

**Fermilab** *Fermi National Accelerator Laboratory*  
 Technical Division-Machine Shop

**Welder Performance Qualification Record** Date  
4/13/2009  
*In accordance with Fermi WPS Ti6*

Revision: xxx    Revision Date: xxx    Remarks:

**Welders Name:** Daniel Watkins    **Fermi ID#** 03991N    **Weld Stamp #** 24  
**WPS Number:** Fermi WPS Ti-6    **Test Coupon**    **Production Weld** N/A  
**Welding Process/Type:** GTAW/Manual    **Type of Joint Welded:** Pipe Groove Weld  
**Joint Types Qualified:** Groove and Fillet Welds  
**Base Metals Welded:** SB-861, Grade 2 to SB-861, Grade 2

Welder Variables (QW-350)	Actual Variables Used	Range Qualified
AWS Classification:	ERTi-2	
Filler Metal Specification (SFA)	5.16	5.16
Filler Metal F-No.	F-51	F-51 thru F-55
Filler Metal Product Form	Bare(Solid)	Bare/Metal Cored
Consumable Insert	No Insert Used	Without Insert Only
P- or S- Number to P- or S- Number:	P-No. 51 to P-No. 51	P-No. 51, 52, 53, 61, 62
Base Metal Thickness (inches):	0.109	1/16 to 0.218
Pipe Diameter (inches):	2 inch	1" Min. - Unlimited
Deposit Thickness (inches)	0.109	0.218
Welding Position/Progression	6G	All Positions
Backing Gas	Argon Backing Gas Used	With Backing Gas Only
GTAW-Current/Polarity	DCEN	DCEN Non-Pulsing

Machine Welding Variables (QW-360)	Actual Variables	Range Qualified
Direct/Remote Visual Control	N/A	N/A
Automatic Voltage Control	N/A	N/A
Automatic Joint Tracking	N/A	N/A
Welding Position	N/A	N/A
Consumable Insert	N/A	N/A
Backing	N/A	N/A
Single/Multiple Pass Per Side	N/A	N/A

**Fillet Welds:** All- within WPS Limits

<b>Guided Bend Test (QW-160)</b>	Face Bend #1-Acceptable Face Bend #2-Acceptable	Root Bend # 1-Acceptable Root Bend # 2-Acceptable	Bend Test Conducted by Bodycote Testing Group	Test Number G090430
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**Visual examination results:** Visual exam satisfactory per QW-302.4 and QW-194

**Radiographic test results conducted by:** Alloyweld Inspection Co., Inc. \*\*Acceptable per ASME Section IX\*\*Test Id# 174820

**Welding of Test Coupon conducted by:** Fermi National Accelerator Laboratory    Verification Number 41309-RH

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.

Fermi National Accelerator Laboratory    
 Authorized Representative    Fermilab ID