

THE INFLUENCE OF TYPE OF USED KNIVES ON FLANKS CURVATURE OF CYLINDRICAL GEAR WITH CYCLOIDAL TEETH

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Abstract: The cylindrical cycloidal gear is generated by rolling with a mobile straight line, using a milling cutter with several units of knives mounted on the tangential slide of the processing machine.

In order to locate the contact point, the aim of this paper is to determine the flanks curvature resulted after generation, taking into account two types of knives: knife that generates the flanks of one tooth and knife that generates the flanks of two adjacent teeth.

Based on the determined analytical relationships it was done a numerical calculation program the results being used to study the parameters which influence the size of the flanks curvature and also to establish the type of the knife necessary to be used.

These results were confirmed by the measurement done on the obtained gears