



Bulletin No: MI 6  
File: Management Innovation

# Bulletin

## CNC Pipe Fabricator

"I think frugality drives innovation, just like other constraints do. One of the only ways to get out of a tight box is to invent your way out."

Jeff Bezos  
CEO Amazon.com

### Information

Air Masters Corporation (Fenton, MO) identified a need to make consistent repeatable pipe cuts to reduce shop time and increase its competitiveness in the marketplace. Most commercial equipment currently on the market that can perform these types of cuts can cost up to \$250,000. For a small business, such a large capital investment did not make financial sense, considering the return on investment.

Therefore, Air Masters decided to find a more cost effective way to meet its needs. The result was the stationary CNC Pipe Fabricator which mounts on or attaches to the end of any pipe roller bed. This innovation was achieved with a combination of already developed components and custom designed software for a fraction of the cost of commercial cutters.

In recognition of its innovation, MCAA awarded Air Masters Corporation the 2014 **E. Robert Kent Award for Management Innovation**.

### Operation of the CNC Pipe Fabricator

The CNC Pipe Fabricator is designed for pipe from 2 ½" – 12". Using a vertical linear drive actuator that incorporates indexes for the pipe selected, the pipe remains on the pipe bed and rolls into the fabricator. Once in the fabricator, a pipe can be cut straight, inside bevel, outside bevel, saddle cut, or hole selected. Saddle cuts can be any pipe size from 2 ½" to 12" to saddle onto any main size pipe.

To make a cut, an operator only needs to electrically adjust the CNC Fabricator either up or down (depending on pipe size) to center the fabricator around the pipe to be cut. The computer then selects the cut parameters and speed requirements.

The set-up is 25' x 48" and uses two 60 amp plasma cutters; one end of the pipe bed is dedicated to pipe cuts while the other is dedicated to the CNC Fabricator. The all in cost of using new components is under \$30,000, and is affordable and effective for shops of any size.

The innovation developed by Air Masters has cut hours (not minutes) off pipe fabrication time. The firm has realized a return on its investment in less than six months.

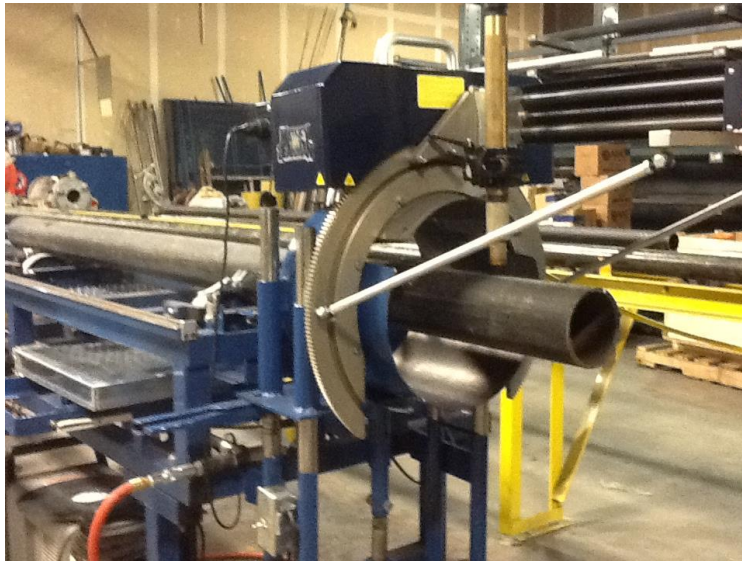
Air Masters will share how this innovation was developed so that any

pipe fabrication shop interested in developing a cost effective way to cut pipe and increase productivity can do so.

For more information, contact Gary Tidwell at [garyt@intfs.com](mailto:garyt@intfs.com) or call 636-680-2100.

Side View

4" Steel Pipe in Set-Up Position



Front View

4" Steel Pipe in Set-Up Position



## Resource

Set-up with computer for controlling the cutting machine



10" Pipe in Production





10" Pipe in Production for Hole Cutting

