

## the Improvement Project for Reducing RO Membrane Replacement Frequency

### Installation details

#### Installation location:

A factory in Inner Mongolia Huomei Wheel Manufacture Co. Ltd., which produces aluminium alloy wheel. Vulcan was installed in the painting workshop, for the pure water section. Pure water is produced by RO membrane (reverse osmosis membrane).

**Installed by:** Suzhou KaiEnSheng

**Installation model:**  Vulcan S10

**Pipe size , capacity:** 65 mm, 15 m<sup>3</sup>/h

### About Huomei Wheel Manufacture Company

Located in Huolinguole Industrial Park, Inner Mongolia. It is one of the largest aluminum wheels manufacturer in northern China.



Pure water process equipment.

### Scaling problems

Before installing Vulcan, adding scale inhibitor was the only descaling method, and the RO membrane would be replaced every 2-3 months, sometimes even more often: every 1-2 months! Each replacement costs about 9,000 USD.

### Results

Since the Vulcan was installed in April 2017, the RO membrane has not been replaced until now (October 2017), and the use of scale inhibitors has also been reduced by 50%. So far, the estimated cost savings are around 25,000 USD.

### A letter from production department of Huomei Wheel Manufacture Company

From May 2016 to January 2017, 5 sets of RO membrane were replaced, they cost 50,000 USD.

The issue is urgent.

We found that the problem comes from the water quality. Suzhou KaiEnSheng recommends Vulcan for us to try. Surprisingly, the effect is very good.

Vulcan was installed on April 6, the conductivity after the three-stage RO membranes were: 17.1, 22.7, 21.5 (μ-Siemens/cm) on the day. Over 4 days, we already saw noticeable effect. We measured the conductivity again on May 4 after the three-stage RO membranes were down to 11.5, 11.5, and 11.6 (μ-Siemens/cm). We will keep tracking the effectiveness.

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S10 was installed before the reverse osmosis membrane.