

TEMPERATURE CONTROLS PTY LTD

A.C.N. 003 512 294

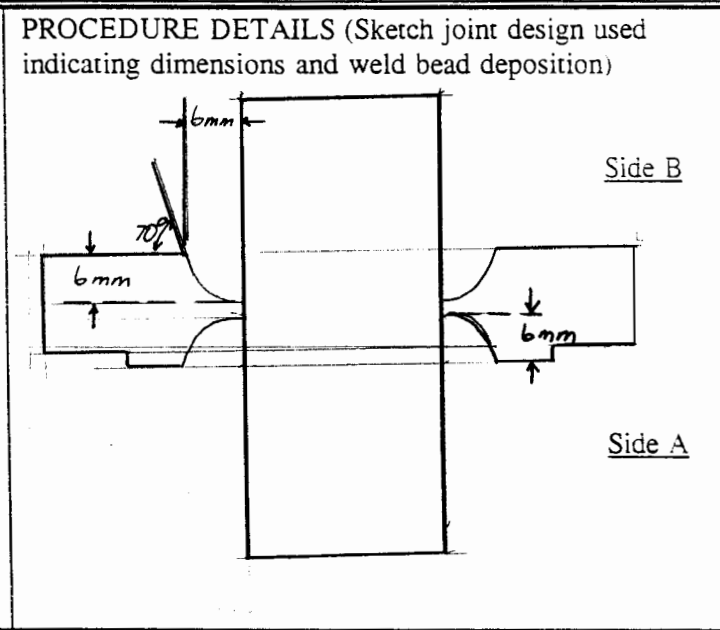
WELDING PROCEDURE QUALIFICATION RECORD

FABRICATOR <i>TEMPERATURE CONTROLS</i>	
WPS No. <i>SZZ</i>	REV. 0
DATE: <i>20.2.96.</i>	
SIGNED: <i>[Signature]</i>	

BASE METAL #1 <i>316L FLANGE</i>	P No. <i>—</i>	GR No. <i>—</i>	SPECIFICATION & GRADE <i>316L ANSI B16.5</i>
BASE METAL #2 <i>316L BAR</i>	P No. <i>—</i>	GR No. <i>—</i>	SPECIFICATION & GRADE <i>316L</i>
JOINT TYPE <i>DOUBLE J GROOVE</i>	THICKNESS <i>—</i>	PIPE/TUBE DIAMETER <i>28mm Ø BAR</i>	

WELDING PROCESS	Consumable	Size	AWS Class	Trade Name	Maker
<i>GTAW</i>	<i>316L</i>	<i>2.4mm Ø</i>	<i>5.4-Ø1</i>	<i>BRITISH INTERNATIONAL TRADING PA</i>	

TUNGSTEN ELECTRODE <i>2% THORIATED</i> (Type & Size) <i>2.4 mm Ø</i>
ELECTRODE/FLUX TREATMENTS (Temperature and times of baking/drying and temporary storage) <i>N/A</i>
EDGE PREPARATION METHOD <i>LATHE MACHINED</i>
METHOD OF FIT UP (If tacks or welded clamps, state weld procedure, pre-head and method of removal) <i>INTERFERENCE FIT</i>
WELD POSITION & PROGRESSION <i>DOWN HAND</i>
DIMENSIONS OF TEST PLATE/PIPE/TUBE <i>N/A N/A.</i>



TIME	WELD BEAD NO.	AMPS	VOLTS	AC/DC	STRING/WEAVE	RATE OF TRAVEL	FLOW RATES	
							GAS SHIELD	BACK PURGE
<i>N/A</i>	<i>1A</i>	<i>150</i>	<i>11</i>	<i>DC</i>	<i>SINGLE BEAD</i>	<i>N/A</i>	<i>10LTR MIN</i>	<i>N/A</i>
<i>N/A</i>	<i>2A</i>	<i>140</i>	<i>11</i>	<i>DC</i>	<i>SINGLE BEAD</i>	<i>N/A</i>	<i>10LTR MIN</i>	<i>N/A</i>
<i>N/A</i>	<i>3A</i>	<i>140</i>	<i>11</i>	<i>DC</i>	<i>SINGLE BEAD</i>	<i>N/A</i>	<i>10LTR MIN</i>	<i>N/A</i>
<i>N/A</i>	<i>4A</i>	<i>140</i>	<i>11</i>	<i>DC</i>	<i>SINGLE BEAD</i>	<i>N/A</i>	<i>10LTR MIN</i>	<i>N/A</i>
<i>N/A</i>	<i>1B</i>	<i>150</i>	<i>11</i>	<i>DC</i>	<i>SINGLE BEAD</i>	<i>N/A</i>	<i>10LTR MIN</i>	<i>N/A</i>
<i>N/A</i>	<i>2B</i>	<i>140</i>	<i>11</i>	<i>DC</i>	<i>SINGLE BEAD</i>	<i>N/A</i>	<i>10LTR MIN</i>	<i>N/A</i>
<i>N/A</i>	<i>3B</i>	<i>140</i>	<i>11</i>	<i>DC</i>	<i>SINGLE BEAD</i>	<i>N/A</i>	<i>10LTR MIN</i>	<i>N/A</i>
<i>N/A</i>	<i>4B</i>	<i>140</i>	<i>11</i>	<i>DC</i>	<i>SINGLE BEAD</i>	<i>N/A</i>	<i>10LTR MIN</i>	<i>N/A</i>

PRE-HEAT TEMPERATURE <i>50°C min</i>	INTERPASS TEMPERATURE <i>150°C max</i>
METHOD OF APPLYING PRE-HEAT <i>CONVECTION OVEN</i>	
METHOD OF CHECKING PRE-HEAT/INTERPASS TEMPERATURES <i>SURFACE DIGITAL INDICATOR</i>	
DESCRIBE COOLING CONTROL AFTER WELDING <i>N/A</i>	
PWHT TEMPERATURE RANGE <i>N/A</i>	PWHT TIME <i>N/A</i>
PWHT PROCEDURE (Indicate method of heating, cooling, and temperature control) <i>N/A</i>	
NOTES: <i>PURE ARGON SHIELDING GAS USED</i>	

REPORT NUMBER:

NT96-0124

DATE:

4 March 1996

Temperature Controls
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A Commitment to Quality

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CLIENT CONTACT:

Mr P Lonsdale

ORDER NUMBER:

019366

DESCRIPTION:

The machining and macro examination of four (4) only partial penetration butt welded thermwelds identified Weld Procedure WPS SZ1/PG1 and Weld Procedure WPS SZ2/PG2 welders SZ and PG

TEST SPECIFICATION:

ASME IX and Client Requirements

TEST RESULTS:

MACRO EXAMINATION

Weld Procedure WPS SZ1/PG1

Depth of penetration 6mm

Material ASTM A105

Welder PG1

One 2.35mm inclusion associated with lack of root fusion - Does not comply

Welder SZ1

No defects evident - Complies

Weld Procedure WPS PG2/SZ2

Depth of penetration 6mm

Material ASTM A240 316L

Welder PG2

No defects evident - Complies

Welder SZ2

No defects evident - Complies

Note : Client requested that the weld material only be assessed to the requirements of ASME IX

Victor KONSTANTINOFF
Mechanical Testing Officer



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Geoffrey ACKERMAN
Manager Mechanical Testing
Approved Signatory

