

CASE STUDY

Improving reliability and safety in solvent filtration at a PDH (Propane Dehydrogenation) unit



CHIRSPDHEN

Summary

A PDH (Propane Dehydrogenation) unit producing propylene was experiencing repeated issues with its solvent filtration step. Filters were not consistently maintaining integrity through a full run, leading to unplanned maintenance and heightened risk and exposure during change-outs.

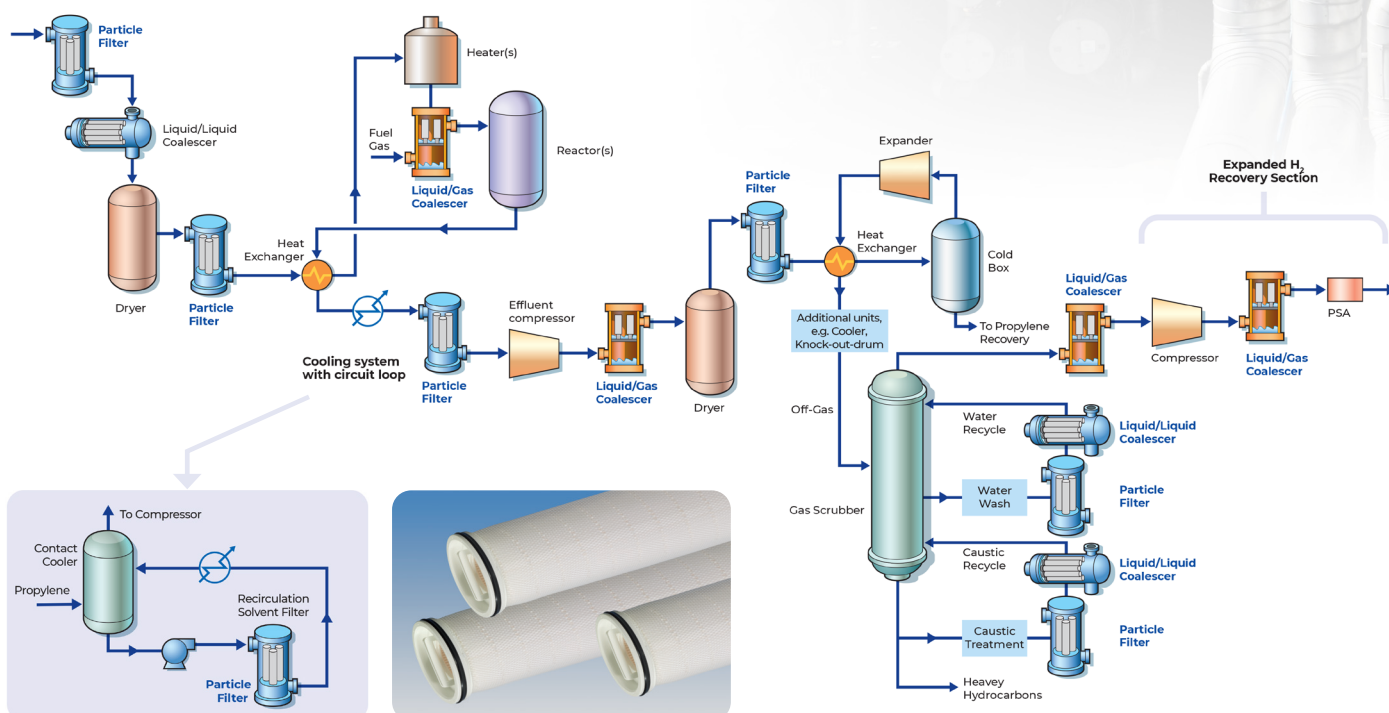
Challenge

- Premature filter failures and reduced confidence in filtration performance
- Frequent change-outs increasing maintenance workload
- Elevated safety risk during replacement activities

After an incident during filter change, the site prioritized a solution that could strengthen operator safety while improving filtration reliability.

Solution

Pall partnered with the site's operations and licensor teams to review operating conditions and failure modes. Based on the assessment, Pall recommended a trial of Ultipleat[®] Highflow elements with glass fiber absolute rated media already validated for this application. Although the filtration rating was finer than the incumbent approach, the glass fiber media and high-flow construction were selected to improve strength, durability and efficiency while maintaining the required throughput.



Cooling system with circuit loop

Ultipleat Highflow elements

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Pall was highly engaged during the evaluation and brought practical recommendations we could implement quickly.

Customer Testimonial

Results

The trial demonstrated improved robustness and run-to-run consistency. Following validation, the producer is satisfied with Pall's solution for the solvent filtration application.

Key outcomes included:

- Improved safety during change-outs: enhanced filter integrity reduced risk associated with handling and replacement
- Higher reliability: more consistent performance supported stable operations
- Lower maintenance cost

Pall value

This engagement succeeded because Pall combined application expertise with hands-on customer support:

- Responsive support: A clear point of contact with cross-functional team and fast turnaround helped keep the evaluation moving.
- Strong technical partnership: Pall specialists collaborated with operations and licensor stakeholders to align on requirements and validate performance.
- Pall's large portfolio: Many options to meet chemical and temperature compatibility.

Customer testimonial: "Pall was highly engaged during the evaluation and brought practical recommendations we could implement quickly."

CONCLUSION

By upgrading solvent filtration with Pall Ultipleat Highflow elements with glass fiber media, the site strengthened change-out safety and improved filtration reliability for PDH operations. To discuss how a similar approach could help your unit, contact your Pall representative to review your operating conditions and performance targets.



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August 2026

