

Valley Forge & Bolt Mfg. Co. Unveils New In-House Heat Treatment Line

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Vertical Integration is on the rise at Valley Forge.

Growth is something that we all strive for. Here at Valley Forge, business continues to grow and with growth comes many challenges. In 2014, growth prompted many capital equipment purchases including an in-house heat treatment line. Having our own in-house heat treatment capabilities is something that we have been wanting for over 30 years. With the expansion into our new Jefferson Street facility, we had the ability to put a dream to reality. This new department allows us to be in control of our own destiny when servicing our customer's ever growing needs.

The new lineup is up and running and has the capability of heat treating 1200 pounds per load. The gas fired Pacific Scientific Integral Quench Furnace carries a maximum processing temperature of 1750°F. Carbon potential is controlled and monitored by a state-of-the-art series 9205 programmable atmosphere and temperature controller. The SSI software package is bolstered with a Yamataki temperature controller. All heat treating is processed using an endothermic gas protective atmosphere, for superior product cleanliness and protection from high heat oxidation. The in-line elevated temperature parts washer, with dunk and spray capabilities, provides excellent post cleaning, thus reducing excessive temper scale. This post quench washer removes oil contamination from the product prior to final tempering in one of two 1450°F Pacific Scientific Temper Ovens. All loads are transferred from station to station via charge car.

In the world of high end fasteners, quality and traceability are the cornerstones of customer satisfaction. With the Super Systems Incorporated (SSI) software, precision and lot to lot consistency of mechanical properties are controlled under one roof. Few fastener manufacturers can make this claim. Electronic data collection including recipes, furnace/temper times and temperatures, carbon potentials, and quench temperature monitoring assure that every load has complete lot traceability.

In addition to the new lineup, we have also welcomed another new face to Valley Forge: Karl Vaughn has joined us as our new Heat Treat Supervisor/Metallurgist. Karl has an A.A.S Metallurgical Science Technology degree and is a Master Mechanic. He is happy to be out of the Detroit cold and to have joined Valley Forge to operate the exciting new heat treat line.

After much anticipation, the wait is finally over, Valley Forge heat treating is here. We look forward to the great things this new capability will bring to our customers and the company as a whole.

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