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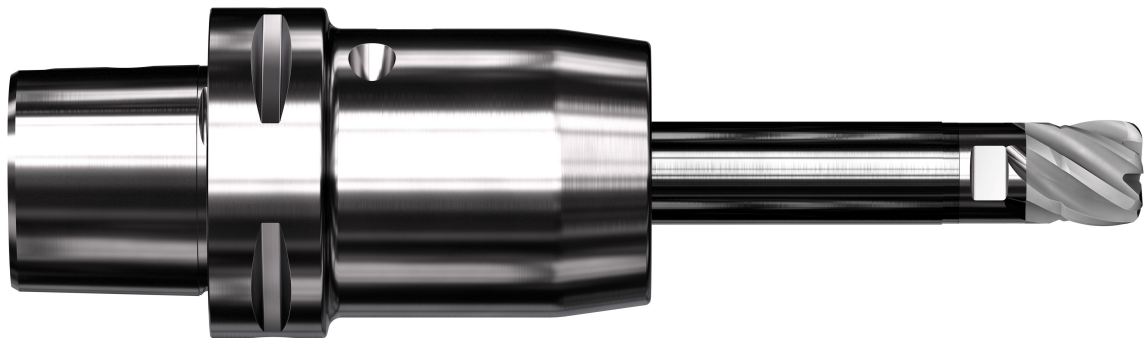
Ceramic End Mills Take the Heat in HRSA Machining

Brought To You By Sandvik Coromant | Apr 25, 2019

Sandvik Coromant offers higher productivity for milling nickel-based alloys.

Cutting tool and tooling systems specialist Sandvik Coromant has released two series of ceramic end mills for optimized performance in nickel-based alloys. The latest brazed ceramic **CoroMill® 316** and ceramic **CoroMill® Plura** end mills offer a more productive method for roughing in ISO 5 materials compared to standard carbide milling cutters.

With aerospace components manufactured from nickel-based alloys becoming increasingly prevalent, the demand for optimized cutting tools is growing. With this in mind, Sandvik Coromant has developed two innovative solutions that are ideal for the shoulder and face milling of nickel alloy aeroengine parts.



Ceramic mills long adaptor

“The ceramic substrate of the latest **CoroMill® 316** and **CoroMill® Plura** end mills allows for a different cutting process from traditional solid-carbide tools,” explains Tiziana Pro, Global Product Manager for Solid End Mills at Sandvik Coromant. “Our unique CC6060 grade is purposefully designed for the superior machining of nickel alloys and is supported by negative geometry that provides a tough cutting edge.”

In fact, the six-flute geometry delivers highly productive side milling operations, while the four-flute geometry boosts face milling in both the **CoroMill® 316** and **CoroMill® Plura** versions. The choice between the two depends on machine conditions and the application. Those seeking solutions for difficult-to-reach applications, or the extra flexibility of the exchangeable-head system, should opt for **CoroMill® 316**, while those requiring superior stability are advised to select **CoroMill® Plura**.

Ceramic tools retain their hardness at the high temperatures associated with milling heat-resistant super alloys (HRSA). As a result, 20 to 30 times the speed can be achieved in comparison to solid-carbide tools, delivering considerable potential for increased productivity. A stable set-up is advised without the use of coolant, as coolant would simply burn at this high temperature. Watch the short video below to see a demonstration of the CoroMill® 316 for roughing in ISO 5 materials in action.

Beyond shoulder milling and face milling, the new end mills can also be used for pocket milling, helical interpolation, ramping and slot milling. Both **CoroMill® Plura** and **CoroMill® 316** are part of the Sandvik Coromant Optimized solutions offer within the company's solid round tools range.

The newly introduced series also includes a ceramic ball-nose version of **CoroMill® 316**, for blisk machining. This profile-milling solution is suitable for semi-finishing operations.

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