

Firmness of the main assumption for models of heat transfer in contacts

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Nominal contact area of surfaces is a main assumption at heat transfer models in rough solids. Numerical solutions results of a heat transfer problem of fluid — rough solid interaction at hydrodynamically smooth regime and of a spatial heat conduction problem of elastoplastic contact of two rough surfaces under pressure are presented.

Keywords: *roughness, contact, finite element method, heat transfer, elasto-plastic deformation*

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