

**GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH
LOK SABHA
UNSTARRED QUESTION NO. 2284
(TO BE ANSWERED ON 12.03.2025)
MACHANIZED SEWAGE SYSTEM**

**2284. SHRI PRATAP CHANDRA SARANGI,
DR. VINOD KUMAR BIND:**

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

- (a) whether it is true that Council of Scientific & Industrial Research (CSIR) has developed a mechanized sewage system;**
- (b) if so, the details thereof including its advantages;**
- (c) whether the developed system has been transferred to industry; and**
- (d) if so, the details thereof and if not, the reasons therefore?**

ANSWER

**MINISTER OF STATE (INDEPENDENT CHARGE)
SCIENCE AND TECHNOLOGY AND EARTH SCIENCES
(DR. JITENDRA SINGH)**

(a)&(b) CSIR-Central Mechanical Engineering Research Institute (CSIR-CMERI), Durgapur, a constituent laboratory of Council of Scientific & Industrial Research (CSIR) has developed a vehicle mounted 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 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**

Further, CSIR-CMERI has recently developed a compact vehicle and integrated mechanized septic tank cleaning machine for faecal sludge management. By automating the cleaning and treatment process, this technology significantly reduces the risk of human exposure to sludge, improves cleaning efficiency, and minimizes environmental contamination. Additionally, the compact design of the system makes it suitable for navigate in narrow lanes. The advantages of the developed mechanized septic tank cleaning machine are as under:

- **Mechanized cleaning of onsite sanitation system (septic tank)**
- **Onsite dewatering of septic tank faecal sludge and onsite wastewater treatment**
- **No electric power requirement to operate the machine**
- **Compact design of septic tank cleaning machine suitable to navigate in narrow lanes (>8 feet road).**
- **The septic tank cleaning machine has been designed and manufactured with around 80% indigenous components and technologies.**
- **Suitable for household septic tank used by up to 10 people**

- **Range of septic tank users: 5-10 people**
- **Household septic tank cleaning: Designed as a self-powered compact vehicle integrated septic tank cleaning machine to clean household septic tank unit**

(c)&(d) 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**

Further, the Technology of Mechanized Septic Tank Cleaning Machine has been transferred to the following industries:

- **M/s. Subham Corporation, Ahmedabad, Gujrat**
- **M/s. Amvica Industries, Ahmedabad, Gujrat**
