

KES

Diameter and Tolerance Calculation of Over Ball

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1. Scope of application

This standard shall be applied to involute gear in transmission, which is equipped in passenger car, mini van and truck.

2. Purpose

The purpose of this standard is to determine diameter of over ball and tolerance range of diameter among gear specification, which are indirect method to manage tooth width.

3. Terminology

- (1) Involute gear : This is gear, of which surface are composed of points that revolve in a given ratio on the base cylinder.
- (2) Backlash : Clearance between teeth to guarantee smooth revolution of gear

4. Reference

- (1) Gear handbook, Gi-Jun-Yun-Gu-Sa

5. Calculation method

- (1) Specification of gear

Investigate the following specification in the gear drawing to determine diameter and tolerance range of diameter in over ball.

- (a) Number of tooth (Z)
- (b) Tooth perpendicular pressure angle α_n
- (c) Twist angle β
- (d) Tooth perpendicular module (m_n)
- (e) Coefficient of modification (X_n)