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ABSTRACT

SPROCKET TOOTH PROFILE

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An improved tooth profile for a roller chain sprocket enables noise reduction from impact and polygonal action during the meshing process. The profile of the engaging flank consists of three portions which are the seating, impact and distal portions all three of which are arcs with well-defined radii and arc centres. The profile of the disengaging flank is determined in accordance to a modified form of the JIS standard in which the sprocket pitch is smaller than the roller chain pitch. The impact point is located at the tangent point, thus permitting a gradual change of the roller velocity, thereby lessening the impact level and the effects of polygonal action.

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(Figure 7)