



OPTICAL FIBERS

AWT has installed a high purity water treatment system based on Electrodeionization (EDI) process for an Optical Fibers industry in Maharashtra. The system produces water with resistivity $> 18 \text{ M}\Omega \cdot \text{cm}$.

High purity water production has traditionally used a combination of membrane separation and ion exchange processes. EDI is a process which combines semi-impermeable membrane technology with ion-exchange media to provide a high efficiency demineralization process.

Electro dialysis employ electrical current and specially-prepared membranes which are semi permeable to ions based on their charge, electrical current, and ability to reduce the ions based to their charge. Through electro dialysis an electrical potential transports and segregates charged aqueous species. The electrical current is used to continuously regenerate the resin, eliminating the need for periodical regeneration.

The EDI process produces industrial process water of very high purity, using less than 95% of the chemical products used in the conventional ion exchange processes. With EDI system membranes and electricity replace the million gallons of acid and caustic chemicals that the old processes required daily.

The given module is designed with proven continuous electrodeionization technology to produce high purity water.

Features of the projects are listed as below

- Generates mixed bed deionized water without the use of chemicals
- No need for acid/caustic, neutralization system or exchangeable DI tanks
- Consistent continuous production instead of batch cycle variability
- Most compact footprint
- Can be operated in both horizontal and vertical configuration
- Significantly lower operating costs than conventional ion exchange