A DEVICE, SYSTEM AND METHOD FOR OBSTACLE IDENTIFICATION AND REMOVAL

IPTel Tracking ID: MS-CST-2018-89

The invention is a portable sewer maintenance system which includes an IoT (internet of things) based sewer inspection probe with a self-powered clog detection and clearing robot. It is a wireless technology with a robot having self-cleaning feature. It is also an affordable solution to inspect and clean manholes and sewer lines.

Area of technology: Product design/Sustainable technologies

Technology Readiness Level (TRL): 4

BACKGROUND

- Presently, method for sewer-line clearing in India involve Jetting-sucking and de-silting machines.
- Available automated technologies are expensive and often found to be not feasible for congested areas.
- Also, the automated machines which produce images are complex, making it difficult for maintenance authorities to use. Periodic inspection and maintenance is needed to solve various maintenance issues.

TECHNOLOGY

The invention discloses a device and system for finding an obstacle at a location and removing it.

Key highlights:

- Wireless system operating with robot having self-cleaning feature.
- Robot inspects and de-clogs in pipes with varied dimensions starting from 225mm.
- Robot inspection includes visuals, pH, temperature and gas sensing.
- It is housed in carry case with PV panels for ‘on-the-go’ charging of operational unit.
- Logging of sewer related complaints on mobile phone using GPS with the maintenance authority.
COMMERCIALIZATION

Indian Institute of Science has filed a provisional specification for patent grant in India

CONTACT DETAILS

Mr. Venkat Rama Rao Adhikari
Technology Licensing Manager
Office of Intellectual Property and Technology Licensing
E-mail: venkatadhikari@iisc.ac.in, Mobile: 8220260777