

MANHOLE TOXIC GAS DETECTION AND ALERTING SYSTEM



Problem statement

Manhole workers are exposed to toxic gas hazards, leading to serious health risks. A reliable detection and alerting system is crucial.



At least 631 people died cleaning sewers, septic tanks in last 10 yrs: NCSK

A total of 631 people have died in the country while cleaning sewers and septic tanks in the last 10 years, the National Commission for Safai Karamcharis (NCSK) said

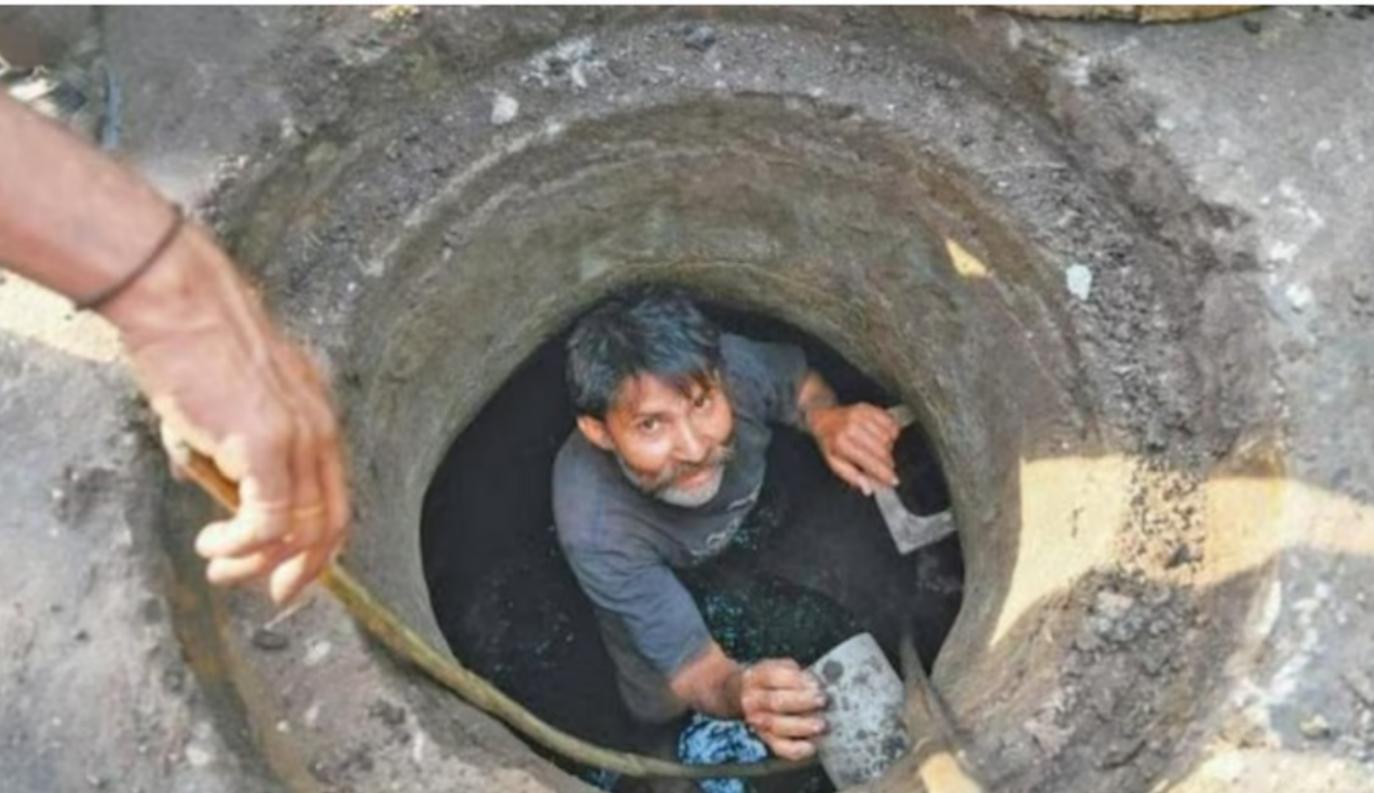


Chennai man dies while cleaning sewer line

A man died in Chennai on Tuesday while trying to clean a sewer line.

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Purpose

- WORKER SAFETY
- PREVENTING ACCIDENTS

Benefits of the system

- **EARLY DETECTION OF TOXIC GASES AND HAZARDOUS SUBSTANCES.**
- **IMMEDIATE ALERTING OF CONCERNED AUTHORITIES AND PEOPLE IN THE VICINITY.**
- **REDUCTION OF ACCIDENTS AND FATALITIES CAUSED BY TOXIC GAS EXPOSURE.**

Cost Analysis

- 1. BATTERIES OR POWER ADAPTERS NOT NEEDED.**
- 2. COSTS FOR THE MATERIALS USED TO HOUSE AND PROTECT THE SYSTEM.**
- 3. EXPENSES FOR TESTING THE SYSTEM AND CALIBRATING THE SENSORS.**
- 4. COSTS RELATED TO INSTALLING THE SYSTEM IN MANHOLES OR OTHER LOCATIONS WHERE IT WILL BE USED.**
- 5. IF YOU NEED TO TRAVEL TO INSTALL OR MAINTAIN THE SYSTEM IN VARIOUS LOCATIONS, CONSIDER TRAVEL EXPENSES.**

