

PROCEDURE QUALIFICATION RECORD

PQR NUMBER 45 (Include PQR Number on All Supporting Documents)

Welder's Name Jim Gentile ID L Welding Test Date 4-14-10
Process SAW Position F-16 Joint Detail: [X] Fig. 5.1 [] Fig. 5.2
Electrode(s) Mfg. Designation LA-13 [] Fig. 5.3 [] Fig. 5.8
AWS Electrode Classification A5.23 ENiK Electrical Stick Out 1/4"
Flux Mfg. Designation Lincoln weld 910 AWS Flux Classification FAW-ENiK-M1-118
Postweld Heat Treatment: Temp. Hold Time Heating/Cooling Rate

Table with 6 columns: Electrode, Diam., Current, WFS*, Voltage, Current and Polarity. Row 1: (1) 3/32, 400, Voltage 30, DCEP.

Calculated Heat Input (see 5.12) 51 KJ/in
Shielding Gas NA Dew Point Flow Rate Gas Cup Size
Travel Speed: Min. 14.1 Max.
Base Metal Specification and Thickness G30W Heat Number 9104138
Backing Metal Specification and Thickness G30W Heat Number 9103608
Base Metal Carbon Equivalent (see 5.4.2)

Preheat Temp 75 (Attach Copy of Certified Mill Test Report for Base and Backing Materials)
Interpass Temp. Min. 70 Max. 450

Table with 2 columns: SPECIMEN, TEST RESULTS. Rows for All Weld Metal Tension (AWMT) with values for Tensile Strength (84,000), Yield Strength (68,000), Elongation (29), and Reduction in Area (67).

Visual Inspection: [X] Acceptable [] Unacceptable **Macro Test: [X] Acceptable [] Unacceptable
Side Bends 1. Pass 2. Pass 3. Pass 4. Pass

Reduced Section Tension Tension Strength 1. 89,000 Location of Break 1. Base metal
2. 66,500 2. Base metal

Charpy V-Notch Impact Toughness of Weld Metal (59, 44, 34, 33, 30)

SMAW, SAW, FCAW, GMAW-5 Req'd. Avg. [X] ft-lbs, [] J 34.7 @ 60 [X] F [] C
ESW and EGW-8 Req'd. Discard the highest and lowest values and average the 3 remaining.

**Chemistry of Deposited Weld Metal C Mn Si P S
When Required by Contract Documents* Ni Cr Mo V Cu

Radiographic Test: [X] Acceptable [] Unacceptable Remarks:
Fillet Weld Soundness Maximum Size Single Pass: 1. 2. 3.
Macroetch Maximum Size Single Pass: 1. 2. 3.

We, the undersigned, certify that the above described WPQR/FWS has been qualified in accordance with Clause 5 of the AASHTO/AWS D1.5/D1.5, (2008) Bridge Welding Code.

State/3rd Party Witness Date Mfr./Contractor ARC Ent.
Authorized By Steve Howard
Agency Results Reviewed Date 5-18-10

Vermont Agency of Transportation
RECEIVED
CK'D BY David Peterson OK'D BY JWC
Apr 26, 2012
RESUBMIT APPROVED [X]
BY C. CARLSON DATE 5/7/12

Form L-3—Procedure Qualification Record (PQR)
for Qualification, Pretest, and Verification Results