Product Name :	Product Code :
Reverse Osmosis Plant	EQUP-MC20054-0002

Description :

Reverse Osmosis Plant

Technical Specification :

Reverse osmosis process is a membrane process in which a synthetic semi permeable membrane is used to separate water from dissolved impurities. When a semi permeable membrane separates a dilute and concentrated solution of salts, due to Osmosis, the water from the dilute solution side passes through the membrane to the concentrated side till osmotic equilibrium is attained. Now, if pressure is applied and increased gradually on the concentrated side, the flow of water continues to reduce till the applied pressure is equal to the osmotic pressure. Any pressure in excess of the osmotic pressure reverses the direction of flow of water and water from the concentrated side enters the dilute side. This process is called the Reverse Osmosis. The water fed to the RO plant where the water gets separated into two streams, viz. Permeate containing very little amount of dissolved impurities and Reject having more concentrated impurities. The Permeate is collected in the Permeate Water tank. Depending on the feed water characteristics the recovery will be decided and it can be between 30-75%. User friendly, does not require continuous monitoring The feed shut off valve will open only when the system is in operation. Otherwise it closes automatically. In case of faulty operation, the valve shuts off. This also allows flushing to take place once the plant is stopped. This helps to conserve water, as the water is not allowed to pass through when the plant is stopped. One SS 316 low pressure gauge to measure the inlet and outlet pressure of the cartridge filter. Pressure Transmitters for Measuring Feed and Reject Pressure. Sampling valve for cartridge filter, inlet/outlet quality. Sampling valve for high pressure feed and reject quality. Check valve for product/reject to protect from water hammering. Matrix – Real Time Remote Monitoring Technology - With IONICs Remote monitoring technology the system can be monitored anywhere from the world as long as it is connected to internet. Ionic Engineering for the first time in India has developed an advanced Reverse Osmosis control system which measures in real time the following parameters for easy and reliable operation of the membrane based system. This feature is unique to our design and is not available in competetive systems. It is well known that Reverse osmosis systems can be very sensitive to changes in the operating conditions. For example, temperature changes or feed water concentration changes can greatly affect either the product flow or the product conductivity. R.O systems design and operating conditions are different and hence the data like flow, pressure, salt rejection needs to be normalized to the start up or standardized conditions which is seldom the case. Fouling of the membranes due to particles, in organic salts, biofilm etc. affects the membrane process and unless the data is properly collected and analysed will result in poor

performance and if corrective action is not taken in time, may lead to irreversible damage to the membranes. Th system automatically stores the start up value and compare this with actual present normalised value and indicates in clear English text what is the condition of the membrane and system performance. This system aslo helps in taking a decision on timely cleaning of the membranes and help in cleaning process. The advanced proprietary software developed by us calculates the allowable decline in performance value and displays in bar graph for easy understanding by the operator. The system also has a unique (Permissble Decline in Performance) indicator which indicates whether the normalised values are with in the limit or out of the range so that the nature of the problem can be easily identified. went one step ahead to make the monitoring and trouble shooting easier. We incorporated articial inteliigence in system with which data is analysed and possible problems like scaling, fouling, O ring and membrane damage are predicted to take the guess work out of the operators mind.

Equip Machines China

Email us at: sales@equipmentsmachines.com