

## NEW APPARATUS OF ROTARY MICRO/NANO-FINISHING PROCESS IN TUBE WORKPIECE

**Ali khoshanjam<sup>1</sup>, Mohamad Reza Samadi<sup>2</sup>, Reza Miri<sup>3</sup>**

1,2. Inverter and Mechanical Designers

3. Process Designer

### Abstract

Disclosed herein is a method for inner surface finishing of a workpiece, in which the inner surface of the workpiece defines an opening with axial symmetry around the longitudinal axis of the workpiece. The method may include the following steps. An abrasive medium may be poured inside the opening; urging the abrasive medium to rotate about the longitudinal axis, thereby imposing a centrifugal force on the abrasive medium to accelerate the abrasive medium outwards from the center of rotation towards the inner surface of the opening, where the abrasive medium impacts the inner surface of the opening; and the workpiece may be rotated about the longitudinal axis in a direction opposite the first direction, concurrently.

