Hydroflow Case Study

Site - Victoria & Alfred Waterfront

bioCURE (PTY) LTD Distributor to Hydroflow SA

Introduction:

The Victoria & Alfred Waterfront, located in Cape Town, South Africa, is a premier mixed-use development and one of the most popular tourist attractions in the country. They use sea water from the Table Bay Harbor for their Heat Exchangers.

Site Conditions:

Sea Life, including biofilm, scaling, barnacles and mussels passes through the filter packs and establishes themselves within the pipelines, limiting pipe diameter and causing blockages at the strainers resulting in down time and onerous maintenance to clean.

Periodic jetting of the lines is conducted, to clear blocked and obstructed lines.

Objective:

To reduce the growth of sea life within the pipeline, which will reduce maintenance on the system and increase efficiency.

HYDROFLOW SA

bioCURE
The future is fresh

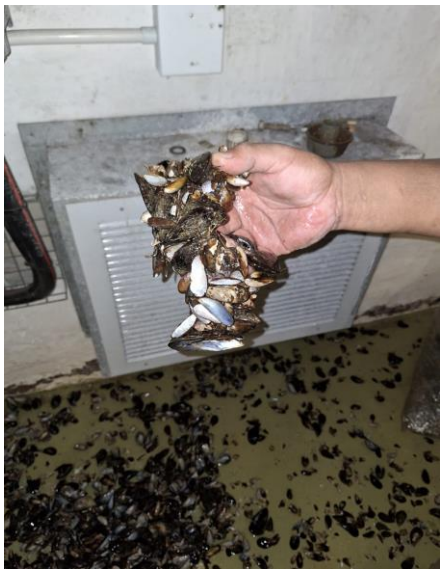
Treatment:

A Hydroflow I Custom unit was installed in November 2023 on one of the two 200mm diameter pipelines leading to Heat Exchanger 4 for a 6-month trial. Heat exchanger 4 draws water from a 280mm diameter pipe, seaside, which then splits after the pump and filters to two x 200mm pipes that join in a manifold and feeds a 280mm pipe to the heat exchanger.

For trial purposes, we installed the Hydroflow unit between the heat exchanger and the sea water pump and filter packs.

Camera Inspection of line before trial started:

Discharge of Biofoul after two weeks at filters:



Camera Inspection of line six months later:

Results:

The period during which the Hydroflow unit was installed and evident from camera footage the following observations were made:

- *Large amounts of sea life and chunks of mussels released from pipe surface after two weeks*
- *No new sea life formed within the pipeline, there are only a few mussels stuck in the line, and will loosen over time*
- *Heat exchanger cleaner on back wash when cleaned by operators*
- *After initial discharge, minimal sea life found in filters during cleaning regime*
- *Downtime of unit reduced, unit has run continuously throughout the trial period, which is unusual*
- *Improved efficiency of the heat exchanger due to higher flows*

The trial was a resounding success with the removal of sea life growth within the pipeline that led to reduced maintenance and a cost saving on manpower.