



ADVENT WIRE FEEDER CALIBRATION

Doc. No.: TP-AD-001

Revision: 0

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Effective Date: 09/17/2007

1. INTRODUCTION

This procedure is used to calibrate the ADVENT System wire feed function to assure accurate and reliable wire feed delivery rate and quantity. This procedure applies to all ADVENT Systems.

2. RESPONSIBILITIES

Performer	Responsibility
Technician	<p>After assuring prerequisites are met, performs a calibration check of the wire feeder function using steps 4.1 through 4.10 of this procedure.</p> <p>If calibration is required, performs calibration using steps 4.11 through 4.13 of this procedure.</p>

3. PREREQUISITS

Tools and equipment required to perform this calibration include:

- 3.1 Wire cutters (for trimming the weld wire)
- 3.2 An accurate rule (inches or millimeters as desired).

4. INSTRUCTIONS

- 4.1 Launch CALIBRATION Mode from the ADVENT Control Panel.
- 4.2 Expand the "I/O Channels" section on the left side of the screen by clicking on the arrow next to "I/O Channels."
- 4.3 Expand the "Servo Channels" section on the left side of the screen by clicking on the arrow next to "Servo Channels."
- 4.4 Double click on the desired "Wire Feeder" axis to be calibrated.
- 4.5 Trim the wire off at the end of the wire nozzle.
- 4.6 In the "Position" box enter in a distance value that you would like the wire to feed in order to check the calibration.
- 4.7 In the "Velocity" box enter in a velocity value that you would like the wire to travel in order to reach the position you entered in the "Position" box in step 4.6.
- 4.8 Select "Move Relative" from the mode box.
- 4.9 Press the **Start** button in the axis dialog box and let the wire finish feeding.
- 4.10 Once the wire is done feeding, measure the wire by using an accurate measuring device. Verify that the measurement is the same as the commanded length. If the measurement is the correct length, the calibration is complete. If the measurement is incorrect then continue with step 4.11.
- 4.11 Choose the "Controller" pull down menu from the top of the screen and select "Edit Mode." Expand the "Hardware Configuration" section by clicking on the arrow next to "Hardware Configuration." Expand "Servo Control" by clicking on the arrow next to "Servo Control". Select the Wire Feed axis that you are working on by double clicking on the servo name. Make sure that the "Encoder



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Resolution” and “Drive Ratio” are correct for the selected axis configuration. If the encoder resolution and drive ratio are correct go to Step 4.12. If the encoder resolution and drive ration are incorrect, go to Step 4.13.

- 4.12 Verify that all mechanical connections are sound and there is no slippage of the motor shaft to the encoder or gearbox.
- 4.13 Contact AMET for the correct “Encoder Resolution” and “Drive Ratio” values. Once you have the correct values and they have been entered and downloaded properly, with AMET Technical Support, repeat steps 4.4 through 4.11.

5. RECORDS

None

6. DEFINITIONS

None

7. REFERENCES

ADVENT System Manual, SM-[TBD] – DRAFT

ADVENT Maintenance Manual, MM-[TBD] - DRAFT

8. APPENDIXES

None