

Circumferential Welding of Pressure Flow Sensors with Automated Hot Wire TIG Technology

Application:

- Pressure flow sensor

Material:

- Stainless steel
- Chrome moly
- Nickel-based alloys

Welding Equipment:

Power Supplies:

- Model 415
- Model 501

Weld Head:

- Model 2 with AVC & OSC

Benefits:

- ✓ **Heads Up Display®** enabling weld parameter adjustment
- ✓ **8,300 welds in 4 years** with only 0.024 % (2) rejects
- ✓ **Durable, reliable welding equipment**

For further information, call
AMI at 1-818-896-9556 or e-mail
sales@arcmachines.com



Model 415/ Model 501



Model 2



When Veris, Inc., a manufacturer of flow sensors, anticipated a growing demand for their new Accelbar differential pressure flow sensor, they made plans to increase welding production. Initially, they used manual welding to manufacture products made from a variety of materials, such as stainless steel, chrome moly, and various nickel-based alloys, depending on the corrosion requirements of the customer's application.

The corrosion resistant materials used in manufacturing the sensors are costly, and a weld reject significantly increases the cost of production. Because of the demand for high quality, Veris selected the GTAW welding process and chose Arc Machines, Inc. for their automated TIG welding equipment. A special integrated system was developed for Veris consisting of a Model **M415** power supply/controller with water cooling and a Model **M501** hot wire power supply, with a Model **M2** weld head consisting of an oscillator and arc voltage controller (AVC) mated to a positioner for weld rotation. The weld sequence was initiated from the remote operator pendant and the operator could view the weld through the Heads Up Display® and make minor adjustments to weld parameters during the weld.

A total of 8,300 welds have been completed over 4 years with an exceptional success rate of only 2 weld rejections. Arc Machines' automated welding equipment has proven to be very reliable and accurate, and has more than paid for itself during the 4 years of operation. The use of hot wire TIG technology can pay big dividends in the nuclear and other industries requiring high quality, high productivity welding.

To read the full story, visit www.arcmachines.com



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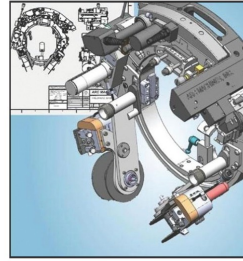
LEADERS & INNOVATORS in Automated Orbital Welding



Cutting Edge Narrow-Groove
Pipe Welding Technology



Advanced Fusion Welding
and Process Control



High-Tech Designs &
Engineering Services



Turnkey Integrated Systems

Advanced Products, Systems & Solutions



With over 3000 customer relationships in over 50 countries, Arc Machines, Inc. has set the standard for Automated Orbital Welding Equipment for over 30 years, combining Quality and Durability with Innovative Engineering and Design. Around the world, leading manufacturers and contractors rely on AMI for their expertise in automated orbital welding and to develop customized solutions for new welding challenges.

www.arcmachines.com

AMI

ARC MACHINES, INC.

Arc Machines, Inc.
10500 Orbital Way
Pacoima, CA 91331 U.S.A.
(818) 896-9556
fax (818) 890-3724
sales@arcmachines.com

M415 Power Supply

QUICK SPECS

Input Power

200 - 575 VAC
Service, 3-phase
50/60 Hz

Weld Current

5 - 400 A DC
100% Duty Cycle

I/O Devices

2 USB ports
RS232 serial interface
data acquisition output
Ethernet over fiber optic

Memory Capacity

Over 1000 weld programs

Water Cooler

Included

Dimensions

39" x 26" x 36"
(991 mm x 660 mm x 914 mm)

Weight

710 lbs.
(322 kg)



M501 Hot Wire Power Supply

Input Power

200 - 400 VAC
Single-phase

Weld Current

0 - 250 A AC/DC
100% Duty Cycle

Hot Wire Volts

0 - 17 V AC/DC

Dimensions

23" x 19" x 9.5"
(585 mm x 485 mm x 240 mm)

Weight

135 lbs.
(61,5 kg)



M2 Weld Head

Oscillator Slide

4" (101,6 mm) long

AVC Slide

8.5" (215,9 mm) long

Wire Feeder

5 - 300 IPM

Torch

500 A, water-cooled TIG torch
and hot wire torch