

ABSTRACT

The invention concerns a sensor unit (50), a device and a process for the inspection
5 of the surface (10', 10'') of an object (10) for the purpose of identifying surface characteristics, such as structural defects. The device contains an emitting module (51), which emits at least one beam bundle (6, 6', 6''), and a receiving module (52) with at least one light receiver (15, 16, 20). In the focal point of a parabolic mirror (1) a rotating polygonal mirror wheel (2) is located, on to which the beam bundle (6) of
10 the laser (3, 4) is directed by means of a telecentric lens, which guides the emitter - and receiver beam on the same optical axis, whereby the parabolic mirror (1) guides the deflected beam bundle (6, 6', 6'') under a constant angle relative to the symmetry axis (7) of the parabolic mirror (1) along a scanning line (23, 24) over the object (10) and the diffusely reflected beam bundle after its deflection out of the common beam
15 path impinges on the processing unit (5).

- 3b -

ject from the scanning lens. The construction can be refined by foreseeing several detectors, which supply maximum signals at differing object distances.

