

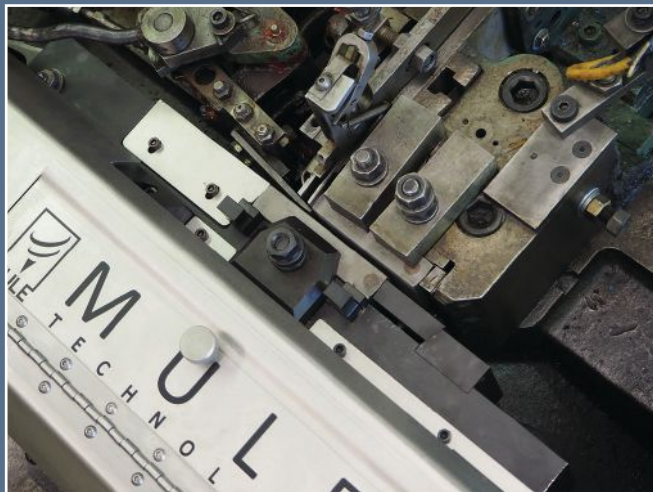
Serving Manufacturers, Distributors and End Users

# Fastener

TECHNOLOGY INTERNATIONAL

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# Fastener Focus

Focused News, Information and Products for  
Fastener Distributors, Importers, Manufacturer's  
Representatives, OEMs and End Users.

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# Meeting the Challenge of a Rapidly Declining Workforce — With a Retrofit Solution

by:  
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**Engineered kits convert existing thread rolling equipment into high-precision machines with accurate, repeatable and quick die setups.**

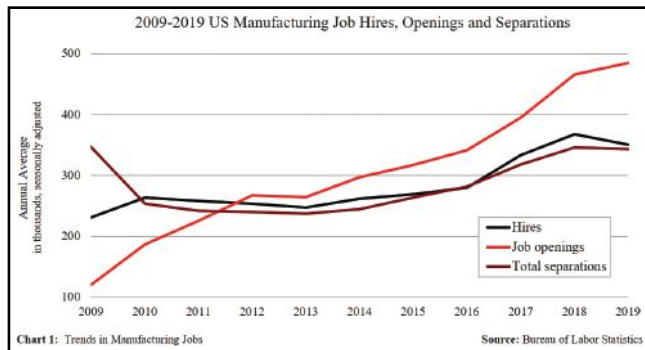
## The Problem: Vanishing Skilled Labor

For today’s manufacturers, not only attracting, but also retaining new talent is becoming increasingly more difficult.

With the unemployment rate at a 50-year low and job openings at an all-time high, the manufacturing sector is plagued with the challenge of finding qualified workers.

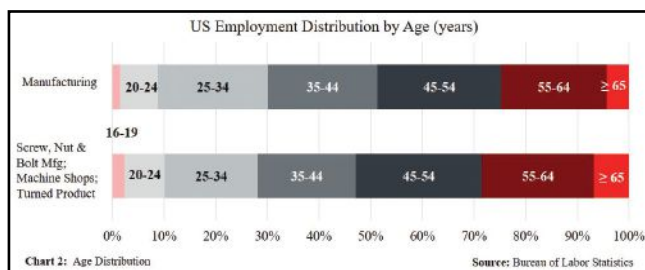
The 2018 skill gap study conducted by **Deloitte** and **The Manufacturing Institute**, found “Fifty-one percent of executives cited ‘maintaining or increasing production levels to satisfy growing customer demand’ as the biggest challenge arising from not filling open jobs in the next three years.”

Deloitte estimates 4.6 million manufacturing jobs need to be filled from 2018 to 2028 with only 2.2 million jobs likely to be filled (see trends in **Chart 1**).



## The Situation: Current Conditions

The fastener industry has an older employee median age of 45.9 years compared to the total manufacturing market, which is 44.1 years. Combine that with the demand for highly skilled employees in fastener manufacturing such as thread rolling and heading, and it’s no wonder the industry is feeling the effects of this challenge today. The main driver of manufacturing job openings is baby boomer retirements that are pressuring companies to increase overtime hours, dedicate machines to specific part numbers or even convince seasoned “threader-men” to postpone their retirement (see age distribution in **Chart 2**).



## The Solution: Replacing “Art” with “Engineering”

By documenting current machine adjustment knowledge and creating a technology for rapid repeatability, threaded product manufacturing will maintain its high standards without requiring (and depending on) highly skilled workers and the costs of their lengthy training.

