Fermilab *Fermi National Accelerator Laboratory*

Technical Division-Machine Shop

Welder Performance Qualification Record No. *Fermi WPQR Ti-4*

Date *12/10/2008*

Revision: *2* **Revision Date:** *6/22/09* **Remarks:** *Changed title of document*

Welders Name: *Michael P.Reynolds* **Fermi ID#** *03993N* **Weld Stamp #** *9*
WPS Number: *Fermi WPS Ti-4* **Test Coupon** *PRN 112569* ~~**Production Weld**~~ *N/A*
Welding Process/Type: *GTAW/Orbital* **Type of Joint Welded:** *Pipe Groove Weld*
Joint Types Qualified: *Groove and Fillet Welds-Autogenous with AMI Orbital Machine Model 227-STD1.9*
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*	*Qualified to weld Any Qualified Automatic GTAW WPS*
Filler Metal Specification (SFA)	*5.16*	
Filler Metal F-No.	*F-51*	
Filler Metal Product Form	*Bare(Solid)*	
Consumable Insert	*No Insert Used*	
P- or S- Number to P- or S- Number:	*P-No. 51 to P-No. 51*	
Base Metal Thickness (inches):	*0.109"*	
Pipe Diameter (inches):	*1.5"*	
Deposit Thickness (inches)	*0.109"*	
Welding Position/Progression	*5G*	
Backing Gas	*Argon Backing Gas Used*	
GTAW-Current/Polarity	*DCEN*	

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: *As per AWS Limits*

Guided Bend Test (QW-160)		
	Face Bend #1-Acceptable	*Root Bend # 1-Acceptable*
	Face Bend #2-Acceptable	*Root Bend # 2-Acceptable*

Visual examination results: *Visual exam satisfactory per QW-302.4 and QW-194*

Radiographic test results: *None*

Mechanical tests conducted by: *Bodycote Testing Group* *Test Number 1215-008/01*

Welding of Test Coupon conducted by: *Fermi National Accelerator Laboratory* *Verification Number12808-02RH*

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 Roger G Hiller 00362N 6/24/09
Authorized Representative Date