

POLITECHNIKA ŚLĄSKA

Wydział Transportu

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ROZPRAWA DOKTORSKA

Wpływ czynników konstrukcyjnych, eksploatacyjnych
oraz technologicznych na wibroaktywność
układu napędowego z przekładnią zębatą

STRESZCZENIE

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High constructional requirements, exploational as well as increasing economic requirements placed before toothed gears, they cause by constructors the necessity of solution more and more complicated task. The optimization of construction leading to minimization of dynamic phenomena is possible in result of use of electronic computational techniques. The present doctor's thesis undertakes the test of complex analysis of influence different constructional, technological as well as exploational factors on vibroactivity of toothed gear.

The aim of work is realized on road of simulating investigations as well as empirical. Simulating investigations were guided from utilization the author's model of dynamic stand (FZG). The detailed description of building of model, procedure of determination of his parameters as well as the program realization was introduced. The high conformity of results of numeric calculations with results of laboratory investigations realized on two stands in wide range of changes of analysed factors was showed.

The analyses in next part of work were introduced on vibroactivity of toothed gear. Analyses were executed for many different factors, what required realization over 5000 simulating calculations. The results of stand investigations confirmed the results of numeric calculations and by this also the correctness of model and selection of his parameters.