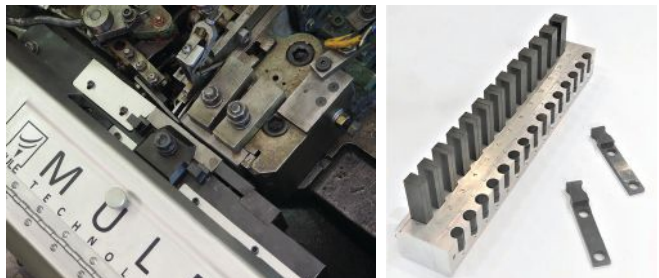
**Mule Technology** has changed forever the process of thread rolling.

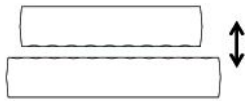


Mule’s engineered Retrofit Kits convert existing thread rolling equipment into high-precision machines with the ability to create, save and accurately repeat die setups quickly. This new technology allows fastener manufacturers to capture the intrinsic knowledge of their most valuable workers and repeat setups in a fraction of the time and with the same exacting control.

## Here’s How It Works

The patented design of Mule’s Retrofit Kits utilizes precision components to eliminate the variability inherent in **Hartford** machines and other thread rolling equipment.





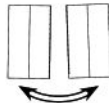
## DISTANCE

Change in Recipe adjusting overall part diameter



## RATE

Change in Recipe adjusting rate of material gathering



## TILT

Change in Recipe to accommodate part taper

This creates a new stability that enables operators to use mechanical memory (machined keys) to establish the optimal die setup and improve part quality while extending die life. The keys allow for micro and macro adjustments to be made on all three die axes commonly referred to as Distance, Rate and Tilt (see illustrations above).

Recreating established part-specific die setups (Mule calls them Recipes) now becomes a simple matter of consulting your saved Recipe files to duplicate the exact specs for a given product. Repetitious trial, error and multiple adjustments by technicians are avoided and machines no longer stand idle for long periods. The result is higher productivity, lower employee training costs and less vulnerability regarding hiring competition.

## The Source: Mule Technology

Mule Technology, a Chicago, IL, USA-based thread roll technology company, is focused on solving this problem for manufacturers by replacing the art of thread rolling with engineering. With more than 20 years of fastener, die and thread rolling equipment innovation experience, Mule Technology has fundamentally improved the process of thread rolling. Engineered and accurate Retrofit Kits convert current thread rolling equipment into high-precision machines with the ability to create, save and repeat die setups.



## The Results: Attracting a New Generation

By simplifying processes and dramatically reducing setup and training time, Mule Technology strives to make USA fastener manufacturing jobs more enticing to a younger generation focused on upward mobility. The company takes aim on the concept that anyone should be able to produce a perfect screw on the very first roll. Using Mule's unique Retrofit Kit plus a few days of training, the company turns this idea into reality.

Today, experienced threader-men have a difficult time communicating to new operators how to adjust die pressure. As a result, they must develop their own "units of measurement" (such as "a smidge more", "to the first hole and back a bit" or "just a hair") to teach new operators the ideal procedure. A "smidge" however, is different for everyone, which is why expertise can only come with a substantial number of years spent getting a feel for the machines. With the current demand for talent, often times it's easier for new operators to seek a new job rather than maintain the patience to learn the intricacies of the trade.

Mule Technology now meets the industry's talent drain challenges with unique engineering and cost-saving efficiency—a Retrofit Solution that maintains quality standards, improves productivity. [www.muletechnology.com](http://www.muletechnology.com) **FTI**

## Technology Creating Positions with Advancement Opportunities

Deloitte, the National Association of Manufacturers (NAM) and The Manufacturing Institute indicate millennials, which are now the largest group in the workforce, rank the manufacturing industry as their least preferred career destination. They aren't interested in static positions with little room for growth.

When a machine can be set up in minutes with little experience, **Mule Technology** believes, manufacturers can start to look at their shop floor and hiring strategies differently.

According to Mule, "Companies can begin to spend less time finding highly skilled individuals or executing long apprenticeship programs. They can focus on creating positions with advancement opportunities."

[www.muletechnology.com](http://www.muletechnology.com)

### Company Profile:

*Mule Technology, LLC in Chicago, IL, USA, is a company that is dedicated to developing innovative solutions to fastener industry problems. Creative engineering offered by Mule Technology, LLC, contributes valuable manufacturing technology advancements that improve both product quality and economic performance. [www.muletechnology.com](http://www.muletechnology.com)*

