

## ADVENT GTAW VOLTAGE FEEDBACK CALIBRATION

### 1. INTRODUCTION

This procedure is used to calibrate the ADVENT System arc voltage feedback function to assure reliable and accurate control of the welding power supply arc voltage. This procedure applies to all ADVENT Welding Systems.

### 2. RESPONSIBILITIES

Performer	Responsibility
Technician	<p>After assuring prerequisites are met, performs a calibration and linearity check of the ADVENT voltage feedback function using steps 4.1 through 4.13 of this procedure.</p> <p>If calibration or linearity check fails, initiate troubleshooting with the assistance of AMET Technical Support.</p>

### 3. PREREQUISITS

Record the system serial number and DC power supply number in Appendix A. The following tools and equipment are required by this procedure:

- 3.1. Calibrated DC Power Supply (0 to 30 volts)



**AS A SAFETY PRECAUTION, ENSURE THAT THE WELDING POWER SUPPLY IS IN THE OFF POSITION.**

### 4. INSTRUCTIONS

- 4.1. Connect the positive lead of the DC power supply to the Work and the negative lead to the Torch. Leave the DC power supply OFF.
- 4.2. Ensure that the system is powered up NORMALLY and that an active network connection has been established.
- 4.3. Ensure that the Welding Power Supply cables are disconnected from the front of the Supply.
- 4.4. Launch Calibration from the ADVENT Control Panel.
- 4.5. Expand the "I/O Channels" section on the left side of the screen by clicking on the arrow next to the "I/O Channels."
- 4.6. Expand the "Analog In Channels" section on the left side of the screen by clicking on the arrow next to "Analog In Channels."
- 4.7. Double click on "Voltage Feedback."



## ADVENT GTAW VOLTAGE FEEDBACK CALIBRATION

Doc. No.: TP-AD-003

Revision: 4

Page: 2 of 3

Effective Date: 04/29/2008

- 4.8. With the 0 to 30 VDC Power Supply in the OFF position, locate the analog input daughter board used for Voltage Feedback and adjust the OFFSET POT until the VOLTS readout on the operator console "Voltage Fdbk" reads ZERO.
- 4.9. Turn the 0 to 30 VDC power supply on and adjust the output to 29 volts.
- 4.10. Locate the analog input daughter board used for Voltage Feedback and adjust the COURSE POT until the VOLTS readout on the operator console "Voltage Fdbk" reads 29 VDC.
- 4.11. Repeat steps 4.8 through 4.10 until no adjustment is needed.
- 4.12. Complete a calibration linearity check by adjusting the 0 to 30 VDC Power Supply to the values in Appendix A, Table A-1, *Arc Voltage Calibration Check*, and recording the values indicated in the "Voltage Fdbk."
- 4.13. Turn OFF and disconnect the 0 to 30 VDC Power Supply and reconnect the Welding Power Supply to the system.

### 5. RECORDS

The records for this calibration procedure are in Appendix A, *ADVENT GTAW Voltage Feedback Calibration Data*.

### 6. DEFINITIONS

None

### 7. REFERENCES

ADVENT System Manual, SM-[TBD] – DRAFT

ADVENT Maintenance Manual, MM-[TBD] - DRAFT

### 8. APPENDIXES

- 8.1. Appendix A, *ADVENT GTAW Voltage Feedback Calibration Data*



# ADVENT GTAW VOLTAGE FEEDBACK CALIBRATION

Doc. No.: TP-AD-003

Revision: 4

Page: 3 of 3

Effective Date: 04/29/2008

## Appendix A

### ADVENT GTAW Voltage Feedback Calibration

\_\_\_\_\_  
Technician

\_\_\_\_\_  
Date

\_\_\_\_\_  
ADVENT Unit Serial Number

\_\_\_\_\_  
DC Power Supply Serial Number

**Table A-1, Arc Voltage Calibration Data**

Step 4.12 - Test Voltage Input	"Voltage Fdbk" Reading	Expected Value (Volts)
0.0		0.0 – 0.2
5.0		4.8 – 5.2
10.0		9.8 – 10.2
15.0		14.8 – 15.2
20.0		19.8 – 20.2
25.0		24.8 – 25.2
29.0		28.8 – 29.2