

6 Easy Questions about Modular Refineries

1 Has Honeywell seen an increase in enquiries or orders for the building of mini refineries in recent months? If so, how much of an increase?

As you know, Honeywell UOP has been the leading process licensor in the refining industry since 1914. Our process technology is in just about every oil refinery in the world, ranging from the smallest capacities (~1000 BPSD) to world scale refineries (1.25M BPSD). We have seen growing interest in lower capacity refineries in select regions where there are good economic and societal drivers.

2 Where are these orders mainly concentrated?

Projects for these smaller capacity units tend to be in areas with some crude price advantage, e.g., local oil availability driving a dislocation from typical global market prices. This would include certain locations in Africa, Middle East, and South East Asia. UOP has also recently received inquiries for small capacity refineries in the US, with some unique drivers.

3 What is the typical capacity of these refineries?

These smaller refineries tend to be topping or hydroskimming refineries that may range from 5,000 to 30,000 BPSD crude capacity. Configuration tends to be simpler and can include process units such as a Crude Distillation Unit (CDU), Diesel Hydrotreating (DHT), Naphtha Hydrotreating (NHT), Reforming, Isomerization, Sulfur Treating, etc. All these technologies are available from Honeywell UOP and can be configured to meet target product demands, and flexible to expand for future needs. UOP currently has some small capacity projects providing some higher value products, targeting production of Euro 3 gasoline, Euro 5 diesel, jet fuel and fuel oil.

4 When is the expected start-up of these refineries?

Several new active projects are in the design phase with expected start up in 2018. There has been continued interest with more projects in various stages of development. UOP is able to fast track these projects from design to operation by combining Honeywell UOP's refinery configuration expertise, process design, modular refinery fabrication, catalysts, Experion controls and automation, HON Connected Performance Services, training and site services for start-up and operational advice.

5 Why is there a revival in the building of these refineries now? Is this a trend you expect to continue?

There have been some government initiatives (Nigeria, Indonesia, etc.) to add local refining capacity to offset continued growth of importing finished products for growing consumer demand. The goal is to provide lower cost, steady supply of fuels and products on a local level. This not only provides increased local security of supply for transportation fuels, but also local electricity and LPG as these locations often use LPG cylinders for cooking and heating fuel. This approach also consumes oil obtained in-country, benefiting from lower regional pricing, transportation, and other incentives such as local jobs creation.

6 What are the advantages and disadvantages of building these mini refineries compared with the traditional, bigger refineries?

Honeywell UOP provides our small capacity refining units as equipment modules that are constructed off-site in a specialized fabrication shop built to UOP specifications. These are assembled and tested before shipping to site. Installation of the modules is much faster compared to a conventional stick building approach. The advantages of mini-refineries include: lower investment costs, sized for lower local demand, modular fabrication off-site for higher quality, shorter schedule, and possibility for future relocation. The traditional larger refineries have improved economy of scale and can produce a wider variety of refined products, can be integrated into petrochemical operations and offer more flexibility. Honeywell UOP provides performance guarantees based on our own technology and has supported customers both big and small for the lifetime of their process units, equipment, catalysts, and products.



For more information

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