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## METHOD AND APPARATUS FOR GRINDING WHEELS



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#### TECHNOLOGY READINESS LEVEL (TRL)

- TRL 4 (Lab Prototype - Lab Testing)

#### PATENT/ GRANTED NUMBER

- MY-183498-A

### ▶ TECHNOLOGY OVERVIEW

The present invention discloses a method and apparatus for fluid jet assisted in process cleaning of grinding wheels that seeks to improve surface quality of a ground work-piece as well reduce grinding wheel loading and specific grinding energy. More particularly the method of the present invention is directed towards the reduction of grinding wheel loading specifically related to CBN (Carbon Boron Nitride) vitrified grinding wheels operating on work-pieces of nickel based super-alloys. The apparatus comprises of a grinding wheel, a primary nozzle for dispensing a jet of coolant and a secondary nozzle for dispensing a jet of cleaning fluid, characterized in that the secondary nozzle is configured to be positioned with a stand-off distance of 70mm (in relation to the circumferential surface of the grinding wheel and is further configured to have a nozzle orifice measuring 1.8mm in diameter.

The method comprising the steps of applying a high pressure fluid jet of cleaning fluid to a CBN (Carbon Boron Nitride) vitrified grinding wheel operating on a work-piece from the secondary nozzle of the grinding apparatus with a stand-off distance of 70mm from the surface of the grinding wheel, applying a high pressure fluid jet of cleaning fluid with a jet speed of  $121\text{ms}^{-1}$  and a flow rate of 18.5 litres/minute.

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