



**T&W FORGE**

A century  
of quality.



A DURREL COMPANY



# Forging strong partnerships.

For more than 100 years, T&W Forge has been providing **quality, durable precision forgings** to leading manufacturers around the globe. As your forging experts, we specialize in all grades of **stainless, alloy and carbon steel, titanium and other high-temperature materials.**

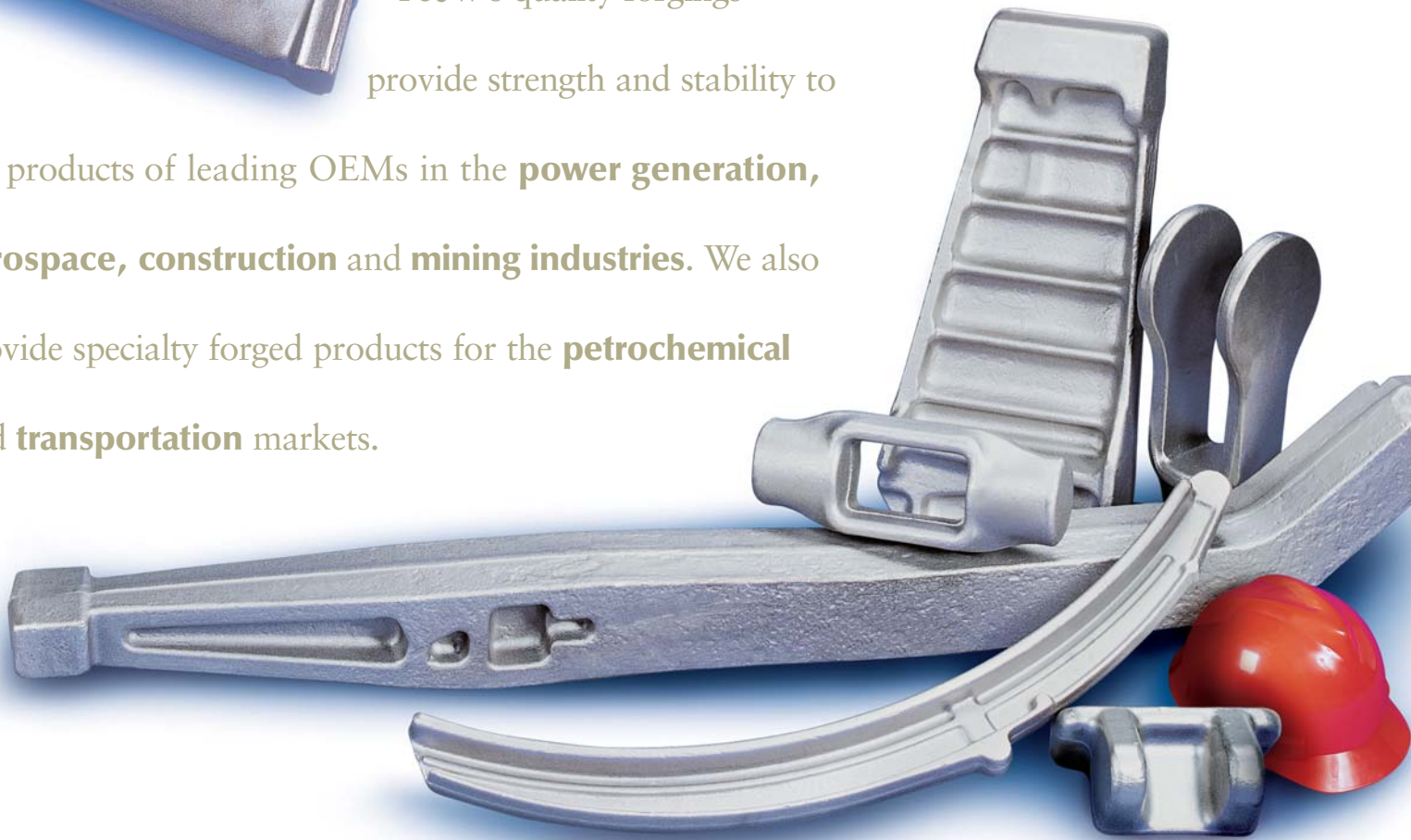
T&W Forge is **centrally located in Northeast Ohio.** Our modern production facility houses state-of-the-art equipment and is staffed with knowledgeable technicians who can tackle the most complex forging challenges. We are committed to providing **innovative, value-added solutions** that meet your budget, time-frame and quality standards.

