Title (en)

LUBRICANT FOR METAL DEFORMATION

Publication

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Application

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Abstract (en)

[origin: EP0334977A1] The invention relates to lubricants for the deformation of metallic materials which are suitable for cold-forming, in particular for drawing elongate formed material, and for hot-forming, in particular for drop-forging. The lubricant for cold-forming contains (A) 0.01 to 15% by mass of alkaline earth metal soaps, (B) 0.05 to 15% by mass of alkali metal borate or ammonium borate, (C) 0 to 14% by mass of alkali metal phosphate or ammonium phosphate, (D) 0 to 10% by mass of polymeric organic compounds and (E) 0.005 to 10% by mass of reaction products of components A to D, which have been formed in aqueous solution at a pH above 6.9 and at temperatures below 95 DEG C, the total of the proportions of components A to E being less than 35% by mass. The lubricant for hot-forming contains, in water, (A) 0.25 to 10% by mass of alkaline earth metal soaps, (B) 0.05 to 3% by mass of alkali metal borate or ammonium borate, (C) 0.05 to 8% by mass of alkali metal phosphate or ammonium phosphate, (D) 0.01 to 2% by mass of polymeric organic compounds and (E) 0.005 to 8% by mass of reaction products of components A to D, which have formed in aqueous solution at a pH above 6.9 and at temperatures below 80 DEG C, the total of the proportion of components A to E being less than 20% by mass. The lubricants are environmentally compatible, stable for a long time, highly effective and cheap.

IPC 1-7

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