

Hach helps significant chemical company get safe, reliable and efficient operation

Bukom, Singapore

Who is the client?

Situated on a 243-hectare island 5.5 km southwest of Singapore, it forms part of a group of southern islands that have been identified for petrochemical and other industrial manufacturing.

The plant has a very large refinery globally in terms of crude distillation capacity (500,000 barrels per day). It is also home to a world-class Ethylene Cracker Complex (800,000 tons per annum) and a Butadiene Extraction Unit (155,000 tons per annum). It is now an integrated oil and petrochemicals site, with manufacturing facilities for fuels, lubricant base oils and specialty chemicals.



Figure 1: Pulau Bukom Refinery Site, Singapore

Integrating the refining and petrochemicals assets maximize the economic and efficiency benefits in terms of feedstocks, operations and logistics. Feedstock flexibility helps the site maximize returns as economics shift between hydrocarbon streams, and more importantly, provides greater security of supply for Shell's customers.

What is the challenge?

Being a significant chemical company worldwide, client requires the plant to run smoothly and the water used by the plant has to meet certain requirements.

What is the process and Hach's solution to client?

Being the important process in the utilities – demineralized water, Hach helped client install instrumentation and tested for Silica using the Hach 9210 Silica Analyzer, Hach 9610 Silica Analyzer and testing for chlorine using the Hach CL17 Chlorine Analyzer.

Controlling volatile silica contaminants is critical to avoid fouling and other adverse effects in super heaters, turbines, heat exchangers, condensers and dryers, where heat transfer efficiency could ultimately impair production efficiency. Plus, monitoring silica using Hach 9210 Silica Analyzer and Hach 9610 Silica Analyzer, detects demineralized breakthrough faster than resistivity, resulting in improved make-up water quality control.

In the laboratory process, client use the Hach LICO620 Colorimeter and Hach DR3900 Spectrophotometer to test on parameters like silica, hardness, calcium and magnesium, alkali, nitrogen and nitrate.

How is the end result?

In summary, Hach offers total solution for client with the solution table for list of instrumentation as follows:

Products	Application Point
Silica: 9210 Silica Analyzer	Utilities – Demineralized Water
Silica: 9610 Silica Analyzer	Utilities – Demineralized Water
Chlorine: CL17 Chlorine Analyzer	Utilities – Demineralized Water
LICO620 Colorimeter	Laboratory
Silica, Hardness, Calcium & Magnesium, Alkali, Nitrogen, Nitrate, COD: DR3900 Spectrophotometer	Laboratory

Client's feedback: With Hach as your water expert solution provider, batch problems can be avoided by means of continuous monitoring and adjustments. This requirement can only be fulfilled when reliable measurement systems are used for continuous monitoring.

FOR TECHNICAL ASSISTANCE, PRICE INFORMATION AND ORDERING:

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