

Ion Exchange (India) Ltd. (IEI) has specialised in water and environment management for 44 years, using its wide range of technologies and experience to provide total solutions for industry, homes and communities, urban and rural.

In this issue, we spotlight three recently launched products which are eminently suitable for drinking water treatment. These are the INDION Ultra High Rate Clarifier for clarification of large volumes of surface water; the INDION Lampak which is ideal for clarification and disinfection of surface water for requirements of smaller communities; and the INDCHLOR which generates mixed oxidants from salt solution, to disinfect water.

INDION® Ultra High Rate Clarifier

The INDION Ultra High Rate Clarifier is an innovative, compact, efficient and low cost unit for clarification of surface water and waste water. Its design combines the technologies of the solids contact clarifier and the lamella clarifier, offering the advantages of both, with enhanced performance at significantly increased rise rates compared to conventional clarifiers. Reaction, flocculation, separation, sludge removal and clarification occur in a single treatment basin. The square design allows construction of multiple units with significant reduction in civil costs; it allows for common wall construction with other units, thus making for very compact layouts. It can be assembled at site with great ease and in a very short time.



Process Parameters

- Handles high inlet suspended solids load upto 3000 ppm, while giving consistent treated water quality of <20 ppm.
- Wide flow rates and size range – flow rates as high as 2500 m³/h and sizes as large as 20 m x 20 m.
- Rise rates are more than 10 times higher than conventional clarifiers.
- Sludge concentrations upto 4 – 5% are achieved.

Advantages

- Gives better outlet quality.
- Improved performance at very high flow rates.
- Minimal space requirement.
- Rapid and complete chemical reaction.
- Dense, easily settled precipitates.
- Minimum chemical requirement.
- Sudden flow fluctuation does not affect performance; uniform results obtained regardless of feed suspended solid fluctuation.
- Minimum energy consumed.
- Reduces the overall sizes of equipment, and hence the cost.
- Effective solid handling and sludge removal; maximum consistency of sludge.

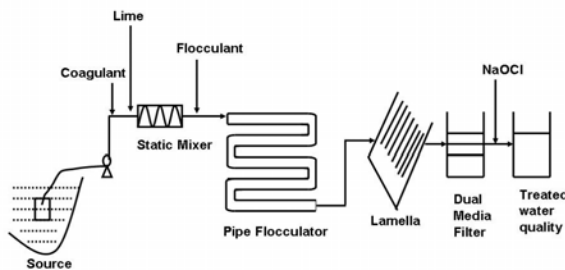
INDION® Lampak

Making available clean and safe drinking water is of urgent, primary concern, particularly in India's rural areas where it is estimated that a staggering 90 million people in villages do not have access to safe drinking water sources. The INDION Lampak unit produces safe drinking water from surface water like ponds, lakes, rivers and canals. It is best suited to community requirements – ideal for small villages and housing colonies as well as for military establishments and resorts/motels.

Designed to treat raw water having total suspended solids (TSS) as high as 500 mg/l, the INDION Lampak can produce 25 m³/h flow of drinking water, which is the typical demand for community use.

Features

- Produces disinfected water having less than 2 mg/l TSS from raw water with upto 500 mg/l TSS. Treated water quality is independent of the raw water TSS containing upto 500 mg/l.
- Packaged system that incorporates mixing, flocculation, clarification and filtration in a single unit.
- Does not have a rotating mechanism for flash mixing, flocculation and sludge removal.
- Does not require separate backwash water storage tank.
- Less moving parts so easy to install and operate. Takes just a day to install.



Advantages

- Easy to operate; can be operated even by villagers with adequate training.
- Compact unit requiring less space.
- Low maintenance due to minimum rotating parts.
- Containerised unit and hence easy to transport and move to different locations if required.
- Does not depend on availability of electricity - if equipped, can also work on a diesel generator. The unit can thus be operated in areas where electricity supply is not available, including remote villages.

INDCHLOR Mixed Oxidant Generator

INDCHLOR is an on-site, integrated system which produces mixed oxidants from a salt solution for disinfection of water. The electrolytic cell is the heart of the system and disinfectant is produced by electrolyzing the salt solution. INDCHLOR is designed to generate mixed oxidants continuously except during cleaning and maintenance, and can produce a maximum of 0.8 kg/day mixed oxidants.

INDCHLOR is ideal for drinking water treatment apart from its applications in swimming pool treatment and industrial process & cooling water treatment.

Features

- State-of-the art electronically controlled safety interlocks ensures operational safety.
- Simple, cost effective method.
- Integrated monitoring system ensures efficiency.
- Alert alarm signals undesirable conditions.
- QAP ensures the product quality.
- Designed to function in auto mode.

Advantages

- Completely non-hazardous & safe.
- Very low operating cost.
- Kills bacteria, pathogens, viruses, cysts, etc.
- No odor & taste problems.
- Long shelf life of 9 days when properly stored as compared to 2-3 days of NaOCl solution.
- As effective as ozone, in swimming pool treatment.
- Better oxidation efficiency as compared to gas & liquid chlorination due to presence of other oxidants.
- Modular, so easy capacity expansion.

INDION® & **INDCHLOR** are registered trademarks of Ion Exchange (India) Ltd.

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