



DENSO'S JUMP ON JUMPER PIPE BRAZING

It's a Brazed New World

Competing in manufacturing often means figuring out ways to outdo yourself. So when the multicooler engineering team set out to reduce costs on this unique condenser, it meant looking deeply at the existing product and thinking big.

Their key improvement idea? Less components and labor. Eight less screws to be exact. But to make this idea a reality, the team had to enter a brazed new world.

Changing to brazing on the multicooler jumper pipe instead of bolting it in place meant the product required a dozen less purchased parts—8 bolts and 5 blocks used to secure the brackets. Associates would spend less time driving screws and more efficiently weld or crimp on new extruded metal brackets before brazing. This change in work—reducing the risk of repetitive strain injuries for assembly associates and further speeding up the process—added even more value to the project.

Senior Process Engineer Afsheen Mozammel was assigned the project when she joined DENSO in 2015. DENSO Manufacturing Michigan is the first DENSO affiliate in the world to braze the multicooler jumper pipe, so Afsheen was responsible

for helping create this brazed new world.

"This change required a massive modification of most of our current mass production process set-ups, including new investment and process layout changes," Afsheen said. "That meant the chance to work with so many people—from our temporary employees to the president. This project is intense, but as we get close to launching it, I realize that I learned giving up is not an option; there is a solution to every problem. If plan A doesn't work, then there is always a plan B and a plan C to try."

Multicooler Engineering Manager Tim Stocks said because of the project's high cost-savings potential, this will be a high visibility project.

"This part will be more than half of multicooler volume coming into model year 2019, so the potential savings are tremendous," Tim said. "We're looking at saving 15% of the cost of each condenser between eliminating purchased parts and assembly time. So in addition to the local focus, our DENSO colleagues around the world are watching closely, hoping to crossline the improvement globally."

When the 2019 model year multicoolers start rolling off our assembly lines, the estimated savings are up to \$3.3 million per year. One brazed jumper pipe at a time. ◀

CONGRATULATIONS AFSHEEN!

Despite working many late nights and weekends on brazed jumper pipes, Afsheen also took a moment to return to her alma mater, Purdue University Northwest. Late in 2017, she was received an Outstanding Alumni Achievement Award. Purdue honored Afsheen for her accomplishments since graduating with a Master's in Industrial Engineering Technology. Thanks for representing DENSO, Afsheen!





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See Exchange 2018-005 for more details.

RETIREMENT

Advanced Associate Douglas Squires retired January 8. Thank you for 16 years of service, Doug! ◀

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We'll then decide the best way to deliver the information (Core, TV, Exchange, intranet, etc.). We also reserve the right to edit for conciseness and length.