



*Langbein, S.; Welp, E.G.; Sohn, J.*

**Development of a Variable and Integratively Structured SMA-Actuator for Multifunctional Application**

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**Abstract**

This publication deals with the development, examination and realization of a multifunctionally applicable actuator on the basis of a shape-memory-alloy (SMA)-actuator. The task of this variable SMA-actuator is the conversion of a controller output variable into an elongation that affects e.g. a downstream thermostat valve. An actuator of this type could be used as an alternative for electrically activated wax elements and thus make a more flexible and more dynamic mode of operation of the valves possible. The aim of the development of this actuator was to generate an integratively and variably structured actuator that can be used for diverse applications and different construction sizes.