

## ALGORITHMS AND SOFTWARE FOR PARAMETRIC DETERMINATION OF GAS AEROTHERMODYNAMIC PROCESSES IN VARIOUS ENGINEERING FACILITIES

### Areas of Application

The algorithms and software are to be used for supporting the design and test setup works in rocket and space engineering, power engineering, and metallurgy

### Specification

Algorithms and software (AS) enable determining the parameters of gas thermodynamic processes considering homogeneous and heterogeneous chemical transformations, phase transitions, interactions between the working body and the bounding surface materials for solving the problems of rockets aero-gas dynamics, ramjet engines, feed systems for jet-rocket engines and micromotors, flame spraying, etc.

### Advantages

The use of AS can save time and costs for test setup works due to application of mathematical models simulating the key specific features of processes and quick adjustment for determining the parameters of specific devices

### Stage of Development. Suggestions for Commercialization

IRL4, TRL4

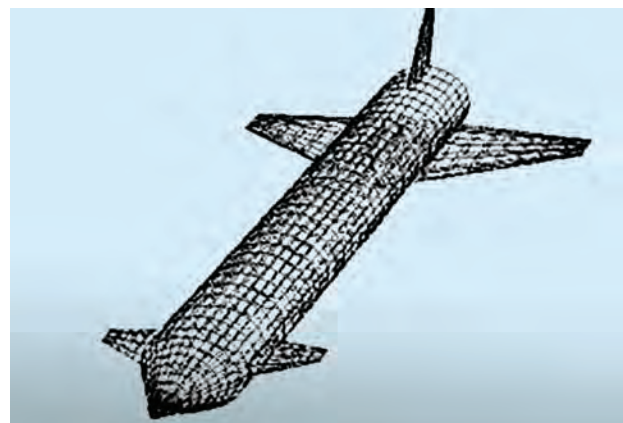
Algorithms and software are ready to be used for supporting the development and operation of specific engineering systems

### IPR Protection

IPR3



*a*



*b*

Applications of algorithms and software:  
*a* – feed systems for jet-rocket engines ;  
*b* – gas aerodynamics of rockets

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