 March 2024	9.3 b	N/A	9.3 c	N/A

Revalidation for qualification by examiner or examining body for the following 2 years [refer to 9.3.b]

Date	Signature	Position or title

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

Date	Signature	Position or title

