

ABSTRACT

**A BOROSCOPE AND A METHOD OF PROCESSING A COMPONENT WITHIN AN
ASSEMBLED APPARATUS USING A BOROSCOPE**

5 A boroscope (60) has a first end (62) and a second end (64) and the first end (62) of
the boroscope (60) has an optical fibre (66, 67), a light source (68), a lens (70), a beam
expander (72) and a transmissive diffractive optical element (74). The optical fibre (67)
extends from the first end (62) of the boroscope (60) to the second end (64) of the
boroscope (60). A laser optical fibre (71) extends from the lens (70) at the first end (62)
10 of the boroscope (60) to the second end (64) of the boroscope (60) and a laser source
(76) is arranged to direct a laser beam into the laser optical fibre (71). The beam
expander (72) is provided between the laser optical fibre (71) and the lens (72) and the
lens (72) is provided between the beam expander (72) and the transmissive diffractive
optical element (74). The transmissive diffractive optical element (74) is arranged to
15 produce a laser beam (L) with a predetermined shape and a focal length probe (77)
extends from the first end (62) of the boroscope (60).

(Figure 3)