

VISVERVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM



Project Report on

“Studies on Recycling of Automobile Wash Water Using Low Cost Filter(s).”

Submitted in the partial fulfilment of the requirements for the award of

Bachelor of Engineering

IN

MECHANICAL ENGINEERING

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Academic Year 2014-15

ABSTRACT

As water is becoming a rare resource, the balance between water demand and supply has reached critical levels in many areas. The onsite reuse and recycling of automobile wash wastewater are practiced in many countries as a sustainable solution to reduce the overall urban water demand. Automobile's such as Two & four wheeler washing is one of the activity which consumes large quantity of water approximately 400 litres for each four wheeler vehicle i.e. buses and cars and this is not only the environmental threat posed by the industry but also uses detergents in cleaning and waxing vehicles, none of which can be considered completely safe. Some detergents currently used contain hazardous substances as highly toxic to water organisms. To prevention of this problem the automobile washing station for recycling of wash water using low cost filter is presented. It can help to show how water shortages can be managed more effectively by better planning to reduce consumption and technical improvements in the treatment and recycling of wastewater economically. it is clear that washing each vehicle approximately 300-400 litres of water required but when washed by hose pipe with flexible vehicle wash facilities (without recycling system) it consumes 150 litres but if the vehicle wash wastewater is treated and reuse the same for car washing, in addition of recycled water it requires only 10-50 litres of water extra. Water and wastewater recycling and reuse as increasingly been integrated in planning and development of India, particularly for agriculture and landscape irrigation help to protect public health, increase water availability, prevent water pollution and enhance water resources and nature conservation policies. In India several scientific technologies were applied for wastewater recycling and reuse. Here, an automobile wash wastewater treatment system, which used Preliminary solid treatment, filtration process using cheap materials, to obtain reusable water is presented.