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**Title** **Process for forming the micro-relay regularly on the surface of the gear teeth**

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**Description**  
**EN**

The invention relates to the mechanical engineering technology, in particular to the machining of surfaces of gearwheel teeth of different metals and alloys operating in the lubricating medium. The process for the formation of a regular microrelief on the surface of the gearwheel teeth consists in that the tool in the form of a profiled on the edge disk with the radius  $R$  is communicated a motion that simulates the real operating conditions by movements coordinated about the mobile  $X1Y1Z1$  and fixed  $XYZ$  coordinate systems. The tool is also communicated a linear motion along the gearwheel tooth, at an angle of  $d \geq 0$  about the plane formed by the axes  $X1$  and  $Y1$ . The gearwheel is communicated a rotary motion and ultrasonic vibrations modeled by the amplitude. The tool periodically comes in contact with the gearwheel, carrying out deformations on the surface of the teeth and forming a regular microrelief in the form of a grating of grooves with the necessary parameters along and by the depth of the tooth. The result of the invention consists in increasing the quality of the surface of the gearwheel teeth and providing the lubrication of the meshing zones with insufficient lubrication.

Class no.