

Unmanned Fire Suppression System

APPLICATION

This technology provides autonomous and precise fire detection and suppression solutions, enhancing safety and minimizing damage in enclosed spaces such as buildings, tunnels, and transportation systems.

FOUNDERS' NAME

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INTELLECTUAL PROPERTY

Granted Indian Patent No:
383478

PROBLEM ADDRESSED

- Delayed response time of aerial vehicles such as drones.
- Potential exacerbation of fire damage due to airflow from drone fan blades.
- Limitations on Unmanned Aerial Vehicle (UAV) usage in confined spaces like cellars and tunnels.
- Manual control requirement for most UAV operations.
- Inability to operate UAVs in adverse weather conditions.
- Requirement for skilled personnel to operate UAVs effectively.
- Time-consuming reloading and manual release of fire extinguishers.
- Difficulty navigating narrow paths with larger UAVs carrying multiple extinguishers.

ABOUT THE TECHNOLOGY

The Unmanned Fire Suppression System is a revolutionary technology designed to swiftly detect and extinguish fires in specific zones autonomously. It features a sophisticated arrangement of sensors, stepper motors, and a microcontroller that works in tandem to identify fire outbreaks and deploy a carbon fire extinguisher to the affected area. Through a series of meticulously coordinated movements, the system navigates to the fire location, aligns itself precisely, and activates the fire extinguishing mechanism without causing damage to surrounding properties. Additionally, the system incorporates safety measures such as audio alerts, emergency exit guidance, and communication with emergency services via GSM and GPS modules. This innovative solution ensures rapid and effective fire suppression, minimizing the risk to lives and property.

PRODUCT IMAGE

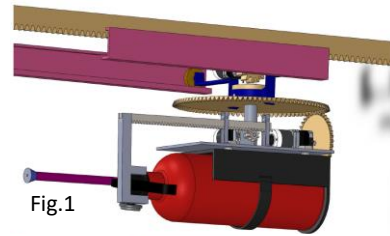


Fig.1

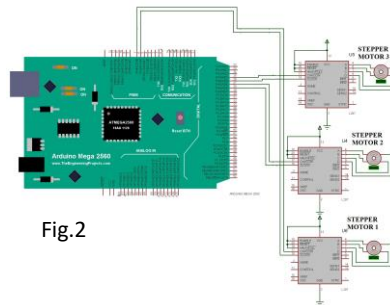


Fig.2

Fig 1. Fire suppression system; Fig 2. Internal circuitry arrangement of the fire-suppressing device

CATEGORY OF INVENTION

- Fire Detection and Suppression Systems
- Unmanned Systems
- Safety and Emergency Response Technology
- Sensor and Control Systems
- Transportation and Infrastructure Safety

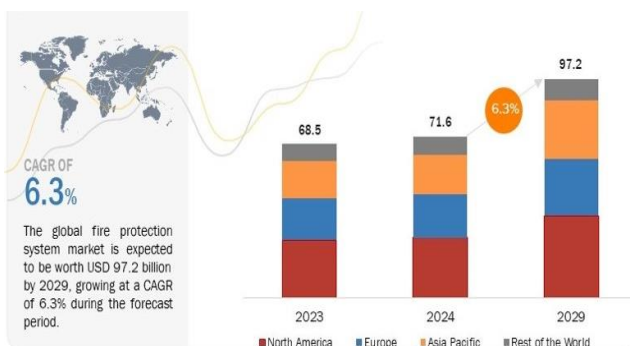
USP

- Fire Detection and Suppression Systems
- Unmanned Systems
- Safety and Emergency Response Technology
- Sensor and Control Systems
- Transportation and Infrastructure Safety
- Cost effectiveness,
- Ease of use,
- Increased shelf life/half-life,
- Better applicability etc.,

ADVANTAGE

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- Cost effectiveness,
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MARKET FORECAST



Ref: <https://www.marketsandmarkets.com/>