

Utilization of Optimization Techniques in Electroheat Device Design

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Abstract

A methodology of design of selected electroheat devices is presented based on advanced optimization algorithms connected with penalization techniques. As the electroheat processes are nonstationary the forward part of the problem is solved by higher-order finite element method. The backward part (optimization) is based on using both deterministic and heuristic procedures. The objective function consists of both classical and penalization terms. The computations are mostly carried out by our own application Agros. The methodology is illustrated with typical example - design of the inductor and input parameters.

References

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