

Torch Ignition System for Propulsion Systems

SUMMARY

The University of Texas at El Paso seeks a licensing partner for a swirl co-flow premixed torch igniter that uses oxygen and methane as propellant.



TECHNOLOGY

Current engine ignition systems require too much power or consume too much propellant, which decreases the overall efficiency of the system. This invention revolves around the renewed interest in using oxygen and methane propellants for propulsion. This invention contains a coaxial swirl torch igniter that can reliably ignite in a large range of inlet conditions and operates under a wide temperature range. This ignition system operates using methane and oxygen as propellants.

ADVANTAGES

- Reduces size and weight of engine
- Can operate on various fluid mixtures
- Igniter is reliable, durable, and fast
- Methane propulsion is space-storable, nontoxic, and burns cleanly



APPLICATION

- Aerospace
- Rocket Propulsion

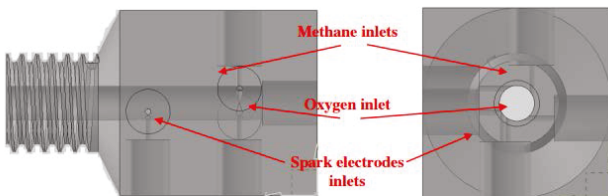


Figure: Graphic representation of the igniter body.

INVENTORS

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PATENT STATUS

- Patent Pending