

# CORROCOAT



Case Study: 014

## Corroglass 200 & Fluiglide Extend Pump's Efficiency

### The Industry

Chemicals

### The Challenge

The client, a major Japanese chemicals company contracted Corrocoat Japan Ltd to refurbish a stainless steel water cooling pump at one of its manufacturing plants, which had had to be taken out of service due to inefficiency .

### The Solution

Carrying out the work in its own workshops, the pump was first flash grit blasted, then salt decontaminated before being grit blasted again, this time to standard Sa 2½. The internal surfaces, were coated with Corroglass 232 to produce a flat surface suitable for a further coating of Corroglass 200. Finally, a coat of Fluiglide was applied. The pump was re-assembled and balance adjusted.

The combined use of Corroglass 200 and Fluiglide offers dual benefits. The system not only reduces fuel consumption by achieving notable increases in overall efficiency levels, but also provides an effective corrosion barrier, preventing early fall-off in performance due to nodular growth and corrosion.

### Results & Benefits

On a recent similar contract, a chemicals company requested a performance test on a pump that had been in continuous operation for 14 years. This graph shows the results of the test carried out by Corrocoat Japan before and after applying a coating of Fluiglide using the thermodynamic method for pump testing compared to the pump manufacturer's test.

The pump performance test before coating shows the following results in comparison with the pump manufacturer's test at design duty point (2100 m<sup>3</sup>/h): Pump Head: Deterioration 6.53%, Power kW: Increment 12.52%, Pump efficiency: Decrease 17.03%

After applying Fluiglide, the pump performance test (green curves) at same duty point shows the following results:

Pump head: Recovery 9.78%, Power kW: Reduced by 9.53%, Pump efficiency: Improved by 21.79%

The total energy savings after one year showed a massive saving and a payback period of 16 months was achieved.

### Credentials

There is an on-going drive to make more effective use of energy resources by maximising the performance of pumping systems used in the chemicals, marine, power generation, processing and water and waste industries. Corrocoat was a pioneer in the introduction of new technology in coating materials which have now been applied to thousands of pumps worldwide, achieving in every case significant improvements in efficiency.

### Photographs

Left: The pump casing before blast cleaning  
Middle: The pump casing after blast cleaning  
Right: The pump after coating with Fluiglide

