



DESIGN OF SPUR GEAR AND ITS TOOTH PROFILE ON MATLAB

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ABSTRACT

Spur Gears are the most widely recognized means of transmitting power in the current engineering applications. They changes from tiny size utilizes as a part of watches to the bulky gears utilized in marine speed reducers; bridge lifting components and railroad turn table drivers. They are important elements of main and auxiliary mechanism in numerous machines, for example, metal cutting machine tools, marine engines, transmitting machinery, automobiles, tractors, rolling mills, hoisting etc. MATLAB has been used to design gear in the present work. MATLAB has been widely utilized to solve scientific and research problems due to its accuracy and numerous built in functions which makes it flexible. In present study spur gears has been designed. A MATLAB code has been written when run, ask for the inputs and executes the essential design calculations and provides required output values. MATLAB code also gives the tooth profile of involute gear with correct dimensions.

Keywords: Spur gear design, Bending and Compressive stress, Tooth profile, MATLAB