

Mobile Urban Solid Waste Collector

Problem Statement: Population growth rate and infrastructure development have caused failure in collection methods and vehicle technology in urban cities, leading to uneven dumping and littering of solid waste across the city. Handling and managing huge amounts of solid waste generated daily is a daunting and challenging task. Over time, if these wastes are not collected properly, it leads to choking of drains, floating materials over the water bodies, making the urban landscape unclean and unattractive. The main aim of the present project is to provide solutions for handling waste littered in frequent dumping places which are neglected and not considered for collection.

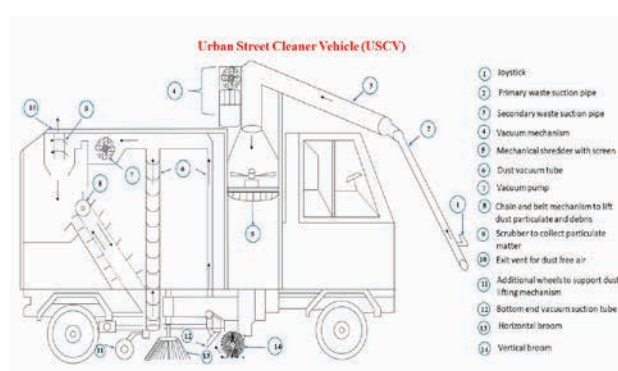
Uniqueness of the Solution: The team has studied the requirements for developing different types of mobile units and tools for solid waste collection along the streets, railway tracks, coastlines etc. Since each type of media (waste) is different, the solution

is different. Therefore, there is a need to design, implement and test several mobile tools to be employed over large geographical areas. For example, mobile cleaning equipment will be developed for sweeping street surfaces. The tools consist of another set of equipment for cleaning unpaved/grassy/other surfaces. Whereas another mobile unit will be required for skimming muck floating over water surfaces. These units may also comprise built-in processing facilities such as segregation, shredding, baling, dewatering etc., depending upon waste characteristics.

Current Status of Technology:

A preliminary study on existing collection and processing technology is completed and in the stage of TRL 1. The proposed technology will help improve the overall collection efficiency, followed by cost-effectiveness in SWM.

Societal Impact: There are insufficient vehicles that are not reaching every



corner of the cities for complete cleanup of the waste in public places. The waste collecting machine which is developed to target solid waste handling problems will be novel and innovative. Every tool/equipment / implemented and designed shall be of immense commercial value in the market.

Patent(s): Nil

Relevant Industries: Cities, Towns, Urban Local Bodies, Municipalities, Industries.

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