



Solar Powered Emergency Shower and Eyewash Station

Customer: Downer EDI Mining Blasting Services

Location: Mount Thorley, NSW

Case Study ID: CS-56

Date: October 2015

Overview

Dowdens Pumping and Water Treatment have successfully designed, manufactured and commissioned a self-contained Solar Emergency Eyewash and Safety Shower. The safety station incorporates both safety shower and eyewash facilities, delivered via a water tank powered by a solar-powered Grundfos pump.

Dowdens supplied the portable Solar Eyewash and Safety Shower stations to Downer EDI Mining Blasting Services for use at the Rio Tinto open-cut coal mines located at Mount Thorley 15km South-West of Singleton in the Hunter Valley region of NSW.

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The Problem

Downer EDI Mining Blasting Services required a portable eyewash and deluge shower solution for their open cut coal mines.



Our Solution

Dowdens Pumping and Water Treatments in house design can be positioned inside workshops or out in the field with its heavy-duty battery pack and 190 W Solar panel. The solar panel powers a Grundfos pressure water pump monitored by the voltage regulator and power inverter control panel. The eyewash basin and showerhead are foot-lever activated. The device also has a green LED safety light that is viewable from 360 degrees. The Dowdens solution fulfilled the brief from Downer EDI Mining Blasting Services.

Key Components & Features

- The station uses the sun's energy to charge 6V batteries via a 190W solar panel.
- This energy is then stored and converted to 240V power, driving the electric Grundfos pump.
- The Power Inverter Control Panel contains the solar charger module and the power inverter module.
- The self-contained Solar Eye Wash and Safety Shower station is designed and manufactured to comply with Australian Standards AS4775-2007.

Dowdens Pumping and Water Treatment also built a second portable Solar Powered Shower and Eyewash Station for Downer EDI Mining Blasting Services at a different location.

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Project Design Philosophy

Dowdens Pumping & Water Treatment design philosophy for this project was:

- Cost-Effectiveness
- Innovation
- Ease of Installation
- Simple & Effective Pump Operation
- System Reliability & Reduced Ongoing Maintenance



Brands used in this project



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