

Workshop »Coatings for Tools & Components«

Green carbide and coatings – Tooling a sustainable future

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Sustainability is a challenge in the hard metal industry that sets new benchmarks in the handling of raw materials, their preparation and processing, and in particular recycling. The aim is to gradually increase the use of secondary raw materials in hard metal products without simultaneously losing performance (upcycling). The combination of these factors is essential for acceptance by customers and thus enables an important step towards Industry 5.0.

With the development of the Green Carbide substrate material CT-GS20Y, CERATIZIT successfully launched the first product representative of sustainable carbide grades with more than 99 % secondary raw material content on the market last year (2022). The increasing customer requests for Green Carbide products confirm the future potential of the planned product portfolio. Nevertheless, matching the combination of substrate material, geometry, cutting edge and coating remains crucial for a successful use of the tool within the application.

New studies with coated milling tools made of Green Carbide show promising results under various machining conditions. Different coatings were tested and validated for applications with the aim of achieving optimum performance.