

Abstract

Method for cutting a multiplicity of slices by means of a wire saw from workpieces during a sequence of cut-off operations

5 A method for cutting a multiplicity of slices by means of a wire saw from workpieces during a sequence of cut-off operations divided into initial cuts and follow-on cuts, wherein the wire saw comprises a wire array of moving wire sections of a saw wire and an actuating device, and the wire array is tensioned in a plane between two wire
10 guide rollers, wherein each of the two wire guide rollers is supported between a fixed bearing and a floating bearing and comprises at least one chamber and a shell which encloses a core of the wire guide roller and which is structured with guide grooves for the wire sections, the method comprising

 during each of the cut-off operations, feeding the respective workpiece by
15 means of the actuating device through the wire array along a feed direction perpendicular to a workpiece axis and perpendicular to the plane of the wire array in the presence of a working fluid and hard materials, which act abrasively on the workpiece, which comprises

 during each of the cut-off operations, feeding the workpiece through the wire
20 array while simultaneously changing the length of the shells of the two wire guide rollers by adjusting the temperature of the chambers of the wire guide rollers with a first cooling fluid in accordance with the specification of a first temperature profile, which specifies the temperature of the first cooling fluid in dependence on a depth of cut and which correlates with a first correction profile, which specifies the change in
25 the length of the shells in dependence on the depth of cut; and while simultaneously axially moving the floating bearings of the two wire guide rollers by adjusting the temperature of the fixed bearings of the wire guide rollers with a second cooling fluid in accordance with the specification of a second temperature profile, which specifies the temperature of the second cooling fluid in dependence on
30 the depth of cut and correlates with a second correction profile, which specifies the travel of the floating bearings in dependence on the depth of cut, wherein the first and the second correction profiles are opposed to a shape deviation; and determining the shape deviation before each of the cut-off operations.

Drawing relating to abstract: Figure 1