

S205

HRSA turning grade

S205 is a new CVD (chemical vapour deposition) grade developed for intermediate and last stage applications in aerospace engine components within the area of HRSA turning.

The grade offers increased productivity through higher cutting speeds in semi-finishing and finishing applications without compromising on tolerances and surface conformity.

Features

- Second generation Inveio® coating for high wear resistance and long tool life
- Post-treatment technology strengthens the insert by modifying its mechanical properties

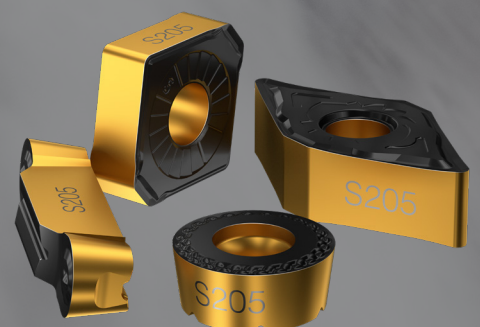
Benefits

- 30-50% higher cutting speeds than competition without compromising on tool life
- Higher cutting speed translates to improved productivity
- Excellent resistance to flank and adhesive wear resulting in longer tool life



Inveio®

Uni-directional crystal orientation



Application

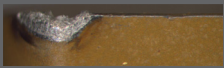
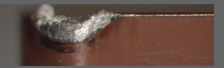

- Last stage machining applications where the depth of cut is smaller than the nose radius
- Intermediate stage machining at low entering angles with round inserts and CoroTurn® Prime
- Aged Ni-based materials
- Pre-machined surfaces
- Aerospace engine components: turbine discs, rings, casings, shafts
- Applications requiring higher cutting speeds



Performance

Component: Test bar
Material: Aged Inconel 718, 43.2 HRC
Operation: External turning (finishing)

+110%
Tool life

| | Competitor 1 | Competitor 2 | Sandvik Coromant S205 |
|---------------------------------------|---|--|---|
| Insert | CNMG | CNMG | CNMG120408-SM |
| v_c , m/min (ft/min) | 130 (426.5) | 130 (426.5) | 130 (426.5) |
| f_r , mm/rev (in/rev) | 0.11 (0.0043) | 0.11 (0.0043) | 0.11 (0.0043) |
| a_p , mm (in) | 0.2 (0.0078) | 0.2 (0.0078) | 0.2 (0.0078) |
| Insert edge after 5 mins of machining |  |  |  |
| Tool life, min | 5 | 5 | 10.5 |
| Result | Sandvik Coromant S205 shows 110% increase in tool life compared to competition. | | |

For more information, contact your local Sandvik Coromant representative or visit www.sandvik.coromant.com

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