

Solid carbide endmills and drills CNC profiling with sharp edge DIA wheels



Metal bonded DIA wheel: 14EE1 150 1,5 5 8 20
Wheel specs: D 46 SR 150 M18

Case history :

Operation: pine endmills profiling for the production of turbine blades – footh shaping
Fresa a pino saldobrasata Ø150 L90 Z12

Material: carbide working head on steel shank



Dressing :

dressing stick :

to restore the free cutting action
#600 grit white aluminum oxide
or
#120 grit abrasive rubber disc

Use : manual operation

Machine :

Type: Walter Helitronic Power

Spindle power: 24 kW

Coolant: well filtered neat oil.
Coolant chilling to the optimum oil temperature enables to get uniform performances from the wheel

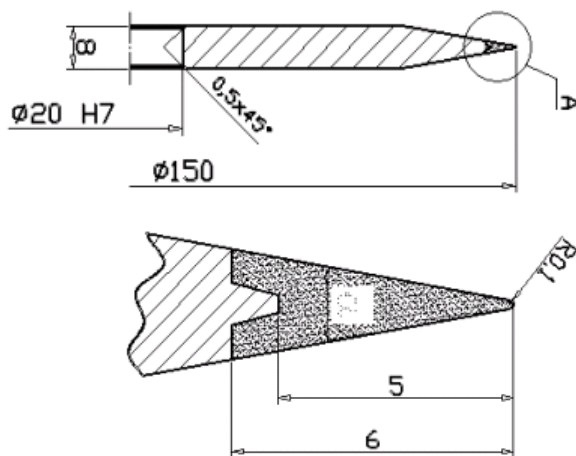
Pressure: 15 bar

Grinding parameters :

Wheel speed: 24-26 m/s

Depth of cut: 0,05 mm

Feed: 150 mm/min



Note:

Very tight tolerances are requested for the turbine blade footh profiling. With last generation NC grinding machines equipped with special metal bonded Diamond wheels only, able to keep very small tip radiuses for long time, thus maintaining a free cutting action, the operation were possible with the requested tight tolerances : the radius holding ability is critical for it determines the profile precision.

All endmill teeth must be identical, no profile dimensional deviations are allowed

This kind of tool is checked piece per piece on measuring machines and a measuring certificate will be issued reporting the check of all teeth profile.

After a long optimizing test program, we have found that the above mentioned spec shows the best small radius holding ability under the described working conditions.

CAFRO s.r.l.

via Raimondi 55 - 22073 Fino Mornasco (CO) - Italy - T +39 031 880150 - F +39 031 880260 - E cafro@cafro.com - www.cafro.com
Capitale Sociale € 26.000 i.v. - Registro delle Imprese di Como - C.F. e P.I. IT 01728350131 - R.E.A. 212258 - CCE M. CO 010058