

**A sensor module for detecting unevenness of a surface, an apparatus comprising the same
and a method for detecting unevenness of a surface using the said sensor module**

ABSTRACT

5 The present invention relates to a sensor module for detecting unevenness of a surface,
especially for detecting bulging and bowing of the pipe external surface. The sensor module
comprises an arm assembly comprising an arm body having at least two ends, one or more
surface contacting element mounted to at least one end of the arm body; a magnet assembly
comprising at least one magnet to generate magnetic lines of force; and a magnetic sensor
assembly comprising a magnetic sensor being assembled adjacent to the magnet for sensing
10 changes in the magnetic lines of force in response to movement of the arm body. The invention
also relates to an apparatus comprising the said sensor module and a method for detecting
unevenness of a surface using the said sensor module.

Figure 4