

# Influence of eddy current thermal annealing on soft amorphous alloys

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The following paper presents the results of investigation on the influence of eddy current thermal annealing on magnetic properties of soft amorphous alloys based on iron and iron-nickel. Thermal annealing is a method of material treatment utilized to reduce the mechanical stress within the material and improve its magnetic properties [1]. Traditional methods of thermal annealing include long-term annealing of the material in high temperature. The proposed method is based on conductive properties of amorphous alloys. Eddy currents induced within the material by inductive heating are utilized to rapidly increase the temperature of the material, which results in much less period of time necessary to conduct the treatment. The results obtained with proposed method will be compared to the results of traditional thermal treatment.

## References:

[1] J. Salach [et al], The Influence of Thermomagnetic Treatment on the Magnetoelastic Characteristics of Fe<sub>61</sub>Co<sub>19</sub>Si<sub>5</sub>B<sub>15</sub> Amorphous Alloys, Act. Phys. Pol. A, vol. **127**, pp. 617-619, 2015

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