Title (en)

FORGING PROCESS

Publication

EP 0189447 B1 19880427 (DE)

Application

EP 85903281 A 19850708

Priority

DE 3427156 A 19840724

Abstract (en)

[origin: WO8600838A1] A process for producing a synchronous component possessing short gear-teeth, with undercut teeth for a gear system, by means of precise forging in which the teeth, which are placed with their radial inner side against a common cylindrical surface and with their base on a common lower plane are first made with tooth flanks which are parallel and then undergo a finishing upsetting operation, this process making it possible to achieve a particularly precise shape of the engagement surfaces, whereby the following stages of the process are important: a) a semi-finished product is produced by preliminary forging, the short-toothed gearing of which possesses teeth (7) having a dimension which exceeds the finished dimension of the tops of the teeth (10); b) by one or several successive calibrating passes the cold semi-finished product is formed in such a way that i) first, the tops of the teeth (10) are upset, whereby the teeth are supported on their radial external sides on the forging side; ii) simultaneously with preliminary upsetting or by means of a further calibration pass by rounding off of the tooth flanks (9) to the lower plane (5), a cold reinforcement is produced in the corresponding bases of the teeth (7) and iii) when the finishing upsetting operation is performed, the tops of the teeth are each shaped in the form of a roof and the tooth flanks receive an oblique setting corresponding to their undercutting.

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B21K 1/30; B21J 5/12

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