

New with MySep Engine v6.1

Rating		Product Basis		Actual Volume	
		Frac. of Feed	Frac. in Product	Product Flow [m ³ /h]	Prod.Mass/Vol [kg/m ³]
Light liquid in gas	0.0000	0.0000	6.282e-003	5.860e-004	
Heavy liquid in gas	0.0000	0.0000	5.881e-003	6.882e-004	
Gas in light liquid	0.0000	0.0000	0.0000	0.0000	
Heavy liquid in light liquid	0.0109	0.0093	4.029	9.161	
Gas in heavy liquid	0.0000	0.0000	0.0000	0.0000	
Light liquid in heavy liquid	0.0551	0.0644	25.11	49.62	
Total liquid in gas	0.0000	0.0000	1.136e-002	1.194e-003	

Rigorous liquid-liquid separation modelling in your simulations and Digital Twins

MySep Engine v6.1 – an Industry First

The v6.1 release of MySep Engine heralds an **Industry First** – rigorous liquid-liquid separation modelling in process simulations and Digital Twins.

From first release, MySep Engine established an industry software standard, bringing physics-based modelling of gas-liquid separation to the leading process simulation platforms. Our latest release, available from 16th April 2025, now brings MySep's research-grounded calculations for **Oil-in-Water** and **Water-in-Oil** furnishing more precision for overall process design and optimisation of operations.

In addition, the release provides simulation models with:

- User option to invoke liquid-liquid calculation
- Comprehensive liquid-liquid results for all relevant "Activated" vessels
- Common project file with MySep Studio
- Vessel layout images for all "Activated" vessels
- Control over calculation frequency (particularly valuable in dynamic simulations)
- Modelling the effect of upstream valves on liquid-liquid separation

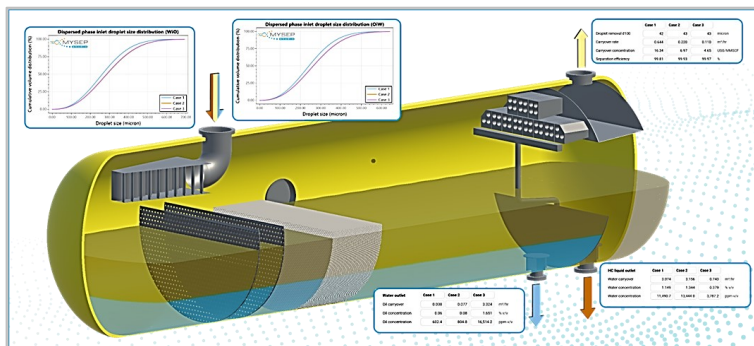
Find out more about these and other improvements and download the "What's New" document:

[Find out more on MySep Engine v6.1](#)

MySep Studio v6.1 – Major Up-grade

Extensive in-house research has led to one of our most requested improvements in liquid-liquid separation modelling for the flagship MySep Studio software. The new v6.1 release predicts the concentration of Oil-in-Water and Water-in-Oil, irrespective of which phase is regarded as the continuous phase.

Users can now enjoy the best available carry-over estimate for each liquid product in both horizontal 3-phase gas-liquid-liquid vessels, and horizontal 2-phase liquid-liquid separation vessels.



MySep Studio v6.1 Enhanced Liquid-Liquid Modelling

Oil-in-Water and Water-in-Oil concentrations can be viewed in "Results," with more comprehensive analysis including inlet and outlet droplet size distributions, provided with the Detailed Liquid-Liquid section of program screens.

Improved Modelling of Vane Packs

Drawing on MySep's comprehensive experimental and analytical research, over the past 20 months,

we have been able to develop improved modelling for vane-pack demisting and agglomerator devices in our v6.1 release. This results in more reliable predictions of liquid carry-over beyond the “re-entrainment” or flooding point.

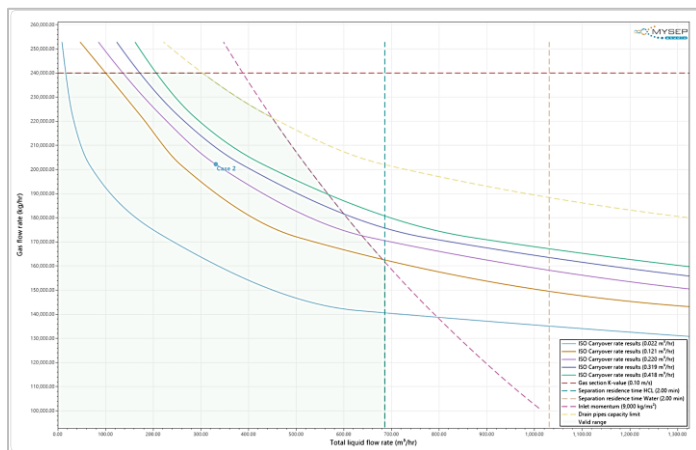
Enhanced Liquid-sealed Agglomerator Handling

Enhanced detection of user-specified partially-submerged agglomerator and demisting devices has been implemented. MySep Studio now automatically classifies a device as liquid-sealed (without a gas box), when a Gas section is placed immediately downstream of the device. Additionally, the flow area and bottom elevation of the device is automatically updated to ensure accurate modelling.

