

# SYLWRAP Case Study

## Seawater Cooling Line Snapped Nozzle Repair

Petrochemical plant in Saudi Arabia make an urgent repair & reinforcement of a 1500mm seawater cooling line after a snapped nozzle left a 50mm hole



The pipe surface had been damaged and weakened by the 5 metre high water discharge through the hole



A PTFE plug was fixed in place using Sylmasta AB



Further reinforcement was given to the plug and AB Original by seven layers of SylWrap HD



Repair was completed by encompassing weakened section of pipe with a protective sleeve of SylWrap HD, strengthening it against future breaches

### Defect

The pipe was the main supply line in the seawater cooling system, extracting from the Red Sea. When the nozzle snapped from a flange, it left a 50mm hole through which water was discharging 5 metres vertically at a pressure of 3 bar.

Losing so much water impacted on the efficiency of the system. When the water returned to ground, it saturated the pipe surface, causing damage, discolouration and mould, weakening the line.

### Solution

A PTFE plug secured the hole whilst the supply line was shut off. The plug was fixed permanently in place using **Sylmasta AB Original Epoxy Putty**, which provided a fully watertight seal.

The two-hour work time of AB Original ensured that there was enough time to mix, shape and apply the putty without premature curing due to the climate.

Seven layers of **SylWrap HD Pipe Repair Bandage** reinforced the plug and surrounding AB.

When the line was put back into operation, water and air was noticed bubbling at the pipe surface below the hole. To strengthen this section from future breaches, 4 layers of SylWrap were applied around the 1500mm diameter.

### Result

Completing the repair took under two hours, after which the system was operating at full capacity.

The repair saved the petrochemical plant from a costly and time consuming fitting of a replacement section of pipe.