

Ultrafiltration / Nanofiltration

Convergence, OSMO-inspector



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Introduction

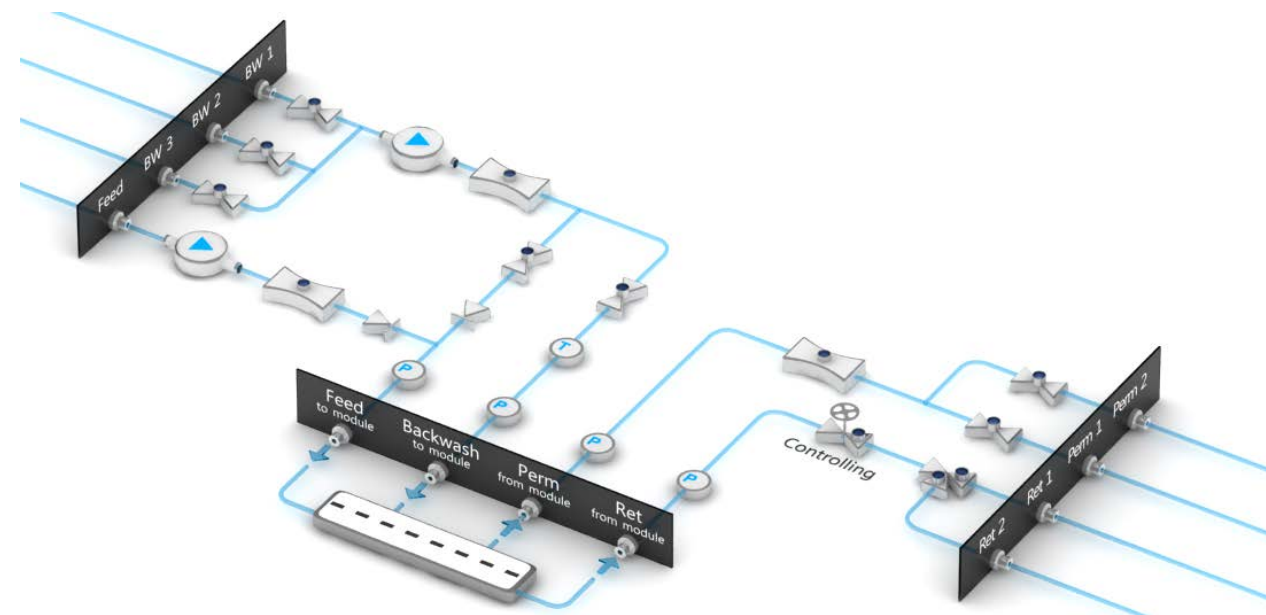
The OSMO-inspector is a flexible pilot installation to evaluate UF/NF membranes. The system is designed to test permeabilities, fouling and cleaning behavior at various pressures, temperatures and flows. Due to the flexible design the system fits different types of (polymeric) flat sheet and hollow-fiber membranes.



Principle

The OSMO-inspector has been developed to evaluate the performance of membranes. Furnished with Coriolis mass flowmeters and crossflow pressure controllers the system is extremely accurate and suitable for inside-out and outside-in filtration. To mimic large scale membrane installations, a backwash option is integrated allowing optimization of backwash and chemical cleaning strategies.

UF and NF are pressure-driven membranes processes that fractionate components predominantly according to their size, shape and (in case of NF) charge.



Flow chart of the OSMO-inspector.

Application range

- inside-out and outside-in filtration
- constant permeate and constant pressure mode
- backwash/chemical cleaning is integrated
- backwashes and chemical cleanings
pH 1-13 and 1-70 °C continuous
- pressures up to 6 bar
- flow rates up to 10 L/h