



Key Benefits

- A total solution for the fertilizer plant water and wastewater treatment needs
- An optimum design that takes into consideration the stringent requirements set by the owner and the project consultants
- More efficient project management since all packages are handled by one contractor; Metito
- An efficient wastewater treatment plant that takes into consideration the tough and varying quality of the feed waste with a practical Zero Liquid Discharge (ZLD)
- A reliable design that meant trouble free operation and minimum downtime
- Full local support and customer service, in a world-class quality, from a well established company



Water and Wastewater Treatment, National Fertiliser Public Company-Map Ta Phut, Thailand

A Case Study



Key Data

Location	Map Ta Phut, East Coast of Thailand Gulf - Thailand
Plant Type	Desalination, Water & Wastewater Treatment, Demineralisation & Chemical Injection
Capacity	Different Capacities for Various Packages
User	Fertilizer Plant
Client	Hyundai Engineering & Construction Company (HEC)
End User	National Fertilizer Public Company (NFC)
Contract Type	Foster Wheeler Design & Supply on FOB Basis

Introduction

National Fertilizer Public Company Ltd. of Thailand (NFC) constructed a modern NPK fertilizer plant, that included a Phosphoric Acid manufacturing unit, within the complex. As a natural result, the wastewater had an abnormally high content of various highly toxic pollutants like Phosphoric Acid & Fluorides coupled with Sulphates. The characteristics of this wastewater and the amount of waste to be treated, coupled with the strict environmental discharge regulations, required a tailor-made water management solution, and special treatment processes.

Due to the nature of the project and to such stringent requirements set by NFC, Metito was chosen and entrusted to execute the wastewater plant and other water treatment facilities. The plant was then classified as one of a few of its kind in the world.

Scope of Work

Metito took charge of the complete design, engineering, manufacture, inspection, testing and supply on FOB basis, supervision of installation & commissioning, start-up and performance testing for the complete water and wastewater treatment plant packages. The packages included;

- Process Wastewater Treatment Plant with a capacity of 100 m³/h to treat waste streams from the various production units. The plant units include a Hastelloy-C heat exchanger, a 1200m³ Acidic water-lined equalisation basin, automatic lime handling and dosing system, two lime silos each measuring 6.5m diameter and 31m high, pre-contact tanks, 15m diameter primary and secondary clarifiers, and belt press sludge thickeners with polymer dosing units
- Water Pretreatment System treating 310m³/h of raw water for process use, through solid contact clarifiers
- 20m³/h Ion Exchange Demineralisation Plant in two streams with anion and cation columns
- Ion Exchange Plant Chemical Waste Treatment Collection and Treatment System
- 168m³/day Extended Aeration Sanitary Drainage and Treatment System
- Distributed Control System for controlling all plant operation

