

Title (en)

MULTI-STAGE GAS GENERATOR AND GAS GENERANTS

Title (de)

MEHRSTUFENGASGENERATOR UND GASERZEUGENDE ZUSAMMENSETZUNGEN

Title (fr)

GENERATEUR DE GAZ A PLUSIEURS ETAGES ET GENERATEURS DE GAZ

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2004024653A2] A gas generator is described that may have two or more compartments, each with a separate initiator. One compartment may discharge before another. Each compartment may have the same propellant. The propellants may have different geometries in each compartment, producing different rates of gas evolution from each compartment. The gas generator may produce a rapid initial inflation, followed by a more gradual inflation rate in subsequent stages. One propellant used may include ammonium nitrate as an oxidizer, a fuel such as CL-20, and a binder such as polycaprolactone. A second propellant may include approximately 70-95% energetic nitramine fuel, 5-25% energetic polymer binder, and 0.1-5% flash suppressant, respectively, by weight. An inflation rate of an airbag may be controlled by connecting a gas generator to the airbag, causing each of the chambers to discharge at a different, predetermined time, and causing the effluent of each chamber to flow into the airbag.

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IPC 8 full level

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