

Iron Removal Unit (Capacity 300 L/Hr)

Iron at higher concentration in water is objectionable owing to the production of discoloration, turbidity, deposition in distribution systems apart from astringent taste. Water quality of most parts of NE region of India is ferruginous in nature. In view of these, to provide iron free drinking water, Iron Removal Unit (IRU) has been developed by DRL, DRDO Tezpur, which needs no electricity to run. The iron removal unit is cylindrical in shape and consists of an aeration system with cover, four chambers viz. sedimentation, up flow filtration, gravity flow filtration and filtered water chamber. These chambers are housed in the cylindrical main body and separated by partitions. The chambers are connected by holes for flow of water. During the filtration process the pH of the water is adjusted by dropwise addition of lime water and aeration is done by gas transfer. Oxidation of ferrous to ferric ions takes place and iron is precipitated as sediments. The removal takes place by dual processes, which includes up filtration & gravity flow filtration. IRUs have been installed in several Army, Air Force, Paramilitary and Civilian units in NE India.

Main features:

- Adequate aeration facility
- Major portion of iron settles in sedimentation chamber
- Filter bed cracking prevented and clogging delayed
- Double filtration ensures better iron removal
- It can remove iron from 40 ppm to <0.3ppm.
- Efficient backwashing system
- Easy operation and maintenance
- Filtration rate: 300 L/Hr (approx.)



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