



## **FUTURE PIPE INDUSTRIES B.V.**

Glassfiber Reinforced Pipe Systems

**Lyondell Chemical Company  
Botlek – Holland**

### **Location**

Botlek, Holland

### **Completed date**

2003

### **End User**

Lyondell Chemical Company

### **Contractor**

ABB Lummus Global



### **Description**

Lyondell built the biggest chemical factory in his kind sofar: factory producing 286 kton propylene oxide and 640 kton styrene monomer. Several crucial pipelines, such as the complete fire fighting network, the (chemical) sewer system and a large part of the potable water system are made of Glassfiber Reinforced Epoxy, engineered, manufactured and supplied by FPI.

### **Scope**

Our scope included:

- Engineering
- Fabrication

### **Pipe System**

In total 22 km pipes, ranging from 50 mm up to and including 1000 mm, divided over  $\pm$  500 isometrics, and 1200 spool drawings.

Spools are connected with Rubber Seal Lock Joint for the fire fighting system, the sewer system is partially adhesive bonded and partially laminated because of the severe chemical loading. The above ground potable water lines are made of series EWT with KIWA approval; buried potable water lines are made of the Wavistrong EDT system: the only non-metallic pipe system with a KIWA approval for application in heavily polluted soils (class C).

### **Advantages**

There were several reasons for Lyondell to choose for Wavistrong:

- The wide- and universal chemical resistance against attack from the inside, but also from the outside such as aggressive substances in the soil,
- The ease of installation due to the flexible jointing system in unstable soil conditions
- Light weight: easy to install and transport
- Strong and reliable
- No corrosion protection or other maintenance required.
- The only non-corroding pipe system capable of transporting drinking water through highly polluted soils