

# Machining trials

## Dry cylindrical turning of C45E

### Machine:

DMG CTX Gamma 1250 TC

### Workpiece:

C45E

### Tool:

WC-6Co, SPUN120308

NbC<sub>0.88</sub>-14Co, SPUN120308

NbC<sub>1.0</sub>-12Ni4Mo4VC, SPUN120308

### Process parameters:

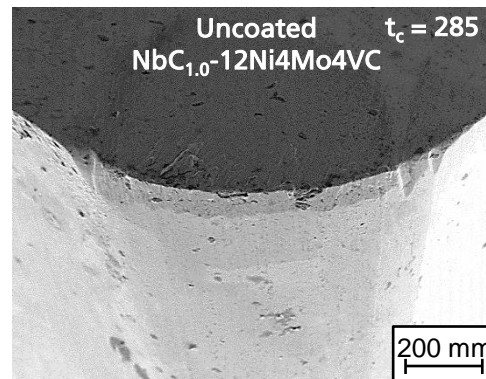
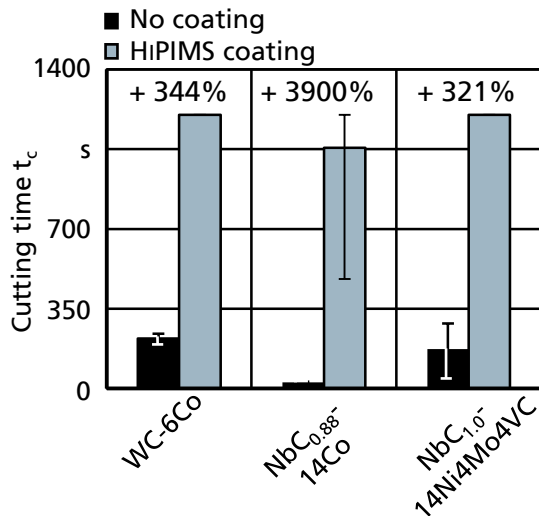
Cutting speed  $v_c = 150.0$  m/min

Feed  $f = 0.1$  mm

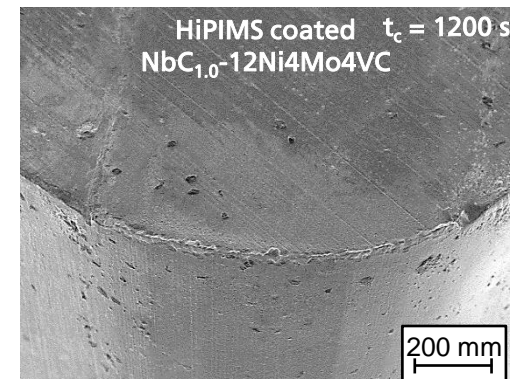
Depth of cut  $a_p = 0.5$  mm

- Comparison of tool performance of uncoated and HiPIMS coated substrates

- WC-6Co
- NbC<sub>0.88</sub>-14Co
- NbC<sub>1.0</sub>-12Ni4Mo4VC



SEM image of uncoated NbC<sub>1.0</sub>-12Ni4Mo4VC [IWF]



SEM image of HiPIMS coated NbC<sub>1.0</sub>-12Ni4Mo4VC [IWF]