

Finite-element model selection for inducer flow simulation

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The paper studies peculiarities of finite-element models for hydrodynamic inducers numerical modeling of turbo-pump boosters. The inducer configurations differ considerably from those of other blade machine types which creates difficulties while using typical flow calculation methods. The article shows the results of comparative calculation for two inducer configurations. The authors propose the base structure of hexahedral element for given configuration.

Keywords: booster turbo-pump unit, inducer, finite-element model, hexahedral element.

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