Book a FREE v6.1 Awareness Session !
Email: info@mysep.com

Some other Selected Improvements

- Carry-over export to process simulators now includes option for liquid-liquid results
- Enhanced support for MySep Engine, through common project file, designated (.mvp)
- The “Add section” control (Gas, Agglomerator, Demisting) - improved visibility and accessibility
- Operating envelope provides improved clarity
- Critical and information warnings provided with distinct icons



MySep Studio v6.1 Improved Operational Envelope

Find out more about these and other improvements and download the “What’s New” document:

[Find out more on MySep Studio v6.1](#)

MySep Executive Perspective on v6.1

MySep CEO and Co-founder Guy Hellinx explains: “The introduction of liquid-liquid analysis in MySep



Guy Hellinx

Engine is not just a refinement, it’s a major leap for process digital twin architects. We are convinced this capability, coupled with our unique gas-liquid modelling, will be the cornerstone of our customer’s digital twin implementations across Upstream, Midstream and Downstream sectors.”

Industry Digital Twin Applications

MySep customers are directly specifying rigorous separation modelling in their Digital Twin implementations.

An energy super-major has mandated inclusion of MySep separation modelling as a key requirement in the architecture of a comprehensive Real Time Simulation

(RTS), aimed at optimizing production and enhancing operational reliability on one of their Floating Production, Storage and



An FPSO facility

and Offload (FPSO) assets. The dynamic Digital Twin being delivered represents a full FPSO production system, including risers and topsides processing. The RTS features MySep Engine integration to provide rigorous modelling of all system separators and MySep Development is providing close support to the RTS execution team.

Another international energy super-major is piloting a digital twin to optimize one of several assets in a key offshore basin. In this instance a steady state simulation of topside processes includes MySep Engine embedded separator models. The customer’s system is run at regular intervals adding time series carry-over to the vast data lake of measured and predicted parameters.

MySep’s Wim Moyson lent specialist assistance by constructing models in MySep Studio, assembling a complete library of vessels to cover all facilities in the entire operating basin.

It is MySep's intention to provide more detailed information on these and other similar industry Digital Twin applications, subject to customer permission.

MySep at Industry Events

Participation at industry events is a priority investment for MySep. It allows us to keep in touch with our global customers, to recognise industry trends and to engage with potential customers across the Oil & Gas value chain.

Energetic Engagement in Egypt

The EGPES 2025 - Egypt Energy Show - was a valuable forum for MySep Executive Director and Co-founder Michel van Vorselen. Held in February under the theme 'Building a secure and sustainable energy future',



Michel at EGPES 2025

The event yielded excellent discussions with new contacts, and opportunity to catch up with esteemed customers: Dragon Oil, Harbour Energy and TotalEnergies & BP. Michel was also

able to connect with other partners and key industry players such as Aspen Technology, GASCO, National Gas & Industrialization Company, GUPCO - Gulf of Suez Petroleum, Apache Corporation and Mubadala, amongst others.

Tech Connect Expo 2025

MySep was honoured to participate in the prestigious Tech Connect Expo 2025, held in Kuwait City and hosted by Kuwait National Petroleum Company (KNPC) in collaboration with [TechnologyCatalogue.com](https://www.technologycatalogue.com). The event took place on May 11–12, 2025, at the Ahmad Al-Jaber Oil & Gas Exhibition Center, operated by Kuwait Oil Company (KOC).

Fifteen innovative companies were invited to present their cutting-edge technologies to professionals from KNPC and KOC.

Representing MySep were Michel van Vorselen and Business Development Manager Andrea Luongo, who demonstrated how MySep's Digital MySep Pte Ltd

Twin technology is setting new standards in process optimization. Their presentation



Clockwise from left, Venue, Andrea and Michel, Networking

highlighted how this innovation can reduce downtime, improve operational efficiency, and support smarter decision-making across the oil and gas sector.

A special "thank you" to the organizers—Dr. Mona Jawad Alqattan of KNPC, Vincent van Beusekom of TechnologyCatalogue.com, and their dedicated teams—for hosting this impactful event.

