



Press Information

Sandvik bringing a competitive edge to component machining

Sandvik Materials Technology at IMTS 2014

Booth: W-1251

Today, machine shops are constantly looking to minimize their machining time per component in order to increase productivity while combating increasing costs and competition to meet customer demands.

There is, however, only so much real machining time available and it is imperative that this is utilized to the full. Out of a total of 8,760 hours within a year, actual machining time can be as low as just 2,100 hour annually.

“All of this is quantifiable and at IMTS we are aiming to show visitors to our booth just how they really have an opportunity to maximize the available time by as much as 1.5 times,” explained Christer Thorsson, Sandvik Global Product Manager, Hollow Bar.

Traditionally in the US, solid bar is the material of choice when it comes to machining components. However, when a central bore is being machined Sandvik argues that by selecting near-net-shape, machine optimized hollow bar machine shops could significantly increase their output.

Many factors influence profitability in the machining process the main ones include, type of CNC machine, machining methods, work piece material, machinist skills, labor costs, country of production and tooling. Among these factors, choice of the work piece material represents ~17% of the overall cost.

“It is this material choice that so influences productivity and profitability of the machine shop. By direct, real time comparison from a Sandvik machining video it can be seen that in the time it takes to produce just one complete component from solid bar, three components can be produced from Sanmac® hollow bar.

“The advanced machinability of Sanmac® hollow bar means increased cutting speeds and feed rates are achievable. Because the dimensional stability and material consistency from batch to batch is identical no adjustment is required to be made so machine settings remain the same reducing set-up and processing time”, explained Christer Thorsson. “When compared to solid bar, hollow bar helps to reduce set-up time, machine cycle times, drilling chips, tooling costs, lubricant usage, electricity consumption and freight costs, offering users an operational advantage.”

Sanmac® hollow bar offers a complete selection of material choices including: 4305 UNS S30300, 304/304L UNS S30400/30403, 316/316L UNS S31600/31603, 4435 UNS S31600/31603, 2205 UNS31803/32205. These are available in sizes ranging from: outside diameter x inside diameter combinations from: 1.22 in. x 0.862 in. right thru to 10.827 in. x 8.067 in., and any size configuration in between, to suit customers’ production requirements. Hollow bar in non Sanmac® alloys are also available on request.

Optimizing the material for component machining Sanmac® is the result of more than 40 years of research and development by Sandvik that continues even today to introduce new and exciting material grades.

“Looking at this from another perspective the use of hollow bar allows machine shops to increase their production capacity without capital investment,” concluded Christer Thorsson.

Sandvik has a bar converter app to help design engineers, machine shop owners and operators to estimate potential savings when converting from solid bar to Sanmac® hollow bar. You can find it at: www.smt.sandvik.com/barconverter

For further detailed information on Sanmac® hollow bar, along with other material grades, visit the website: www.smt.sandvik.com/en/products/bar-and-hollow-bar/hollow-bar/

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