

# Another Thai Success

## Sriracha Paraxylene Plant completed

In September 1995, Foster Wheeler was appointed to prepare a front end engineering design package and invitation to bid for a paraxylene plant for Thai Paraxylene Co., Ltd. (TPX).



View from north-west corner of process units, including Parex™ unit finishing column (foreground), and the 140-metre reinforced concrete stack (background).



Utilities units located to south of the process units, with TPX administration building in the background.



TPX administration building.



Process units from south-east - xylene rerun column with its reboiler heater.



View of process units from north-east - fired heaters with their associated concrete stack.

This company is a Thai-registered joint venture company, part-owned by the Thai Oil Company Limited (Thaioil), with whom Foster Wheeler had already established a long-standing, successful business relationship, having completed a series of projects at the Thaioil Refinery in Sriracha. The paraxylene plant, using UOP technology and costing US\$230 million, was to be built next to the refinery.

Paraxylene is an upstream petrochemical product used as raw material to produce purified terephthalic acid, which in turn is the feedstock for the production of polyester fibres and polyethylene

terephthalate, used in the making of drinking bottles.

The invitation to bid was issued to bidders in mid-February 1996 and the engineering, procurement and construction (EPC) contractor was selected in June 1996. A series of delays in the financing arrangements meant that the EPC contract was not finally revalidated and placed until February 1997.

At the same time, Foster Wheeler was appointed as project managing contractor to oversee the detailed engineering, construction and commissioning of the plant. Foster Wheeler's role included project management,

engineering management, project control, plus construction and commissioning support.

Detailed engineering, carried out in Yokohama, was based on the project specification prepared by Foster Wheeler. Procurement of the imported equipment and materials also took place in Yokohama during 1997-1998, under Foster Wheeler's supervision. Foster Wheeler's Thailand Operation centre at Sriracha supervised construction and commissioning of the complex.

The paraxylene plant is essentially a stand-alone facility, with some ancillary

facilities constructed within the Thaioil Refinery. It comprises three process units: Parex™, Isomar™ and xylene fractionation units. The complex also includes utilities, offsites and common facilities: tankage, ground flare, transfer and marine loading.

Ancillary facilities included buildings for administration, workshop, fire truck, warehousing, control room, and chemical storage. There are further ancillary facilities within the Thaioil Refinery: storage and pumping facilities, jetty facilities, and pipeways.

The complex has been designed for a paraxylene production rate of 288,000 tonnes per year from hot mixed xylenes feedstock from an existing aromatics fractionation unit of the Thaioil Refinery. However, the piping and most of the equipment in the complex has been designed for 120% of normal capacity, thus giving a potential paraxylene production rate of 345,000 tonnes per year

Construction work began during the last quarter of 1997 and was about 50% complete when the project was suspended in December 1998, as a result of the economic downturn in the region.

During this "suspension period" of nearly two years, Foster Wheeler managed the custody of the plant on behalf of the owner to ensure a seamless and trouble-free resumption of the unfinished work.

Foster Wheeler's diligence during this period and the rapid re-mobilization and resumption of work after the suspension culminated in a timely and successful completion of the plant to TPX's satisfaction. The project was fully resumed in December 2000 and the construction was accelerated to the mechanical completion stage in September 2001. Ready for start-up of the plant

was achieved one month later. The plant was successfully commissioned at the beginning of December 2001.

The plant is now commercially complete and the first shipment of paraxylene product was successfully exported on 7 January 2002.

This is another landmark in Foster Wheeler's success story in Thailand and in particular with Thaioil and its affiliated company, TPX. Also, this is the seventh aromatics plant Foster Wheeler has completed in recent years: four as EPC contractor and three as PMC contractor. an enviable track record.