



APPLICATION STORIES

APPLICATION: SUBMARINE BILGE

The Australian Submarine Corp (ASC) uses a 32mm peristaltic hose pump in the new Collins Class Submarines to transfer oily contaminated seawater from the bilge to the waste tank. The peristaltic hose pump is perfectly suited to the duty because the pump is capable of self-priming, dry running indefinitely and can handle sludge-type materials that could be encountered in the bilge.

PROBLEM:

The overall physical size of the pump coupled with the cramped internal confines of the submarine resulted in the suction and discharge pipe work being considerably twisted; incorporating many bends and valves. The pulsed flow action caused the acceleration head of the pump to sharply increase and markedly decrease hose life to the extent that offshore trials were lasting less than a week.

SOLUTION:

A BLACOH SENTRY I Flat Top 175 cubic inch pulsation dampener was installed on the suction and discharge of the pump. The dampener has a rubber bladder to separate the pumped liquid from a compressed nitrogen charge. The gas charge in the dampener alternately compresses and expands as the pump cycles and allows the dampener to remove the sharp flow pulses, therefore eliminating any acceleration head and vibration from the pipe system.

RESULT:

Since the installation of the BLACOH dampeners, hose life has increased and complete sea trials are being conducted.

SUBMITTED BY:

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