

Welding Procedure Data Sheet (WPDS)

Sheet 1 of 3

Reference Standard(s): CSA W47.1/ W59-03

Company Name: www.WeldCanada.com

Address: info@WeldCanada.com, 1 (877) 977-9353

WPDS No.:

DEMO-WPDS

Ref. WPS:

MCAW-CS

Supporting PQR No.:

Prequalified WPDS

Welding Process:

MCAW

Process Mode:

Semi-Automatic

Position:

Flat

Base Metal Part I (Material Spec., type or grade):

Group 1, 2 and 3 of Table 11.1/ 12.1-CSA W59-03

Base Metal Part II (Material Spec., type or grade):

Group 1, 2 and 3 of Table 11.1/ 12.1-CSA W59-03

Thickness*/Pipe Diameter:

Groove or Fillet: mm (in)

$T \leq 10 \text{ mm } (3/8 \text{ in})$

* If Prequalified, qualified range as shown in Sketch

Filler Metals (CSA):

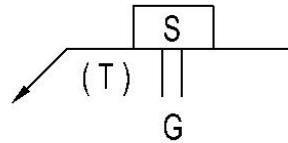
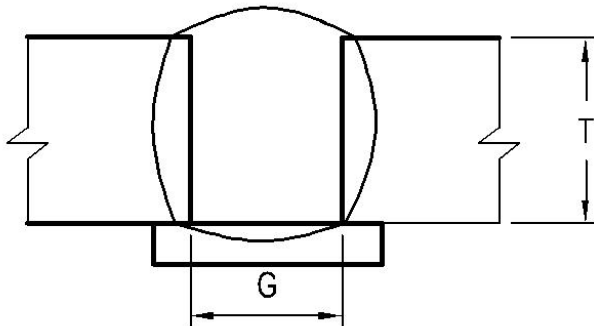
Classification/Specification

E491C-6M-H4

CSA W48

Joint Details/Sketch:

F1-1



$G_{min} = T$

$T \leq 10 \text{ mm } (\frac{3}{8} \text{ in})$

B-L1a-FC

Joint Design Used (Design information for Prequalified WPDS as shown in Sketch):

Root Opening G: mm (in) $G_{min}=T$

Root Face RF: *n/a*

Groove Angle: *n/a*

Radius (J-U): *n/a*

Weld Type:

Complete Joint Penetration Groove Weld

Joint Type:

Butt Joint

Backing Option:

Welded with backing

Backing Material:

Same as parent material

Transfer Mode (GMAW or MCAW):

Spray

Electrical Characteristics:

Current Type/Polarity: DCEP

Tungsten Electrode (GTAW):

Type: N/A

Size: n/a

Shielding:

Gas Composition (Flux for SAW): Ar+15% CO2

Gas Flow Rate: 40 to 50 CFH

Gas Cup Size: 5/8 in.

Electrical Stickout (ESO): 3/4 to 1 in.

Welding Parameters

Thickness mm (in)	Weld Size E (Groove) S (Fillet)	Weld Layer (s)	Pass No.	Process	Filler Metal Classification	Filler Size mm (in)	Current Amps	Current Type & Polarity	Wire Feed Speed (in/min)	Volts	Travel Speed (in/min)	Heat Input
6 (1/4)	E=T	1	1	MCAW	E491C-6M-H4	1.4 mm (0.052)	200-250	DCEP	200-250	25-27	10-14	n/a
8 (5/16)	E=T	1 to 2	1 to 2	MCAW	E491C-6M-H4	1.4 mm (0.052)	200-250	DCEP	200-250	25-27	10-14	n/a
10 (3/8)	E=T	2	2 to 3	MCAW	E491C-6M-H4	1.4 mm (0.052)	270-300	DCEP	270-320	26-28	12-18	n/a

Heat Treatment:

Preheat Temp., Min °C (°F): 10 °C, Table 5.3 of CSA W59-03

Interpass Temp., Min/ Max °C (°F): 10 °C, Min. Table 5.3 of CSA W59

Cleaning Procedures: Wire Brush

Additional Notes:

-The end of contact tube recommended to be recessed in the cup nozzle at least 6 mm (1/4 in).

-Any combination of shielding gas with wire needs to be CWB Certified.

Welding Supervisor or Welding Engineer:

CWB Acceptance:

Name: Joe Smith

Date: 12,12,2005



Date: 12,14, 2005

Heat Treatment Sheet

PREHEAT:

Preheat and interpass temperature shall be sufficient to prevent cold cracking.

The need for and the temperature of preheat are dependent upon a number of factors such as chemical analysis, degree of restraint of the parts being joined, elevated temperature mechanical properties, and material thicknesses.

CSA W59-03, Table 5.3 Minimum Preheat and Interpass Temperature °C (°F):

Preheat and Interpass temperature is provided for each material and thickness and process type on this group.

Preheat requirements shall be based on Welding Procedure Data Sheet (WPDS).

POSTWELD HEAT TREATMENT:

PWHT requirements shall be based on Welding Procedure Data Sheet (WPDS).

CSA W59-03, 5.12 Stress-Relief Heat Treatment: Where required by the contract drawings or specifications, welded assemblies shall be stress-relieved by heat treatment.

See CSA W59-03, 5.12.4, Requirements for stress-relief treatment;

See CSA W59-03, 5.12.3, Steels Not Recommended for PWHT