HAND PUMP ATTACHABLE IRON REMOVAL PLANT FOR COMMUNITY WATER SUPPLY

BRIEF DESCRIPTION:

Excessive Iron in drinking water affects human health. Precipitation of soluble iron by oxidation with air followed by sedimentation and filtration is a relatively simple process used for removal iron from groundwater. Based on this process our associate lab has designed hand pump attachable iron removal plant with 1 m3/hr hydraulic loading. The plant is suitable for 250 persons with 40 lpcd and 10 hrs of operation. The dimensions of the plant are 135 cm diameter and 150 cm height.

COMPARATIVE ADVANTAGES:

Continuous operation system with 1 cu m/hour hydraulic loading
Oxidizes the dissolved iron : 1-30 mg/L
High Removal Efficiency and easy to operate
No need of chemical addition, skilled operator, electric power and mechanical parts
Minimum maintenance with negligible operational cost
Pre-fabricated FRP units can be installed quickly
The system treats the water with Iron content in the range of 1 – 30 mg//L.
The treated water is with iron content below the drinking water standard (BIS: 10550: 2012) of 0.3 mg/L.
The plant is either constructed of Reinforced Concrete (RCC) or prefabricated using Fiber-glass Reinforced Plastic (FRP) as per required situations.

Scale of Development: Technology is commercialized

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The technology is already commercialized



