

BIOLOGICAL FOULANTS

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Biofouling

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Summary

Biofilms or the accumulation of microorganisms on surfaces can affect the efficiency of desalination processes. In thermal processes the high temperature of a evaporator usually precludes the presence of microorganisms, but associated plants, e.g. preheaters and condensers, can be affected. Semipermeable membranes used for the production of potable water, can be seriously affected by the presence of biofilms, i.e. from blocking and degradation of the membrane material.

1. Biofouling

In general biofouling does not occur in a desalination plant that is subject to high temperature, e.g. in multiphase flash evaporation. If a water cooled condenser or preheater is employed in the process it can suffer biofouling (see chapter Biofouling). Where problems due to microbial activity can occur are in processes involving membranes, e.g. reverse osmosis. The success of a reverse osmosis unit depends upon membrane life and sustained performance. Biofouling can adversely affect both these requirements.

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