



## Ken Braney's monthly look at SPE's activities

I recently had the pleasure of being invited, with Vijay Boolani, 2009–2010 Vice President/Secretary of SPE and a member of SPE India Section Board, to the refinery division of Reliance Industries, in Jamnagar, Gujarat, India.

We traveled to the facility on Reliance Industries Ltd.'s private jet, accompanied by Bhaskar Ghosh, senior vice president of business development for Reliance and a Board member of the SPE India Section. On our arrival, we were met by assistant vice president Ronald Samuel, who showed us a model of the complete plant and explained details on the tour upon which we were about to embark.

We were introduced to Mr. P.K. Jain, senior executive vice president and operation chief—EOU refinery, and Mr. Surinder Singh, Saini senior executive vice president, who is responsible for the new plant that has just come on line. Mr. Y.K. Lodha

gave a presentation on Reliance Industries and all the activities of the organization. The facility is spread over 7400 acres (3000 hectares) and has the capacity to produce over 60 million tonnes/yr; it can refine various types of crude oil and manufacture various types of fuel. The in-house petrochemical plant produces more than 2.0 million tonnes of polypropylene and fiber intermediates in the same site.

Reportedly the largest single-site petrochemical refinery in the world, it is used as a model for other companies in the industry in terms of capacity utilization, safety, and energy efficiency. The facility at Jamnagar was adjudged the most energy-efficient refinery by Shell Global in 2004.

After the presentation we toured the harbor, where a number of tankers were discharging crude oil into pipelines on a pier. The smaller tankers were accommodated by this method, whereas the VLCC (“very



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large crude carriers”) were connected to underwater pipelines approximately 25 km off shore. The pier is also used to load tankers with polymer and other chemicals to be transported to Reliance customers wherever they are the world.

In the middle of the pier was a control center where all these activities are monitored by cameras, computers, and other electronic systems. The commander of the facility was a naval officer, who gave a presentation on the capabilities of the pier and also showed the various safeguards in place for unloading the crude oil and loading the polymer.



Vijay Boolani (third from right) and SPE President Ken Braney (second from right) examine a model of the plant.



The pier.

That afternoon, we toured the newest facility at Jamnagar, and our first stop was the control room. We were overwhelmed by its size. Giant screens gave an instant view of the progress of each individual product, from the crude oil on one side to the finished polymer on the other. (It reminded me of the control



Pier control center.

room at NASA in the U.S.) Sitting at consoles, about 20 people controlled and monitored the flow of the refining and intermediate product process as it went through the system. This room runs 24 hours a day.

After the tour of the facility, we vis-

ited a spot that was originally wasteland but had been transformed into an area where teak trees and a large number of fruit trees were flourishing—all watered by wastewater generated at the Jamnagar facility. The area is very barren and normally does

not receive a lot of water, but with the special watering facility, hundreds of acres of land can be put to use for growing mango, papaya, guava, and other tropical fruits. A number of agricultural scientists are employed solely to develop this new venture.

We finally reached an open area in the green belt where we enjoyed drinks and fruit that had been grown on this farm.

The whole experience at this amazing facility provided a very valuable lesson on how to be green as well as productive.

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