

# MIXING PARAMETERS INVESTIGATIONS AND METHODS OF APPROACH TO CALCULATIONS AND DEVELOPMENT OF THE THRUSTERS WITH A SPRAY-CENTRIFUGAL SCHEME OF NT AND NDMH MIXING ON THE CONFUSION CHAMBER WALL IN CONSIDERED

© 2009 Y. I. Ageenko

Isayev chemical engineering design bureau – branch Khronichev State Research and Production Space Center

Many years investigations results in field of mixing parameters studies in the thrusters developed CMDB named after A.M.Isaev are described. The NT and NDMH spray-centrifugal mixing scheme on the confusion chamber wall in considered.

*Liquid rocket engine of small thrust, space vehicle, mixing element, completeness of mixture, factor liquid phase mixtures*

**Ageenko Yuri Ivanovich**, chief designer lines, Head of the liquid rocket engine of small thrust, renowned designer. Phone: 8 (495) 516-80-26. E-mail: kbhimmash@korolev-net.ru. Area of research: the organization of work processes in liquid rocket engines of small thrust, the study of parameters of mixture.

## References

1. Dobrovolskii M. V. Liquid rocket engine. Design basis Moscow / Moscow State Technical University named N.E. Baumana, 2006

2. Instability burning in LRE. edited by Harie D.T., Rirdona F.G. – M. Mir, 1970

3. Popcov V.L. Characteristic flow under interaction flow with barrier. Dep. All-Russian Institute of Scientific and Technical Information №6 – 84 on 07.01.1984.

4. Kurochkin V.A. Research spreading on the wall axially symmetrical jet. Transactions MAI, part 119-M.: Oborongiz, 1960 – p. 102-110.

5. Ageenko J.I. Alekseev S.A., Nigodjuk V.E., Popcov V.L. Experimental investigation, method preparation and calculation program process respreading in jet-mixing type. STR №666, Kuibyshev: KuAI, 1989

6. Ageenko J.I., Ulyanova O.V., Shestrikova S.P. Research facilities creation engine thrust 200N on scheme mixture component

fuel engine S5.142 and S5.144. rocket space technology. Scientific-and-technical collection, series 4, part 3 (145). 1998 – p. 112 – 116

7. C. a. №137177 on 03.12.1979. author: Ageenko J.I., Ilin V.M., Primazov V.A., Seleznev E.P. notify 08.06.1977 №2220639/23.

8. Ageenko J.I. Alekseev S.A., Nigodjuk V.E., Popcov V.L. Program design calculation parameters liquid-phase mixture jet swirler with film. STR №683, Kuibyshev: KuAI, 1990.

9. C. a. №286295 on 02.01.1989. author: Ageenko J.I., Kaznacheev D.N. notify 15.07.1987. №3 176083/23.

10. Ageenko J.I. Single-component and two-component LREST new generation for small satellite. 1 international conference – show small satellite new technologies, progress problems and perspective international cooperation in new millennium. – Korolev, Moscow region., CRIMAS, 16 – 20 November 1998 – section VIII. Propulsion device.