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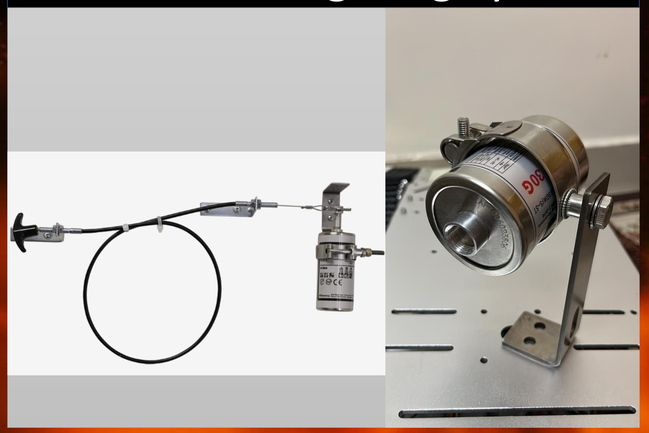
Firefighter robot

Capstone 2.0
Term: 222

King Fahd University of Petroleum and Minerals
College of Engineering and Physics
Control & Instrumentation Engineering Department

Aerosol Fire Fighting System



Conceptual Design

Plastic chassis

Build chassis

Aluminum Chassis

Testing and Validation

Demo video

Scan the QR code

Background

Problem Statement:

The aim of this project is to design a remotely controlled fire-fighter robot to be used in a medium size gas station in Saudi Arabia, capable of extinguishing fire with class B using the aerosol system.

Constraints:

- The Technical Regulations for Fire Fighting Equipment and Materials establish standards that ensure fire safety in every country.
- The standards of the OSHA regulations.
- Budget of the product.

Technical Specifications:

1.Response time	≤ 10 seconds
2.Robot's speed	≤ 1km/h (±10%)
3.Size of fire	≤ 0.3 meters
4.Fire class	A, B, C, E (Aerosol fire extinguishing system)

Conclusion

In this project, we have Tested and Validated the following:

- Design a remotely controlled fire-fighter robot that can be used in a medium size gas station in Saudi Arabia.
- The robot is capable of extinguishing fire with class B using the Aerosol fire extinguishing system.

Prototype