



KEEPING MACHINERY MOVING SINCE 1911 – NATIONAL BRONZE MFG. CO.

Case Study

T-Shaped Bronze Bar Cuts Cost & Time for Machinery Component Manufacturer

Before the advancements that led us to modern day continuous casting technology, much of the bronze based products manufactured began as a sand or static castings.

Sand or static casting use a mold into which molten bronze is poured and solidifies, taking the shape of the mold. The advantage of this method is that the variety of shapes you could form was virtually unlimited.

When machining a bronze component it is best to start with a bar stock that is as close to the net machined shape as you can. With custom dies/mold used in the sand casting process this can be achieved.

The cons of sand casting far outweigh the pros unfortunately. Issues such as inclusions, porosity, as well as extended lead time and costs brought about the advancement of continuous casting.

With continuous casting you end up with a bar stock virtually free of impurities with a very fine grain structure. Due to the efficiency of this process, both lead times and costs are drastically cut. The shape of continuous cast bar stock is limited compared to sand castings. Due to the fact that much of the bronze bar stock machined in the world ends up in the shape of a cylindrical bushing or flat wear plate, continuous cast mills cast a number of size varieties in round, tube, and flat shapes. This works great for machining bushings and plates but what if you need a different more complex shape?



One option is to start with the closest round or rectangular size as possible, and machine the difference. This leads to excess machining and scrap loss.

There is another option for certain situations. We used this custom option recently when working with a machinery component manufacturer recently.

The customer needed to machine bronze components of a T finished net shape. Machining from a rectangle would take too long and be much too costly. After discussing his issue with our Inside Sales Manager Joe Kuczynski, National Bronze Mfg. offered a unique and highly cost efficient solution to this machinist in need.

If the total weight of bar stock needed is enough, a custom shaped continuous cast bar profile can be cast. This custom profile yields all the advantage of continuous cast bar stock with the shape flexibility of a sand casting.

By offering the custom T-shaped continuous cast bronze bar stock, our customer was able to greatly cut his machining time and scrap loss. These savings can help raise both competitiveness and profitability for our customers. Lower cost bar stock with less machining necessary can help you win more work and get that work done faster at the same time.

So, the next time a difficult shaped bronze components comes across your desk, give

us a call. One of our highly trained Sales Technicians can developed a customized solutions to help your business grow.

CONTACT

National Bronze Mfg. Co.
Roseville, MI 48066
800-875-3558
www.nationalbronze.com
sales@nationalbronze.com
Quality Bronze Products Since 1911

At National Bronze Mfg. Co. we specializing in creating customer solutions that have helped our customers save time and money for the last 105 years. Industry expertise, exceptional service and great parts on time all of the time. That's what makes National Bronze Mfg. Co. one of the leading bronze component manufacturer and copper alloy distributor in the US.

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