

CONTINUOUS FILM DETONATION OF LIQUID FUEL

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Abstract: The possibility of organizing a continuous-detonation combustion of a liquid fuel film in an annular combustor (AC) of a demonstration sample of a liquid propellant detonation rocket engine has been proved experimentally for the first time. The near-limit mode of the longitudinally pulsating “film” detonation and the continuous spinning “film” detonation modes with one and two detonation waves circulating in the annular gap of the AC are recorded in the fire tests.

Keywords: liquid propellant detonation rocket engine; film detonation; continuous spin detonation; longitudinally pulsating detonation; experiment

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