

MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM (A2)
Fluid and Materials Sciences (2)

Author: Mr. Nikolay Pozdnyshev
Yuzhnoye State Design Office, Ukraine, nik-pozdnyshev@mail.ru

DEVELOPMENT THE CAPILLARY DEVICES OF LAUNCH VEHICLE TANKS AND
PECULIARITIES OF HYDRODYNAMIC PROCESSES SIMULATION OCCURRING IN THEM

Abstract

The paper focuses to actual topic - developing the capillary devices that are important element of ensuring the multiple propulsion ignition system of launch vehicles apogee stages in the conditions of zero gravity. The paper presents the results of analysis applied designs and computing methods both analytically and with a glance of the experimental data. The peculiarities are noted of simulation hydrodynamic processes occurring in these devices in the conditions of Earth gravity. The recommendations are given on the use of one or another capillary devices type in depend on specific operation conditions and tasks.