

Title (en)
METHOD AND APPARATUS FOR FREE FORGING OF WORK PIECES

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Application
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Abstract (en)
[origin: US4788842A] The invention relates to a method and apparatus for open-die forging of workpieces in forging presses at high forging temperatures, more particularly steel billets or ferrous alloy billets between about 800 and 1250 degrees Celsius. In conventional open-die forging it is often not possible to complete the forging process in a single heat, and the workpiece must therefore be reheated. Also, with direct contact between workpiece and tool, cracks occur, particularly in the vicinity of bulges, the prevention or straightening of which requires repeated transverse hammer- or pressure-forging, so lengthening the cooling time. The total energy consumption for deformation and heating of the workpieces is therefore relatively high. Reduction of this energy consumption, a surprising improvement in product quality, and almost complete elimination of bulges are achieved by means of the invention, in that during forging the workpiece undergoes lubrication effective at the forging temperature, the lubricant being a fluid glass film. The lubricant is advantageously applied in the form of a fine powder.

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Citation (search report)
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