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SEWAGE WATER TREATMENT PLANT

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Abstract - The water from such process must be treated before being released to the Environment. In order to make process even more economical and environmentally friendly, the waste water needs to be treated and recycled. Sewage is a water - carried waste, in solution or suspension that is intended to be removed from a community. Also known as waste water, it is more than 99 % water and is characterized by volume or rate of flow, physical condition, chemical constituents and the bacteriological organisms that it contains impurity.

The rate of filtration dropped as more waste water was filtered. Different filter step-ups and filter media will be studied in order to improve the efficiency and quality. There are presented the methods of treatment of the residual wastewater, in order to find the best condition and parameters treatment process. During the recent years, there has been increasing awareness and concern about water conservation all over the world.

This study is investigated using many process such as screening, grit removal, sedimentation, sand filter etc.

Key Words: impurities, colour, hardness, COD, BOD, pH

1. INTRODUCTION

Wastewater treatment is a process used to remove contaminants from wastewater or sewage and convert it into an effluent that can be returned to the water cycle with minimum impact on the environment, or directly reused. The latter is called water reclamation because treated wastewater can be used for other purposes. The treatment process takes place in a wastewater treatment plant (WWTP), often referred to as a Water Resource Recovery Facility (WRRF) or a Sewage Treatment Plant (STP). Pollutants in municipal wastewater (households and small industries) are removed or broken down.

The waste water is predominantly of domestic origin. Varying amounts of industrial and laboratory wastewaters can be collected and treated with the sanitary sewage. The primary purpose of the treatment of sewage is to prevent the pollution of the receiving waters. Many techniques have been devised to accomplish this aim for both small and large quantities of sewage.

2. BODY OF PAPER

The Working Principle of Sewage Treatment

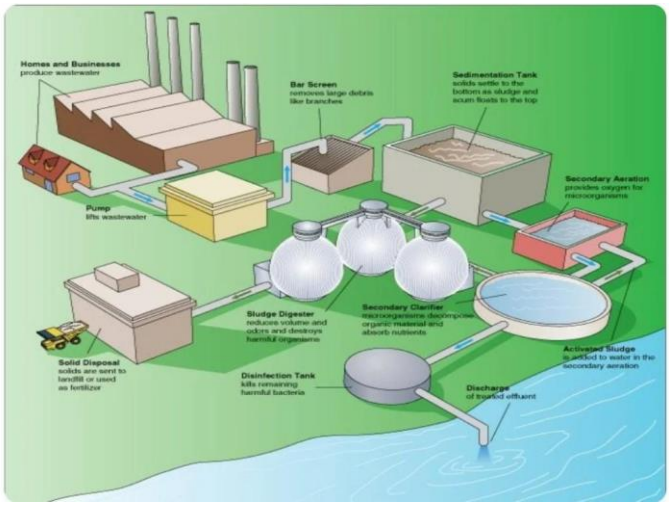

Fig. 1

Industrial sewage treatment system of the electrical control system. As the core controller controls the equipment to run or stop and its speed by detecting input of the operation panel button and input of all kinds of sensors.

The simple outline of the system hardware. The proposed work includes inputs, outputs, hardware and. The input consists of reservoir tanks, power supply, smoke sensor and master switch ON/OFF. The output consists of DC motors, control valves, water pumps and buzzer. The reservoir tank consisting of the waste water to be treated.

The water pump controlled by controller, pumps the water through a mesh to filter macro particle like sand, stones etc. the next stage consists of the filter membrane which filter minute or dissolved particle present in the water. At last chlorination process will takes place.

The solenoid valves open and close according to the controlling action of controller to allow the water treatment in different stages. Send back the treated water to the small scale industries, apartment and also can be recycled for horticultural.

This treated water is delivered to the small scale industries or apartments one after the other for some predefined length of time and so embedded timer functions in this system to do the process. Whole process for waste water treatment is keep on repeat.

TYPES OF TANKS & FILTER USED IN THE WASTE WATER TREATMENT

INLET TANK

GRIT TANK

SKIMMING TANK

SEDIMENTAION TANK

SAND FILTER TANK

PURED WATER TANK

SLUDGE TANK

3. CONCLUSION

The project of waste water treatment process of purification of water in which used many process. In this experiment the various treatments are the removed the impurity is in water, such as suspended, biological, bacterial, etc. This process is used for the removal of impurity from water, in which included sand filter in mostly removal the impurity in the water. In the skimming tank the removal oil droplets contain in the water they are flouting on the surface of water and collects from the top side. This experiment makes the difference between the inlet and outlet water. This method used for the improving the quality of water. The workload of the operator is greatly reduced and the labor intensity is greatly reduced in system. The system is applied to the sewage treatment plant and adopts the modern high and new technology in the process, equipment and management, which has greatly promoted the scientific progress of the industry and created the obvious social and economic benefits. In the sewage treatment control system, the field control is the key, but the field control is mainly completed by the system, so how to use technology reasonably and effectively has become the focus and difficulty of the application.

6. REFERENCES

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