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CTCS245 – The grade for milling Nickel-based alloys

New milling grade boosts productivity when machining heat resistant alloys

Reinforcing its credentials in the aerospace sector, Ceratizit Group has introduced a new milling grade targeting heat resistant nickel-based alloys. Often described as difficult to machine, these materials pose challenges to those involved in their machining, with particular emphasis on process security and tool life. The new CTCS245 grade complements the existing CTPM245 and CTC5240 grades from Cutting Solutions by CERATIZIT by enhancing performance on materials such as Inconel, Nimonic and Rene, making it the 'go to' grade for aerospace applications.



The chief factors in CTCS245's success are the new, extremely tough and heat resistant substrate, combined with a very hard and smooth CVD TiB₂ coating, unique to CERATIZIT. This high-performance grade is thus able to withstand the rigours of machining these materials, ensuring process security together with significantly increased tool life. For example, when machining Nimonic 80A material, which is commonly used in turbine blades, 12 mm button inserts were run at 45 m/min at 0.25 mm/tooth feed and 2 mm depth of cut. The tool life increased by 100 per cent from 62 minutes to 124 minutes compared to using CERATIZIT's older CTC5235 grade. When used on Inconel 625 the gains were even greater, with tool life increasing 200 per cent, even when the cutter was run at 38 per cent higher cutting data than the competitor's grade.

While the initial focus has been on the aerospace sector, with insert shapes including button inserts, high-feed, shoulder and face-milling inserts, CTCS245 is also finding success in other industries such as medical, petrochemical, energy and sub-sea engineering.

“The development of CTCS425 completes our optimised family of high-performance insert grades for milling heat resistant materials; heat resistant steels (CTPM245), Titanium alloys (CTC5240) and now Nickel-based alloys with CTCS245, says Nathan Paxton, UK & Ireland Business Development Manager. “With the significant increases in cutting performance and tool life Cutting Solutions by CERATIZIT has extended the lead it has within the aerospace milling sector.

Attachments:



The new CTCS245 grade complements the existing CTPM245 and CTC5240 grades from Cutting Solutions by CERATIZIT

Issued on behalf of

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CERATIZIT – Passion and pioneering spirit for carbides

For over 95 years, CERATIZIT has been a pioneer developing exceptional hard material products for cutting tools and wear protection. The privately owned company, based in Mamer, Luxembourg, develops and manufactures highly specialised carbide cutting tools, inserts and rods made of hard materials as well as wear parts. We are the market leader in several wear part application areas, and successfully develop new types of carbide, cermet and ceramic grades which are used for instance in the wood and stone working industry.

With over 9,000 employees at 34 production sites and a sales network of over 70 branch offices, the Group is a global player in the carbide industry. Our international network also includes the subsidiaries KOMET, WNT, and Becker Diamantwerkzeuge, as well as the joint venture CB-CERATIZIT. As a leader in materials technology, we continuously invest in research and development and hold over 1,000 patents. Our innovative carbide solutions are used in mechanical engineering and tool construction and many other industries including the automotive, aerospace, oil and medical sectors.

We are active on the market through the seven competence brands Hard Material Solutions by CERATIZIT, Toolmaker Solutions by CERATIZIT, Tool Solutions by CERATIZIT as well as Cutting Solutions by CERATIZIT, KOMET, WNT and KLENK.

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