

GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH
RAJYA SABHA
UNSTARRED QUESTION No. 3161
(ANSWERED ON. 27.03.2025)

MECHANIZED SEWAGE CLEANING SYSTEM DEVELOPED BY CSIR

3161. Shri Sadanand Mhalu Shet Tanavade:

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

- (a) whether the Council of Scientific and Industrial Research (CSIR) has developed a mechanized sewage cleaning system; if so, the details thereof, including the technology used and its operational mechanism;
- (b) whether the developed system has been transferred to industries for large-scale production and deployment; if yes, the details thereof;
- (c) whether the developed system has been used, implemented, or tested in any city or town in the country; if yes, the details thereof; and
- (d) whether the Government is considering integrating this technology with sanitation programs such as the Swachh Bharat Mission or other similar initiatives; if yes, the details thereof?

ANSWER

MINISTER OF STATE (INDEPENDENT CHARGE) FOR THE
MINISTRY OF SCIENCE AND TECHNOLOGY AND EARTH SCIENCES

(DR. JITENDRA SINGH)

- (a) Yes, Sir. CSIR-Central Mechanical Engineering Research Institute (CSIR-CMERI), Durgapur, a constituent laboratory of the Council of Scientific & Industrial Research (CSIR) has developed a mechanized sewer cleaning machine. The technology is vehicle mounted mechanized drain cleaning machine which is fully indigenously developed, integral and self-powered in nature, developed with a noble intention to eradicate the manual scavenging process and also to provide a one-point solution for all sewer-related problems like, sewer chocking, overflowing manholes, damaged sewer pipelines etc. The advantages of the developed vehicle-mounted mechanized sewer cleaning machine are as under:
 - Utilization of Drain Slurry Water for Chockage cleaning. (Minimising the usage of the freshwater)
 - High-Pressure Jetting System & Inbuilt Disinfectant System
 - Equipped with a Closed-loop operator feedback system
 - Post-cleaning inspection camera system (self-propelled type)
 - Indigenous and Cost-effective

- (b) Yes, Sir. The technology of vehicle mounted mechanized drain cleaning machine has been transferred to the following industries
- M/s Kam Avida Enviro Engineers Pvt.Ltd., Hinjewadi, Tal: Mulshi, Dist. Pune, Maharashtra
 - M/s Maniar & Co., Ahmedabad, Gujarat
- (c) Yes, Sir. The mechanized sewer cleaning technology was demonstrated to the following municipalities:
- Rajkot Municipal Corporation, Gujarat
 - Municipal Corporation of Bangalore
 - Coimbatore City Municipal Corporation
 - Amdavad Municipal Corporation
 - Jaipur Municipal Corporation
 - Chandigarh Municipal Corporation
 - Tamil Nadu Municipal Administration and Water Supply Department (MAWS).
- (d) CSIR-CMERI has demonstrated the developed Mechanized Sewage Cleaning System to the Swachh Bharat Mission (SBM) Team, Ministry of Housing and Urban Affairs (MoHUA). The developed Mechanized Sewage Cleaning System has been listed on the Government e Market place (GeM) as suggested by the MoHUA. Recently, CSIR-CMERI showcased the developed sewer cleaning and sanitation technologies in the 12th High-Level Regional Reduce, Reuse and Recycle (3R) and Circular Economy Forum in Asia and the Pacific held in Jaipur, India from 3rd to 5th March 2025. The event was organized by the Ministry of Housing and Urban Affairs (India), United Nations Centre for Regional Development (UNCRD), and Institute for Global Environmental Strategies (IGES) and representatives of major municipalities and Urban Local Bodies (ULB's) participated in the event.
