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**2D MODEL OF COVER DIAGNOSTICS BY TERMINAL VISUALIZATION METHOD ON THE BASIS OF THE TEMPERATURE FIELD   
OF INHANEOUS DEVIATION**

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***Research Methodology.*** *To create a thermal 2D model of the system to detect hid­den surface defects in surface layers, the method of finite elements in the ComSol 5.1 soft­ware environment has been applied. The sampling rate was adjusted according to the equipment on which sampling is performed.*

***Results.*** *The thermal model of the system indicates a noticeable change in the he­te­rogeneity of the temperature field induced by the directional heat flux in the area of the hidden surface defect. As part of the simulation, the effectiveness of the thermal imaging method was verified to detect hidden surface defects.*

***Novelty.*** *The density of the grid applied to the surface layer, as a heat tester, affects the calculation time when creating the model. Accordingly, increasing the density of the grid, the calculation time increases, and the level of accuracy of the simulation increases.*

***Practical Significance.*** *Creating a simulation 2D model of the system to detect hidden surface defects allows you to visualize and to carry out an analysis at the program level, both graphically and analytically, of the deviance of the heterogeneity of the temperature field induced by the directional heat flux distributed on the surface, in particular in the area of the closed defects.*