# ANALYSIS OF TRANSIENT TEMPERATURE FIELD WITH PLANE ELEMENTS OF FINITE ELEMENT METHOD OF LINES

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## Summary

This paper analyzes transient temperature field with plane elements of finite element method of lines. Finite element method of lines treats transient temperature field line, using a semi-discrete in space, in one direction discrete numerically and another direction with analytical type. Using backward time difference, finally ordinary differential equations are obtained, and solved by ordinary differential equations solver COLSYS. Verification indicates that plane element of Finite Element Method of Lines can obtain transient temperature field with higher precision and faster processing speed.