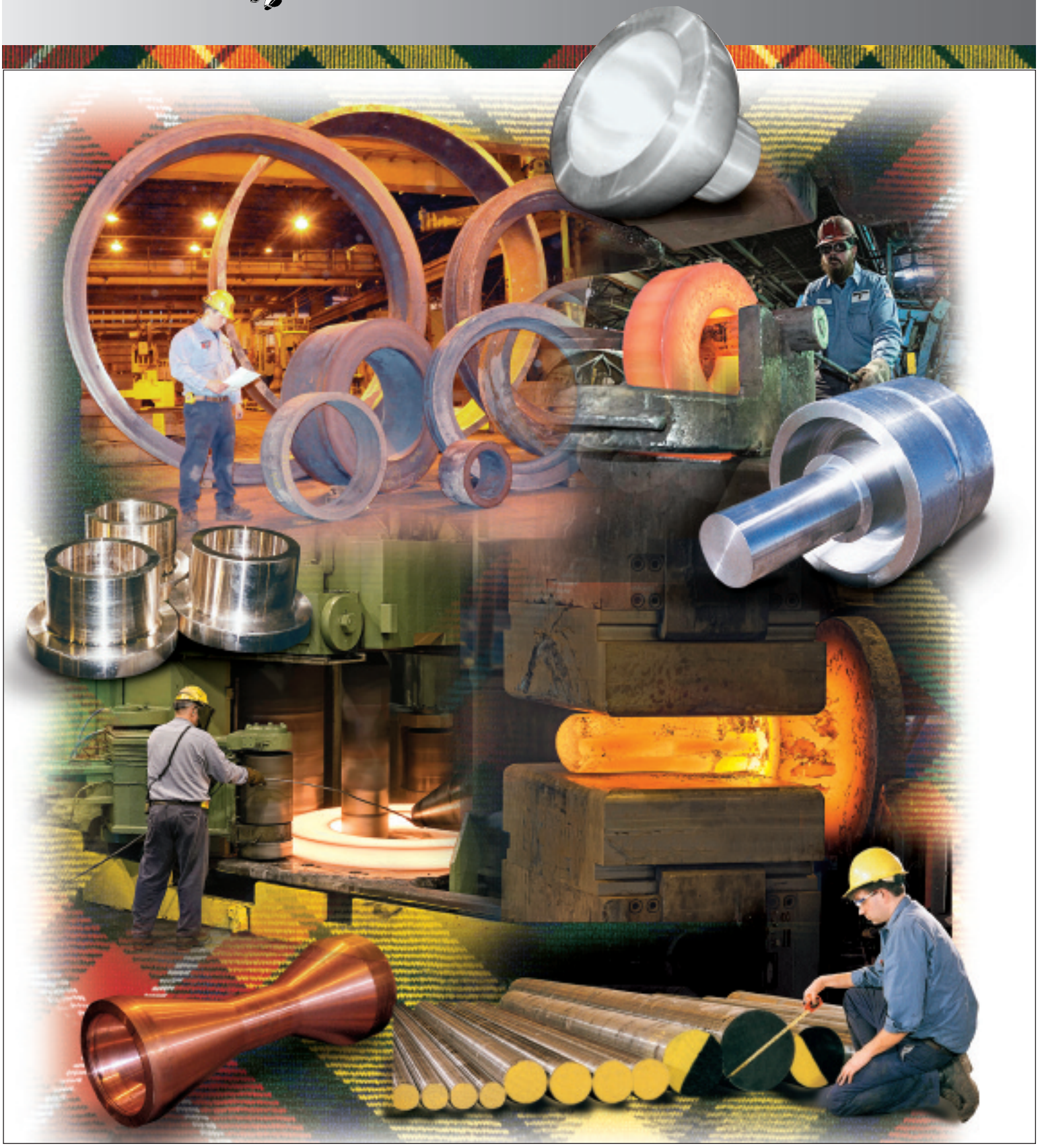
SCOT FORGE

Making the Seemingly Impossible... Possible



Scot Forge provides the

expertise and equipment to match your forging needs

With over 600 employee-owners dedicated to the performance of every forging, deadline and challenge, Scot Forge is equipped to create, deliver and measure superior value for you, our customer. Get in touch with us today and experience the difference working with an ESOP company can make.

Partnering with you to achieve cost reductions

Our technically trained sales staff, backed by our metallurgical engineers and forging experts, will work with you to discover ways to lower manufacturing costs, improve part performance, minimize material waste, and reduce lead times.

