

Sodium Chloride Analyzer

Instrument

NuSonics Concentration Analyzer

Industries

Chlorine-alkali industry, soda ash, sodium hydroxide manufacturer

Application

Measurement of sodium chloride concentration

Introduction

Sodium chloride (NaCl) is soluble up to 26.5% by weight in water from 25° C to 75° C. Above a 26.5% concentration, the excess sodium chloride is in a suspended state and the sound velocity of the solution is not changed significantly by the addition of more sodium chloride. In most applications, the objective is to monitor solutions of NaCl at saturation and lower concentrations.

Test Conditions

Sodium chloride in water concentrations from 0% to 26% by weight have been tested at temperatures from 25° C to 75° C under atmospheric pressure.

Results

For concentrations of 0-26% the average accuracy of the NuSonics analyzer is between +/- 0.01% and 0.04% by weight sodium chloride. For concentrations above 26% the solution reaches saturation and the sodium chloride crystals precipitate out causing instrument accuracy to decline.

Discussion

The NuSonics concentration analyzer has proven to be a highly accurate instrument in the 0-26.5% NaCl in water. The analyzer requires virtually no maintenance and is resistant to fouling.

Conclusion

Since most applications require monitoring below the point of saturation, the NuSonics concentration analyzer will provide exceptional service and offers an unmatched combination of speed, convenience, long-term reliability and accuracy.

