

ABSTRACT**PIEZOELECTRIC THRUSTER AND METHOD OF GENERATING THRUST
WITH SAID PIEZOELECTRIC THRUSTER**

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Piezoelectric thruster comprising:

- a set of identical piezoelectric elements in the form of a stack (5) of piezoelectric discs (2) polarised in alternating arrangement with respect to conductive electrodes (1), the piezoelectric discs and the electrodes (1) being joined together by an epoxy resin (3)
- two parts, a smaller part (6) and a larger part (7) between which the stacks (5) are arranged with pressure being applied and the piezoelectric discs having a high quality factor Q and a high piezoelectric constant d33;
- a power supply (21) capable of providing an alternating current waveform, wherein the waveform has two sinusoidal components with different frequencies,

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A piezoelectric thruster with very low energy loss due to thermal effects is achieved, where the power delivered to the piezoelectric material is maximum, piezoelectric materials have a high mechanical excursion.

Fig. 2