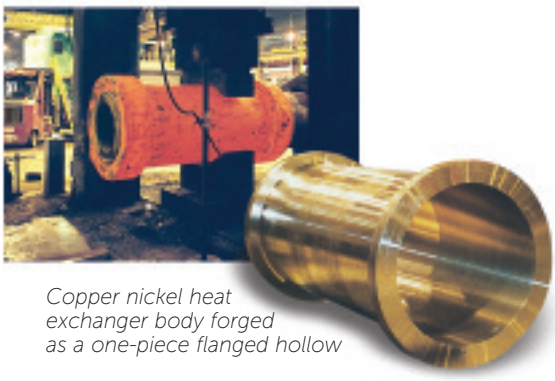
Exceeding demands with the right material and dedication

Scot Forge carries an extensive inventory of raw materials, allowing for shorter lead times and quick reaction to market changes.

With over 200 active grades to choose from, Scot Forge holds on average more than 80 million lbs. of material.

Materials include carbon, alloy, stainless steel, tool steel, copper, nickel, titanium, aluminum, and other ferrous and non-ferrous grades. We also offer custom-melt materials uniquely suited to your application. In addition, VAR and ESR capabilities are readily available.

Our on-site staff of metallurgists and value engineering team specialize in developing innovative metal and processing solutions to meet demanding product requirements and take advantage of forging as the superior form of metalworking.



Copper nickel heat exchanger body forged as a one-piece flanged hollow

Ongoing requirements and delivery reliability

At Scot Forge, we understand the importance of on-time delivery and constantly monitor the progress of production orders to provide the highest level of reliability and communication. In critical circumstances, reduced lead times can be offered for breakdown and emergency orders in need of immediate production response.

Providing superior value-added solutions

We offer all downstream value-added processes including saw cutting, heat treating, contour torch cutting, destructive testing, metallurgical analysis and Level III non-destructive testing. Combined with our advanced forging technology and the inherent advantages of the forging process, these capabilities provide a superior value solution.

Additionally, we maintain one of the most modern and technologically advanced testing labs in the industry to support production, quality control, and research and development.

Scot Forge is proud to be a 100% employee-owned manufacturer of custom open die forgings and seamless rolled rings. Starting as a small hammer shop in Chicago in 1893, Scot Forge has over 120 years of experience.

Headquartered in Spring Grove, IL, the company has expanded into one of North America's leading open die and rolled ring forge shops with facilities in Clinton, WI and Franklin Park, IL and partnerships in Wayne, MI and New Castle, PA.

Operating with more than 1.3 million sq. ft. of manufacturing space between the five plants, over 250 million pounds of forgings are shipped from Scot Forge annually. Today Scot Forge has the capability to manufacture parts weighing up to 100,000 lbs., and roll seamless rings up to 252" diameter.

The SCOT FORGE Experience

We've got you covered...

- Dedicated technical expertise
- Cost and component reduction analysis
- Near net shapes and customized quantities
- Program management
- Fast delivery and breakdown services
- A vast inventory of materials and tools
- Value-added, secondary services
- Certified to ISO 9001:2008, AS9100C, Nadcap Heat Treating and Nondestructive Testing, ABS, DNV, PED-EU, OSHA SHARP, and Lloyd's Register

Flexible Sizes, Shapes and Quantities

With no minimum requirements for stocking grades, you can order single-piece or high-volume quantities ranging from a few lbs. up to 100,000 lbs. in a wide range of ferrous or non-ferrous materials.

DISKS/BLANKS

Disks from ferrous and non-ferrous metals up to 144" O.D. with variable diameter and thickness ratios or combinations

RINGS

Rolled rings to 252" O.D., 49 height, and wts. to 60,000 lbs. Open die rings to 144" O.D., 90" height.

HUBS/TOOLED FORGINGS

Single, double or tapered hubs to 144" O.D.

BARS

Round, square, or hex up to 65" cross section, rectangles to 120" wide. Lengths to 700". Tartan Bars® from 6" to 16" O.D.

SEMI-CLOSED DIE

Unique process pioneered by Scot Forge. Provides cost-effective conversion of cast or fabricated parts. Powered by a CAD and simulation software.