Implementation

HARDWARE CONNECTIONS

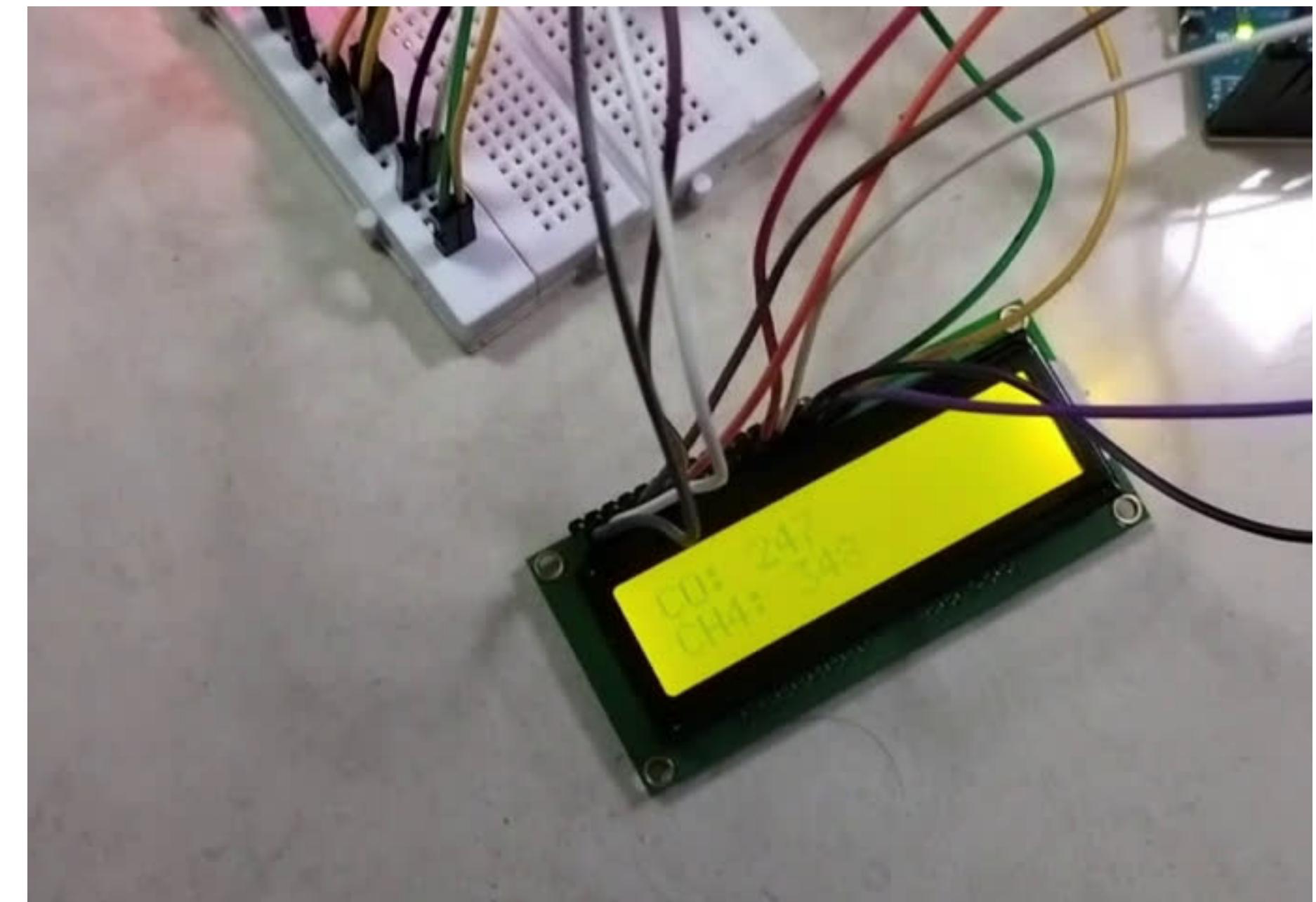
- CONNECT SENSORS TO ANALOG PINS.

TESTING AND DEPLOYMENT

- UPLOAD THE ARDUINO CODE, TEST THE SYSTEM, AND VERIFY DATA TRANSMISSION TO THE APP.

INSTALLATION

- DEPLOY THE SYSTEM OUTSIDE MANHOLES FOR TOXIC GAS DETECTION WHERE GAS WILL REACH TO THE SENSOR THROUGH A PIPE



HOW IT IS EFFECTIVE FOR GOVERNMENT AND OTHER AUTHORITIES

News > Budget 2023 > "Manhole To Machine...": Big Budget Announcement On Sewage System

This Article is From Feb 01, 2023

"Manhole To Machine...": Big Budget

Announcement On Sewage System

Calling the transition "manhole to machine mode", the Finance Minister announced that sewers and septic tanks across the country will be cleaned through mechanical process.

2023 | Aditi Gautam | Updated: February 01, 2023 12:43 pm IST

TRENDING



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Pandya As India's Vice-Captain



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NOVELTY OF MANHOLE GAS DETECTION AND ALERTING SYSTEM

- REMOTE SENSING AND DATA AVAILABILITY
- PROTECTION OF EQUIPMENT
- DATA ACCESSIBILITY
- GOVERNMENT AND AUTHORITY INTEGRATION
- REDUCED MAINTENANCE
- SAFETY ADVANCEMENTS
- ENVIRONMENTAL RESPONSIBILITY



THANK YOU