

# 9. Gear Accuracy and Strength

No wonder gears with high precision are durable and quiet.

Now, let's think about gear accuracy and strength. Good gears are considered to be:

- ① Small and light
- ② Able to transmit high power and forces
- ③ Quiet
- ④ Durable

## ■ Strength and durability

The strength of gears is expressed in terms of bending strength and surface durability. If the force beyond the limits is put on the teeth,

- the teeth will be broken, or
- the surface of the teeth will be worn.

To make gears strong it is necessary that the proper material is used, and that heat treatment of the materials, if necessary, is to be conducted.

For gears to be strong, they must be accurate.

