

DEVELOPING THRUST CHAMBER ASSEMBLY OF LOX - LNG EXPANDER CYCLE LIQUID-PROPELLANT ROCKET ENGINE

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This article summarizes the results of milestone collaboratively completed by Konstruktorskoe Buro Khimavtomatiki (KBKhA, Voronezh, Russia) and AVIO S.p.A. (Italy) towards developing thrust chamber of LM10-MIRA liquid-propellant rocket engine intended to be used at upper stage of LYRA LV.

Hereinafter the results of the activities pertaining to preparation and performance of the testing of power unit jointly developed by KBKhA and AVIO are presented.

Main target of the tests was to verify performance and define characteristics of thrust chamber jointly developed.

Data pertaining to KBKhA thrust chamber and AVIO injector head is presented as well as the integration and manufacturing of the power unit and activities preceding the development of joint thrust chamber.

It has been noted that in course of manufacturing and testing of power unit, various engineering tasks were met and engineering solutions were experimentally proven to be successful.

Main data pertaining to Demo Engine has also been included.