

Design Guide – Driveshaft / Measurement Shaft

1. Material / Heat Treatment

Because of the magnetic measurement principle the material of the shaft has to have specific characteristics. To achieve a good sensor performance we recommend the usage of one of the following materials:

1. 1.2767
2. NC 310YW
3. BS S155

As the sensor performance is depending on the stress level in the sensing region the assigned accuracy refers to a solid shaft, only.

Please respect that heat treatment of the shaft is mandatory.

After heat treatment there must be a high percentage of martensitic structure.

In case of doubt, please ask.

2. Shaft design

The draft below shows a typical designed measurement region.

However the axial bearing surfaces can be designed by different ways.

Either as shown below with surfaces integrated in a driveshaft or with aid of two clamp rings on a constant shaft without a specific contour.

Due to the used friction bearings it's essential the measurement region has the shown diameter, tolerance and surface finish.

