MD.26.	
Title	**Gear system, manufacturing process and production device**
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Description EN	The manufacturing processes by additive process are performed as follows. By the additive manufacturing process traditionally with one or more additive heads successively, a prefabricated gear made of polymeric material or metal powders is made. Subsequently, a surface layer of additive polymeric material or metal powders with the addition of solid lubricant is deposited on the formed

surfaces of the teeth. The material for forming the surface layer of the teeth is deposited through the nozzle of the additive head, which performs a sphero-spatial (precessional) movement with geometro-kinematic parameters ensured by a device and forward translational movement to the center of the gear or vertical, controlled by a computerized control module, finally forming the surface layer. Thus, the surface layer of the teeth will have a more resistant structure to the action of breaking forces in the gear, a more homogeneous structure with an optimal operating capacity in the conditions of cyclic deformations of diamond-type cellular units at the entrance and exit of the gear.

Class no. 6. Mechanical Engineering - Metallurgy