The products manufactured by the dedicated employees of T&W Forge are specifically designed for **maximum strength at minimum cost** and are made to comply with our **advanced quality assurance program.**



T&W's quality forgings  
provide strength and stability to

the products of leading OEMs in the **power generation,**  
**aerospace, construction** and **mining industries.** We also  
provide specialty forged products for the **petrochemical**  
and **transportation** markets.



T&W Forge has long-standing partnerships with Boeing, Textron-Lycoming, Rolls-Royce (AEG), Allison Transmission and Caterpillar Tractor.

# Our value-added services.

Starting with your concept, our engineers will use the latest **CAD/CAM** and **3-D modeling** software to help you design the most efficient forging process for your project. We evaluate every step of the process,



including **tooling design, cost alternatives, materials** and **redesign of existing products** for better cost and weight efficiency.

Our **500,000 square-foot facility** contains the equipment and manpower to produce your forged products quickly and efficiently. Our **metallurgical lab** performs receiving and final qualifications on a variety of materials and metals. T&W's forge

and heat treat capabilities are able to handle our customers' most demanding requirements. Craftsmen on our **die-sinking** team critically inspect tooling to ensure complete compliance with your specifications.

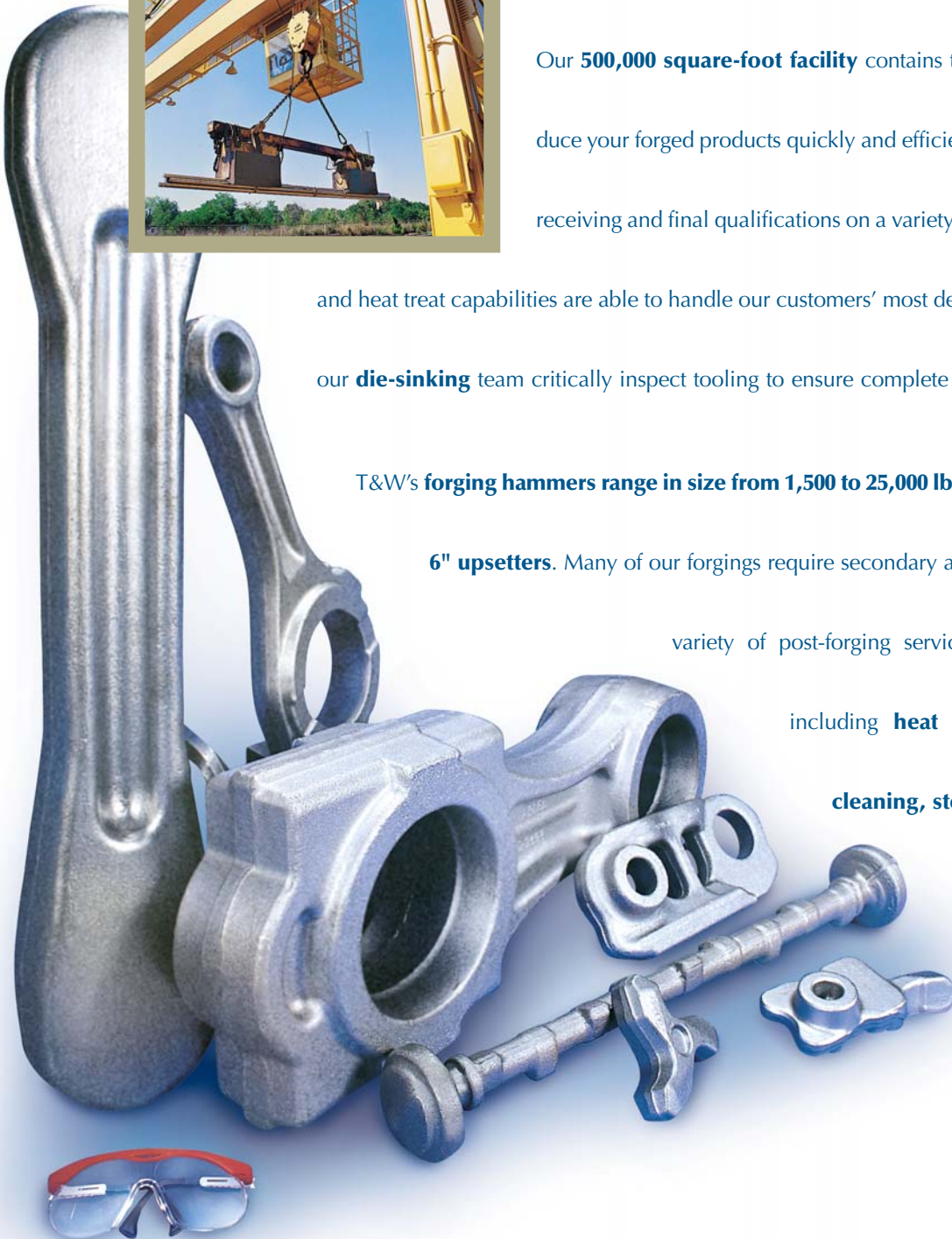
T&W's **forging hammers range in size from 1,500 to 25,000 lbs.** and our facility includes **2", 3" and**

