

CHEMICAL AND EXPLOSION-FIRE SAFETY OF SPILLAGE OF PROPELLANT COMPONENTS AT LAUNCHING ROCKET COMPLEXES

It is shown that the improvement of chemical and explosion-fire safety of spillage of propellant components due to accidents at the launching complexes during the launch preparation is provided by dispersed flows of the process liquids, based on long-range water spraying and a significant area of a treated zone with the possibility of controlling the flow dispersion characteristics, for their evacuation into the zone of the ensuing neutralization. Selection of a hydraulic impulse method of generation of such flows is valid, the technique of their applications is proposed, methodic recommendations for selecting the flow parameters and designs parameters of devices for their generation are made. Those devices are characterized by the technological effectiveness, operation with powder-components liquids and compatibility with standard hydraulic equipment for LC safety systems.

Keywords: launch vehicle, launching complex, propellant components, spillage, evacuation, explosion-fire safety, dispersed liquid, shielding, sorption.

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