TOOL FOR REMOVING INSERT NUTS IN HOLLOW PROFILES

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TOOL FOR REMOVING INSERT NUTS IN HOLLOW PROFILES

Technical task:
For fastening metric screws, insert nuts are inserted into assemblies made of metallic materials and plastics. In the event of damage to the insert nuts, they are removed from the component by boring. However, the nuts usually fall into the cavities and remain there. In order to prevent noise, the cavity can befoamed and the nut can be fixed in place.

Initial situation:
Despite foaming, the element remains in the cavity and the foam does not improve the quality of the component. In addition, foaming requires a further work step. In terms of automotive engineering, the component is not improved and, in addition, the production time/ rework is increased by the foaming.

Solution:
While the insert nut is being bored out, the insert nut can be fixed from the inside with the aid of a new type of tool. A crown drill then penetrates the material on which the nut is pressed. If the material is drilled through, the nut can be removed from the structure.

Advantages:
- The defective parts can be removed from the assembly
- No additional work steps and materials are required

Possible application:
The holder is pushed through the insert nut, which fixes it firmly against falling into the interior. Afterwards the crown drill is centered by the holder and placed on the outside in such a way that the outer diameter of the drill just exceeds the outer diameter of the insert nut. The drilling process cuts through the sheet metal of the component and thus removes the insert nut from the component.