

# copper&brass

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## Modern Metals



## A SOLID SOURCE

### Alloy producer's 122-year-old roots offer a firm business foundation

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In the late 19th century, western Pennsylvania was a hotbed of heavy industrial development. By the 1880s, Andrew Carnegie had begun to build his steel empire and in 1891 the company that 70 years later would become Concast Metal Products Co. began producing brass and bronze ingot in Pittsburgh.

“At that time we were known as ingot makers,” says Al Barbour, who has been president of the family business since 1985. “We would supply foundries raw material — copper alloy — in ingot form, so it was very much dependent on the industrial activity around Pittsburgh. Concast was developed as a captive customer to the original company.”

The company adopted continuous cast-

ing in 1960 at its new mill 30 miles north, in Mars, Pa., and added more copper alloys to its product offerings in 1990. In 1995, when the company acquired its Birmingham, Ohio, facility, it expanded its product line to include aluminum bronze and manganese bronze.

Today Concast is the largest manufacturer of continuous cast copper alloys in North America. Its nine horizontal casting lines in Birmingham and five horizontal lines in Mars produce bars, rods, tubes, rectangles and near net shapes for companies serving the oil and gas, automotive, heavy equipment and plumbing industries, as well as the military. Concast materials have widespread application in industrial valves and fittings and as bearings and bushings, which cross over into many markets.

Concast products are sold primarily through major metal distributors, although some OEMs and contract machine shops buy direct. “The company today and in

the beginning was always founded on our relationship with our distributors,” Barbour says. “That’s an important part of our business, and it’s a majority of our business.”

To provide optimum product availability, the company maintains as much as 7 million pounds of inventory at its main warehouse in Birmingham. But unlike the early years, today’s inventory includes more than 900 sizes. “Our inventory is a mix of standard products and customer-specific products we have for programs,” says Martin Little, Concast’s executive vice president for sales and marketing. “Some products we always have in stock and we remake when the reorder points are hit. The customer-specific material we inventory for customers who, for example, want security and will make a commitment to buy from us. That way, it’s good for us because we make a larger production run and it’s good for the customer because they get the security of a guaranteed price.”

## Going green

Concast’s GreenAlloys line is one of the more recent to become standard stock. According to Barbour, Concast has been active in the field of reduced-lead, environmentally friendly alloys for 20 years or more. “And it has grown, particularly in the last year or two,” he says.

Many of these materials are more expensive than traditional alloys, a factor that must be weighed against the benefits. “Lead is generally the least expensive element in bronze or brass and you’re replacing it with higher purity material, pure copper,” Barbour says. “When you don’t use as much secondary material, and you use more primary material, that makes it more expensive.” He also says changing the alloy mix makes it more difficult to cast. “There are nuances to it that you just don’t learn right away. So we’ve built up our knowledge on that.”

Despite the higher cost, a mandate by the federal government is growing demand for the lead-free alloys. Effective Jan. 4, 2014, the provisions of Senate Bill S.3874, “Reduction of Lead in Drinking Water Act,” require the use of only lead-free materials in any plumbing or storage component that could be anticipated to convey drinking water. Partly in anticipa-



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tion of this, demand has already risen to a point where Concast now stocks lead-free alternative alloys.

“We have a volume of business and we’ve gotten to that crossover point where it makes sense to put an inventory of GreenAlloys,” says Barbour. “Because we’re continually running the same sizes, it makes sense from a cost standpoint to give our customers the benefit of a higher volume by being able to put it into our inventory. It’s a natural progression from what we’ve already done to this point. And we don’t see as much risk in that because we’ve done it for a period of time and it just makes sense to take this next logical step.”

“This product costs a little more,” says Little, “no two ways about it. That’s because it’s harder to make and the production process is slower. In addition, the elements involved are more costly. The only time that we, as Western civilization, opt for a better option like this is if it doesn’t cost us anything—and that’s not true with this product—or the government mandates it. And we’re to the point where the government mandate is forcing the issue.”

Concast already has made a sizable investment in finished goods inventory by offering more than 50 sizes of its C89835, a lead-free alternative to C932, as standard stocked items. Of course, the alloy 932 is not used exclusively in plumbing. Much

of its application is in the bearing and bushing arena. “So we’re not really completely replacing that alloy in the market,” Little says. “We’re replacing a portion of it.” He also says that by producing C89835 products in stocking quantities, rather than only by special order, the company is helping to relieve the burden of a more costly product by making a commitment to inventory. “Making a few thousand pounds and putting it in stock helps everybody,” he says.

## Listening to customers

One of Concast’s primary tenets has always been to listen to its customers, and in recent years that has led to the addition of wrought products. “We went to our customers and asked, ‘What should Concast do that would add value to your business?’” Little says. “And the answer was ‘wrought products.’”

And when customers talk, Concast listens. “We’ve worked on our wrought drawn products over the past two years,” Barbour says. “We’re continuing to develop that line of product, some of which is in-house that we’ve produced with our own draw bench. Other items have been acquired. We have expanded our stock range and alloy offerings, particularly in the 630 and 642 alloys, and it’s an ongoing process.”

Despite the fact that the metal casting industry has for many years been mature, it has seen a remarkable amount of change since Concast’s early days. “We learn new things every day about our business, about things that you thought worked a certain way, from a production standpoint or metallurgically. And that always makes it challenging and exciting,” Barbour says. “You’re always kind of in that learning curve. So it’s enjoyable. I like it.” ■

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