Thought-leadership Webinars

Avinash Ravendran, MySep's Singapore-based Regional Manager for APAC, continues to promote the benefits of separation modelling and analysis with incisive collaborations. In February he contributed to Fauzi Djauhari's "TheCurious Engineer" Webinar series, presenting on 'Optimizing Production by Resolving Process Constraints using Aspen HYSYS and MySep Engine.' Avinash was closely supported by renowned Process Engineering Consultant, Viresh Sharma.



Avinash's recent Webinar Collaborations

On 17th June Avinash participated in an AspenTech webinar titled 'Drive Operational Excellence and Improve Margin in Upstream with Process Digital

Twin', organized by AspenTech and their local partners PT Danan Wingus Sakti. Hiren Shethna, simulation expert and founder of [Anukoolan Solutions](#), shared insights on implementation strategies and the value opportunity from deployment of HYSYS-based digital twins. Hiren's presentation featured equation-oriented digital twins, and supported by Avinash, he outlined a use-case where rigorous separator models, activated by MySep Engine within the simulation, were essential.

Catch MySep at Upcoming Events

MySep will join [Offshore Europe 2025](#) over 2-5th September to meet customers and partners and to introduce the v6.1 product releases.

Book your attendance at [Gastech 2025](#) Milan, over 9-12 September. We invite you to visit our team at



Booth 361, where we're available to showcase our latest v6.1 releases of MySep Studio and MySep

Engine and discuss any separation issues. The event will be held at the Fiera Milano, expo centre

MySep's Michel van Vorselen and Andrea Luongo will join [ADIPEC 2025](#) over 3-6 November, Abu Dhabi, to network with customers and partners. Use the link or email information below to book time with our teams.

Recent Additions to Licensee Community

Since our last Newsletter, the following companies have joined the community of MySep licensees: HydrogenPro ASA; Black Cat Consultancy and Engineering Services; Lummus Technology LLC; Hilcorp North Slope LLC; Inprocess Technology

and Consulting Group, S.L; Global Process Systems; Wood/AMEC International Limited.

Youth Soccer Champions

MySep continues its proud sponsorship of Jonge Kracht U19, the Dutch youth soccer team from Huissen. Since 2020, we've partnered with this talented group.

On 14th June 2025, competing in the Lingewaard Cup, these lads clinched victory with a thrilling final that culminated in a penalty shoot-out.



Jonge Kracht U19 Lingewaard Cup 2025 Victors

Tech Tips–Upstream Pipework & Liquid-Liquid Separation

MySep software is unique in modelling the impact of upstream flow conditions on droplet size distribution and revealing the impact of this on separation. Below we see the MySep Studio Liquid-Liquid results for a 3-phase production separator, comparing Oil-in-Water and Water-in-Oil with a 20-inch inlet pipe (left) and an 18-inch pipe (right).

Ex.1 - (D) Production Separator Inlet piping

Main

Flow regime

Notes

Connected to inlet nozzle

Pipe size (inch)

Pipe ID (mm)

Roughness (mm)

Inlet nozzle 1

20.00

508.00

0.0460

HC liquid outlet

Case 1

Case 2

Case 3

Water carryover

13.145

13.859

3.286

m³/hr

Water concentration

4.73

5.651

1.806

% v/v

Water concentration

47,303.0

56,506.0

18,056.1

ppm v/v

Water outlet

Oil carryover

0.206

0.431

20.035

m³/hr

Oil concentration

0.386

0.502

9.298

% v/v

Oil concentration

3,862.4

5,021.2

92,980.0

ppm v/v

Liquid-Liquid Results 20" Inlet Pipe

Ex.1 - (D) Production Separator Inlet piping

Main

Flow regime

Notes

Connected to inlet nozzle

Pipe size (inch)

Pipe ID (mm)

Roughness (mm)

Inlet nozzle 1

18.00

457.20

0.0460

HC liquid outlet

Case 1

Case 2

Case 3

Water carryover

23.428

26.221

6.313

m³/hr

Water concentration

8.151

10.202

3.788

% v/v

Water concentration

81,505.2

102,016.3

37,879.1

ppm v/v

Water outlet

Oil carryover

0.430

0.894

38.329

m³/hr

Oil concentration

0.997

1.209

16.615

% v/v

Oil concentration

9,965.6

12,087.0

166,145.8

ppm v/v

Liquid-Liquid Results 18" Inlet Pipe

Liquid-Liquid Separation Results comparing Impact of Pipe Size

Three process cases are shown, the first two associated with a hydrocarbon continuous phase, and the third with water as continuous phase.

Using MySep Studio's "split screen capability" it is easy to see the impact of the smaller phase droplets on resulting separation resulting from a smaller specified inlet pipe.

Book a time-slot with MySep at Offshore Europe, Gastech or ADIPEC !
Email: info@mysep.com