STEP SHAFTS/ SPINDLES

Concentric or eccentric to 65" O.D. Round, square, rectangle or polygonal dimensions. Upset flanged-end. Lengths to 600"

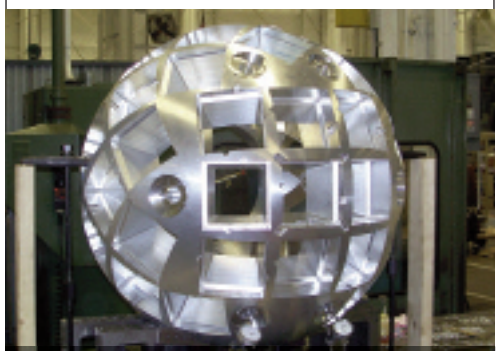
HOLLOWS

Single or multiple O.D./ I.D. up to 90" O.D. 2" minimum wall thickness. lengths to 360"

TORCH OR PROFILE CUT

Infinite shape possibilities. Torch cut shapes or contours in carbon and alloy forged parts up to 32" thick with cross sections ranging between 96" x 144" and 88" x 282"

COMPLEX FORGED SHAPES

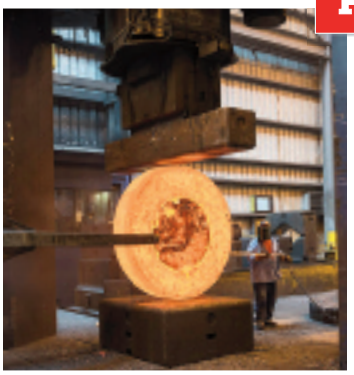


Unique and innovative forged shapes. Created in collaboration with process engineering teams. Powered by simulation and CAD software.

Forging Capabilities and Services

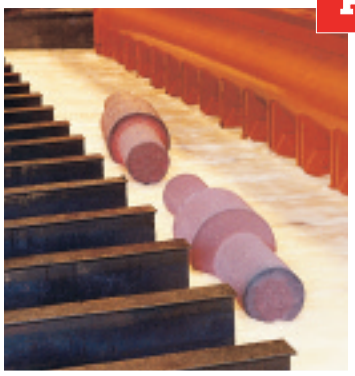
With over 120 years of forging experience, Scot Forge provides the most comprehensive and advanced equipment and processes in the industry.

Forging



Six pneumatic hammers produce forgings in weights from 1 lb. to 3,000 lbs. Eight high-speed open die presses with additional upset capabilities yield a limitless variety of shapes and sizes up to 100,000 lbs. Four high-tonnage ring mills offer rolled rings as large as 252" O.D. and 49" face height with weights up to 60,000 lbs. The Bar rolling/planishing process manufacturers Tartan Bars® from 6" to 16". Combined with our vast inventory of over 10,000 loose tools, Scot Forge has the experience and technology to deliver large, custom, near net shape forgings for a variety of industries.

Heat Treating



Our nine custom-designed quench systems work in tandem with over 40 furnaces and specialized material handling equipment. We are able to heat treat parts up to 70' long or 252" in diameter, including vertical heat treatment up to 110" long. Services include normalizing, annealing, quenching, tempering, stress relieving, spheroidize annealing, solution annealing/solution heat treating and straightening. Additionally, Scot Forge is Nadcap certified for heat treating.

Machining and Boring

We offer a full range of in-house machining options utilizing a combination of over 75 CNC and manual machining centers enabling us to turn, mill or bore your parts as specified, with finishes ranging from 32 to 500 RMS. With over two dozen horizontal turret and engine lathes, we are able to turn shafts or bars up to 80" diameter, with lengths to 550" long. Deep hole drilling capabilities are available to 30" I.D. by 300" long.

Nondestructive and Metallurgical Testing

Certified to Nadcap, our nondestructive testing methods include ultrasonic inspection (contact and immersion), liquid penetrant inspection, magnetic particle inspection, and elemental analysis using optical emissions and x-ray flourescence spectrometry. Capabilities for our state-of-the-art metallurgical testing laboratory include mechanical, impact and fracture toughness testing, in-house and field metallographic analysis, chemical analysis, and hardness testing.

Sawing

With capabilities of cutting material up to 64" square, we operate over two dozen carbide and band saws and a hot abrasive saw, each serving a different purpose. Specialized saws are also available for ring splitting thicknesses as thin as 1/4" and up to 58" O.D., and ring segmenting with wall thicknesses up to 25", 240" O.D., and 36" face height.

Torch Cutting

Combining open die forging and torch cutting allows for new design flexibility, improved integrity in the finished part, and less material waste than casting or welded plate. Our CNC torches can cut through carbon and alloy forgings with areas of 100" by 144" and thicknesses up to 33".

SCOT FORGE

Visit our website at www.scotforge.com

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