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PRACA DOKTORSKA

**Identyfikacja wpływu charakterystyk sprzęgła
podatnego na obciążenie przekładni zębatej
w aspekcie aplikacji w układzie napędowym
maszyny górniczej**

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Summary of doctoral thesis

**„Identification of the influence of flexible coupling characteristics of the load gear
in terms of application in mining machine drive system”**

The drive system of working machines, including mining, attaches great importance to the problem of reducing the torque loading two independent shafts rotatably connected to each by clutch. The interest in this problem is so reasonable that dynamic loads due to high variability and frequency torque capacity are often the cause of inability to work the components of the working machine drive system. This applies above all gears, which in addition to changing internal excitations are exposed to variable operating extortion. Therefore modern approach to mining machines drive system requires taking all possible arrangements to minimize the load to be carried. This can be done, inter alia, through the application of a torsionally flexible coupling with a suitably selected characteristics.

The primary objective of research carried out in this dissertation experimental study was to identify the comparative influence of the type of a torsionally flexible coupling and its characteristics with respect to the dynamic load transmitted by the transmission, as well as the entire drive system, depending on the external load inflicted.

Obtained and presented in the dissertation research can provide valuable assistance in selecting of the type of flexible coupling and its characteristics of a particular drive system due to load gear and thus the dynamic state of the drive, so that it corresponds to the particular requirements for operational.

Maciej Kwainy