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模锻成形过程中金属变形流动的测试方法

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摘 要：利用此方法对叶轮锻件成形过程中两个典型截面上4条流线及其轴向应变进行了测量分析，并定量给出该复杂锻件成形过程中变形及应变分布规律。因而该方法是测试模锻成形过程中金属塑性变形流动较为有效的实验手段。

关键字： 模锻；塑性变形；应变分布

New method to measure metal flow during die forging

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Abstract:A new method named lantern rings screw thread method, was put forward in order to solve the difficulties in measuring the strain and streamlines distribution during die forging of complex components. This method can not only measure but also analyze quantitatively the deformation of die forging without substituted material. The strain distribution can be obtained, when using the method to analyze the axial strain and the four streamlines of two typical sections during the deformation of a compressor impeller. So it can be used as a reliable experimental method to examine the strain distribution during die forging.

Key words: die forge; plastic deformation; strain distribution

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