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(54) **POSITIONING DEVICE AND METHOD FOR
OPERATING SUCH A POSITIONING
DEVICE**

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ABSTRACT

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The invention relates to a positioning device (1) comprising a positioning unit (2) having at least one piezoelectric actuator (4), a drive element (5) to be coupled with an element (6) to be positioned, and a controller (3). The positioning device has a defect analysis device (16) for detecting defects in the positioning unit (2), wherein the actuator (4) or actuators, in addition to functioning as a drive for the drive element (5), functions or function as a generator (12) or a receiver (13) of ultrasonic sound waves, and the defect analysis device (16) comprises a measurement signal generator (22) for generating a sinusoidal electrical voltage for exciting the or a generator (12) and a resonance analyser (24) for analysing an electrical signal generated by the or a receiver (13). The invention also relates to a method for operating such a positioning device in order to detect defects in the positioning unit (2).