**6" upsetters.** Many of our forgings require secondary and finishing operations, so we offer a

variety of post-forging services designed to reduce your costs,

including **heat treating, straightening, grinding,**

**cleaning, steel cutting, NDT and machining.**



# The Forging Process

Hammer forging imparts special mechanical properties into metal. Increased strength and impact resistance are a result of elongated grain flow throughout the contour of the forging, which increases reliability and uniformity.

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## STEP 1

Incoming material is cut to size.



## STEP 2

Studs are welded onto each piece of material to provide a grip while forging.



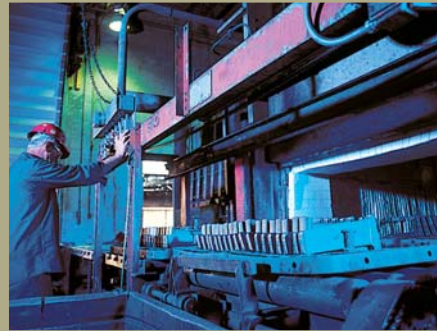
## STEP 3

The heated metal is transformed from raw material to a forging through hammering.



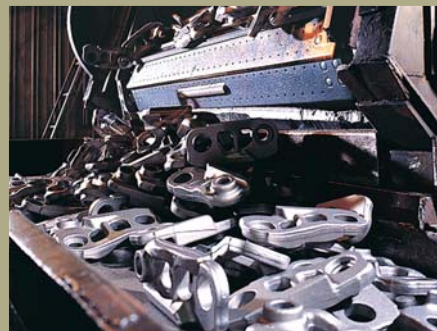
## STEP 4

The forging is heat treated to obtain optimal material properties.



## STEP 5

Parts are cleaned, then sent to final inspection for finish gauging and shipping.



# Our commitment to quality.

At T&W Forge, we understand that it takes more than knowledgeable professionals and the best equipment to produce quality forgings. Our **quality assurance process**, which includes an **ISO 9002 certification program**, guarantees we'll deliver the precision products our customers have come to rely on.

T&W's **full-service metallurgical lab** has a comprehensive array of testing equipment to provide the required data to ensure the quality of your forging products. Our lab technicians test the chemistry of incoming material. Upon completion of the forging process, we take macro and micro photographs, check grain flow and decarburization, verify material hardness, and perform physical testing for mechanical properties. Our final inspection process ensures conformity to our customers' specifications.

In addition to being ISO 9002 certified, we are also approved for Boeing D1-9000. Our highly skilled NDT operators are certified to meet the latest standards.

T&W Forge stands behind more than a century of **quality forged products** and **exemplary customer service**. Our team focuses on bringing you **innovative, value-added forging solutions** that provide your company with long-term success.



For more information,  
or a facility visit, call us at  
**330-821-5740**. We look  
forward to discussing your  
forging needs.



**DURREL**

Durrel Corporation and its affiliated operating companies focus on the production of precision metal products for leading OEMs in various industries throughout the world. Utilizing their combined capabilities and a common commitment to continuous improvement and employee involvement, the Durrel Companies provide value-driven solutions to their customers.



**T&W FORGE**

A DURREL COMPANY

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**ISO 9002 registered.**