

## Sulphuric Acid Waste Sump Evacuation Pumps

**Customer:** Incitec Pivot Phosphate Hill Manufacturing Facility

**Location:** Phosphate Hill, QLD

**Case Study ID:** CS-72

**Date:** October 2013

### Overview

Incitec Pivot Phosphate Hill Manufacturing Facility engaged Dowdens Pumping and Water Treatment to design and build specialised waste sump evacuation pumps used for harsh duty pumping of low percentage sulphuric acid solution.

### The Problem

The main challenge was designing a reliable pump set that could handle the rigours of pumping such corrosive liquids in an already harsh operating environment.

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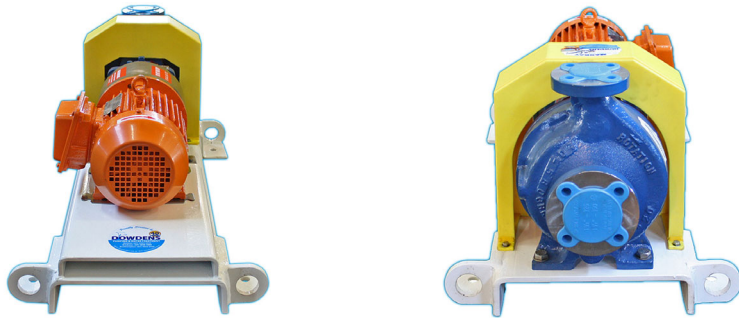
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## Our Solution

As Queensland's sole authorised PSG Dover importer and distributor of Wilden Double Diaphragm pumps, Griswold & System One Centrifugal pumps, and Abaque Peristaltic pumps, Dowdens were able to select a specialised Griswold pump made from Alloy 20 for use in the Evacuation Pumps.

Alloy 20 is a nickel-chromium-molybdenum stainless steel alloy developed for applications involving sulfuric acid. Alloy 20 resists pitting and chloride ion corrosion, and its copper content protects it from sulfuric acid.

## Key Components & Features

- Griswold ANSI Pump – sized for pumping 1.7L/sec of dilute sulphuric acid @ 20m head
- 1.5kW two-pole electric motor and couplings to suit the pump's duty
- Fabrication of customised 316 stainless steel base and coupling guard covers
- Custom John Crane seal to handle the pumping of corrosive waste
- Custom made poly seal guard

## Brands used in this project



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