

Mator News

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Provider of innovative consultancy services in **gas/oil/water/sand separation technology**

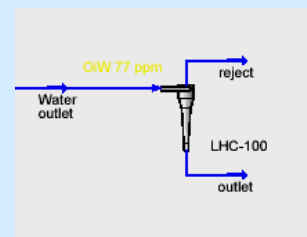
How to use process simulation programs in a correct way?

The challenges for the process engineers are how to combine different simulation tools in order to reflect realistic operating conditions, together with avoiding uncritical use of the tools.

Increased user-friendliness leads to increased use of more complicated simulation tools, and easier to obtain convergence with apparently successful results. Conditions for successful results are however:

- access to realistic input data, which often can be a challenge. Generally, input data have to be obtained from experience or field measurements.
- correct use of the specific simulation program. Different programs have different functions thereby should be handled by correspondingly qualified persons.
- that the user holds the necessary skills towards process technology, and, perhaps most important,
- that the user has the operational experience to see the connection between theory and practice.

Mator has conducted a preliminary evaluation of a new unit operation in a process simulation program; a liquid-liquid hydrocyclone:



Based on Mator's extensive offshore testing and verification activity of two- and three-phase separators including hydrocyclones, the evaluation showed:

- non-conventional distribution model
- indistinct geometry data
- non-conventional parameter logic
- difficult to obtain a calculated efficiency less than 99%.....

It is possible that uncritical use of simulation programs can result in faulty design.

Mator is able to provide the necessary information required for a correct process simulation.

Recent Mator projects:

- ◆ Statoil Heidrun: Minox foam verification
- ◆ ConocoPhillips Bohai Bay China: Water in heavy oil verification (Phase II)
- ◆ Statoil Gullfaks A & C: Produced water optimization
- ◆ PGS / BP Foinaven: Sand cyclone testing (PWRI)
- ◆ Statoil Åsgard: Antifoam chemical testing (scanning)
- ◆ Norsk Hydro Oseberg : Produced water optimization and well screening



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