

Product Name :
Dynamic Behaviour Of Multistage Spur Gears

Product Code :
TN397



Description :

Dynamic Behaviour Of Multistage Spur Gears

Technical Specification :

Dynamic Behaviour Of Multistage Spur Gears

The unit is perform the following experiments and investigations:

Learning Objectives / Experiments:

- Determining the angular acceleration on gears
- Determining the mass moment of inertia of the gear
- Determining the friction
- Determining the gear efficiency

Specification:

- Investigation of the dynamic behavior of 1-stage, 2-stage or 3-stage spur gears
- 4 shafts, 3 drive wheels and 3 drive gears
- Shafts can be coupled by coupling pins
- Optional attachable flywheels to increase the rotational inertia on each shaft
- Gear is accelerated via cable drum and variable set of weights
- Weight raised by hand crank; ratchet prevents accidental release
- Clamping roller freewheel enables free further rotation after the weight has been released
- Gear decelerated via hand-operated brake
- Transparent protective cover with safety lock and protective grill for the set of weights
- Inductive speed sensors on all drive gears

Software for data acquisition via USB under windows 7, 8.1, 10
Including PC1 Computer-System with 21" TFT-Monitor Win 10 engl.

Technical Data:

3-stage gear with 4 shafts

Transmission ratio per stage: $i = 4:1$

Overall transmission ratio: $i = 64:1$

Gear width: 16mm, module 2mm

Drive

Set of weights: 5...50kg

Drop height: max. 0,65m

Max. Potential energy: 320Nm

Measuring ranges

Speed: 0...2000rpm

230V, 50Hz, 1 phase

230V, 60Hz, 1 phase; 120V, 60Hz, 1 phase

Dimensions and Weight

Length x Width x Height: 970x760x1550mm

Weight: 155kg

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