

Title (en)  
SWAGING METHOD AND SWAGING APPARATUS

Title (de)  
TIEFZIEHVERFAHREN UND TIEFZIEHVORRICHTUNG

Title (fr)  
PROCEDE DE MATRIÇAGE ET APPAREIL DE MATRIÇAGE

Publication  
**EP 1964624 A1 20080903 (EN)**

Application  
**EP 06832569 A 20061114**

Priority  
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Abstract (en)  
An upsetting method capable of reducing a molding pressure is provided. The upsetting method uses a receiving die 11 and a guide 20 having an insertion hole 23 for inserting and holding a diameter expansion scheduled portion 2 of the raw material 1 in a buckling prevented state and in an axially slidable manner, the insertion hole being penetrated from the basal end to the tip end of the guide 20. The method includes a step of receiving the diameter expansion scheduled portion 2 of the raw material 1 by the receiving portion 13 of the receiving die 11 and disposing the diameter expansion scheduled portion 2 of the raw material 1 in the insertion hole 23 of the guide 20, and a step of expanding a diameter of the diameter expansion scheduled portion 2 of the raw material 1 exposed between the tip end face 21a of the guide 20 and the receiving portion 13 of the receiving die 11 by moving the guide 20 in a direction opposite to a pressurizing direction of the diameter expansion scheduled portion 2 of the raw material 1 while pressurizing the diameter expansionscheduledportion2 of the rawmaterial 1 withapressurizing means 30 in an axial direction, after the step of disposing the diameter expansion scheduled portion 2 of the raw material 1. At the diameter expanding step, the diameter expansion is performed in a state in which a portion 2a of the diameter expansion scheduled portion 2 of the raw material 1 corresponding to a tip end portion 21 of the guide 20 is locally heated by the heating means 40.

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