



# Bulletin

## Articulating Weld Boom

### INTRODUCTION

The 2008 *E. Robert Kent Award for Management Innovation* went to Shinn Mechanical, Inc. (Kent, WA) for its Articulating Weld Boom.

Shinn Mechanical's fabrication workers designed the boom as part of its effort to establish a new fabrication shop at the company's new location in Kent, WA. The boom and other fabrication equipment were intended to provide the most efficient pipe fabrication operation possible for the space available.

### WHAT IS THE ARTICULATING WELD BOOM?

The boom was designed, constructed and installed by Shinn Mechanical fabrication workers.

It uses a lattice-style design, extending from a 20-inch diameter, Schedule 160 steel column. The boom has three sections, with pivot points between the sections, providing a true articulating boom that allows the working end to be placed anywhere within a 30-foot radius from the base. A welding machine is suspended from the end of the boom, and mounts for grinders are also included.

The boom is equipped with the necessary power to make it work—wiring for electricity to power the boom, a grinder/convenience outlet, compressed air, argon, welding gases (98-2, 75-25), water coolant for the weld torch and a plug-in for foot control of pipe positioners. The design allows the fabricators to perform any type of welding, including TIG, without any cords or hoses on the floor.

### BENEFITS

The Shinn Mechanical boom was designed to greatly improve safety, the ergonomics for the fabrication workers and the ambient air quality in the fabrication facility.

First, the boom will greatly reduce hazards and potential for injuries. The boom moves easily and locks into position with air brakes that are controlled by switches at the working end. The boom is also equipped with a 20-foot picking boom mounted on the same column; it has a 4,000 pound lifting capacity. The boom holds all the cords and hoses overhead and out of the welders' way, thereby eliminating the potential for electrocution and tripping.

Shinn Mechanical also designed the boom to remove noxious fumes and gases from the work area. The boom is equipped with a complete industrial duct system mounted with a point-of-use exhaust hood at the end for removal of gases and smoke. A VFD-controlled exhaust fan expels the gases, filters the exhaust and re-circulates the cleaned air into the shop. With these features, the air quality in the fabrication shop is greatly improved.

**For more information about the Articulating Weld Boom, please contact Mike Shinn at [mikes@shinnmech.com](mailto:mikes@shinnmech.com) or call 425-373-9800.**