Shell Global Solutions’ experience
Solutions that help customers gain advantage

Our experience
More than 20 high-vacuum distillation units have been designed, revamped and licensed since the 1980s by the Shell Group. Shell deepflash, high-vacuum units maximise the recovery of distillate (waxy distillate or vacuum gasoil) from long residue. Low flash zone pressures are obtained, with reduced capital expenditure and maintenance costs. Five-year run lengths can be achieved before coking occurs.

Since 1990, we have designed more than 20 crude distillation (CD) units.

Four to five distillation service visits take place each year to help identify opportunities for improving the performance of distillation facilities. Previous studies have identified margin improvements of 4 to 20 cents per barrel of crude intake, with little or no investment.

More than 250 high-performance separators and glycol dehydrators have been designed for debottlenecking applications on offshore platforms. In one case, the net benefit to the owner exceeded $5 million per month for an investment of less than $0.5 million.

High-vacuum units designed and licensed by Shell Global Solutions maximise distillate recovery at low capital expenditure.

More than 30 distillation sections for conversion units and liquefied natural gas fractionation plant revamps have used Shell HiFi and Shell Calming Section\textsuperscript{†} trays and other Shell internals. In one case, a fractionation plant was expanded by 40% without requiring any new distillation towers or extra energy input.

Shell ConSep\textsuperscript{†} trays have been applied in six distillation unit revamps. These trays offer a capacity 30 to 100% higher than most other trays.

Shell HiFi trays offer an excellent combination of capacity and efficiency and have been used in more than 80 designs and applications for super-fractionators and other columns for olefin processes.

Since the 1980s, there have been more than 2000 applications of Shell Calming Section and HiFi trays.

\textsuperscript{†}Shell Group trademark

The Shell HiFi\textsuperscript{†} tray provides very high capacities while maintaining high separation efficiencies.
Our people

Shell Global Solutions’ distillation and separation consultants are talented professionals recruited from within the worldwide Shell Group or from other organisations. Their experience is wide ranging and Shell Global Solutions uses a very effective mentoring system to help maintain high standards of competence. Experienced process specialists who combine plant, design and development experience also provide team leadership.

Our commitment

Shell Global Solutions’ distillation group is committed to providing its customers with the most effective and economical solutions for distillation (high-vacuum and crude distiller units); mass-transfer and separation internals; super-fractionation; moderate- and high-pressure distillation for chemical and gas plants; and phase separation and gas dehydration in offshore installations.

The group is also committed to providing its customers with the best distillation support in the form of service visits, high-quality design packages and help-desk services, and by sharing successful practices.

Why use Shell technology?

- Shell technology has been validated by application in more than 50 refineries and gas plants advised by Shell Global Solutions.
- Shell chemical plants and offshore facilities.
- Gas plants that use Shell technology have a very high reliability, and long runs between turnarounds can be achieved.
- The reduction in capital investment using Shell technology gives high returns on investment.
- Shell technology can help to optimise the capacity and yield of your plant.

Shell Global Solutions is a network of independent technology companies in the Royal Dutch/Shell Group. In this fact sheet, the expression ‘Shell Global Solutions’ is sometimes used for convenience in contexts where reference is made to these companies in general, or where no useful purpose is served by identifying a particular company.

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