ReSize 3000 Doubles Salt Rejection

Introduction

A brackish water system installed on an industrial site was suffering from poor product conductivity, having seen the conductivity rise from 50 to 140 µS/cm. Frequent cleaning to remove fouling and improve product quality did not resolve the product quality issue. An application of ReSize 3000 was instigated. This case study describes how the treatment was carried out on site and the results seen.

Resize Treatment

Before applying the ReSize 3000 a chemical clean was completed to remove any fouling present.

The Resize 3000 was applied as a 10% weight emulsion while the plant was in service using a spare dosing system.

Base line data was collected before, during and after ReSize 3000 application for evaluation. This included:-

- the conductivity value for each of the vessels,
- the conductivity value of the system
- the feed and concentrate pressures.

Results

The results are shown in the graph below. Each set of datapoints represents an individual pressure vessel. Blue crosses represent the overall system conductivity.

The ReSize 3000 was applied for 60 minutes and it can be clearly seen that the conductivity improved steadily throughout the application period.

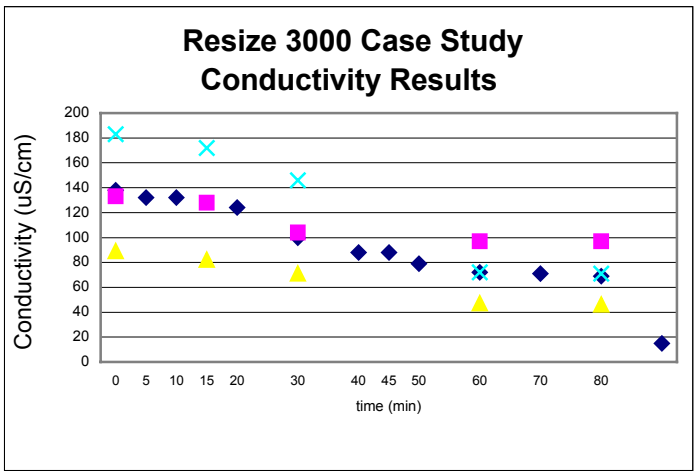
The feed and concentrate pressures increased by 0.5 bar during this period. After application the system conductivity and pressures remained stable.

Conclusion

Application of ReSize 3000 improved the plant product conductivity significantly, reducing it from 140 to 70 uS/cm.

ReSize 3000 is totally rejected by the membrane, no trace passes to the product. The improved product conductivity made the permeate acceptable for process use. The application of ReSize 3000 was adopted as a method of improving the product water quality.

In addition; its use reduced the cleaning frequency, as most cleans had previously been carried out to improve permeate quality. ReSize 3000 is reapplied after each clean.



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