

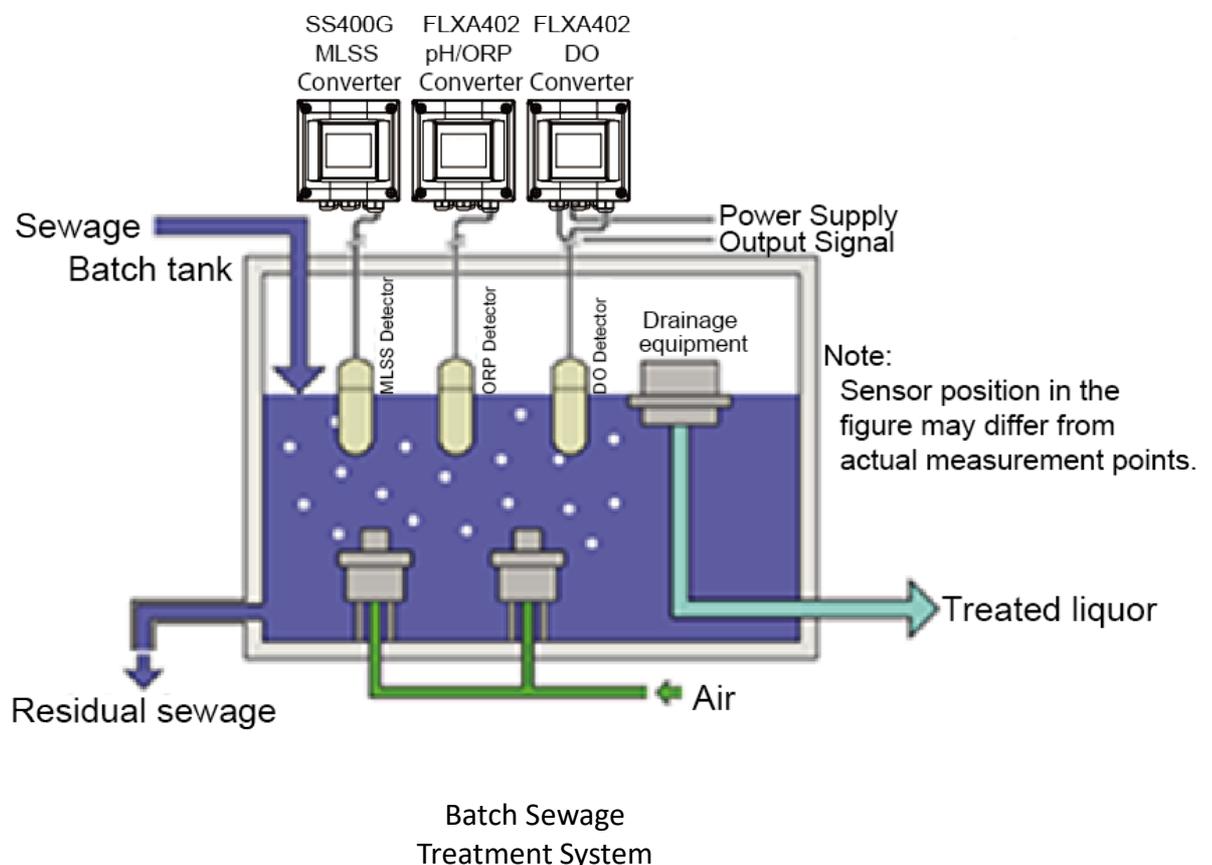
Selection of Sensor Holders for Liquid Analyzers Used in a Batch Sewage Treatment System

Introduction

In a batch tank, analyzers such as dissolved oxygen (DO) analyzers, oxidation-reduction potential (ORP) meters, and mixed liquor suspended solid (MLSS) analyzers are used. To reduce the maintenance frequency, measures must be taken to prevent dirt accumulation on the sensor. As the liquid level in a tank can vary greatly, great care should be taken when selecting the sensor installation position in a tank.

Expected Benefits

- Ensures stable, continuous measurement in heavily contaminated liquid
- Reduces operating costs
- Eliminates the need for manual cleaning



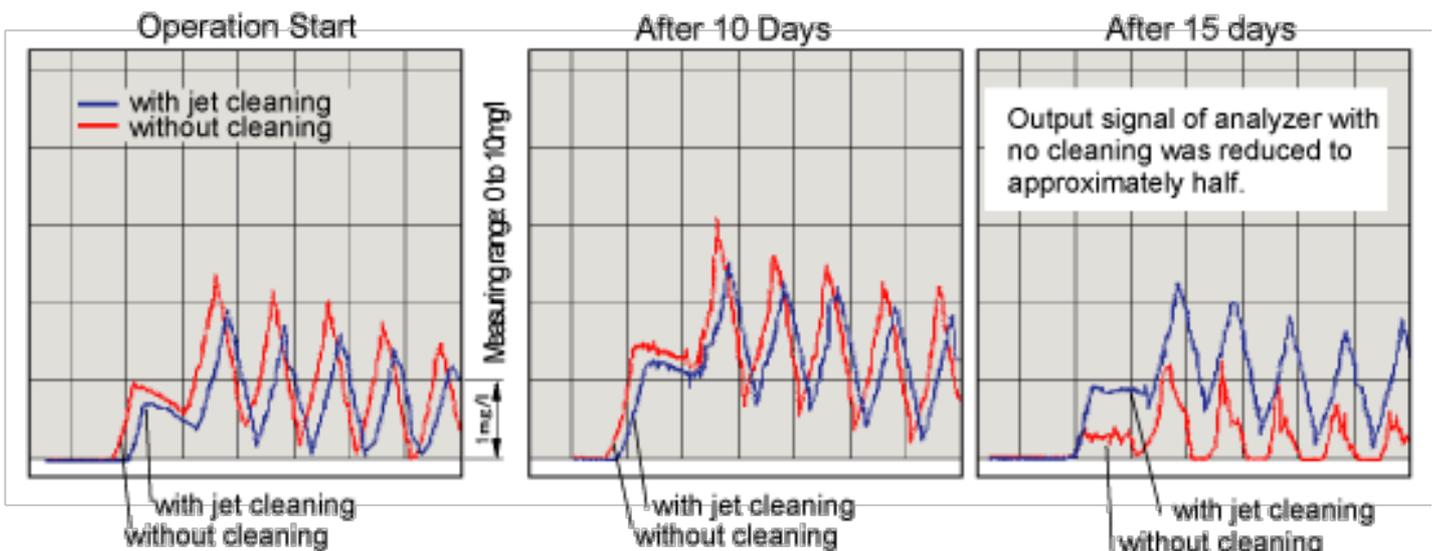
Process Overview

The batch treatment method is an intermittent sewage treatment method where a sequential process of sewage intake, aeration, settling, and drainage is performed repeatedly in a single reaction tank (batch tank). Characteristics of this method include:

- Stable treatment even if the sewage volume changes
- Compact facilities: requiring no settling tanks
- Removal of not only organic matter but also nitrogen and phosphorus

Field Data

Cleaning effectiveness testing of DO analyzer Output signal comparison between no cleaning and water jet cleaning



Both output signals are normal.

While an analyzer required maintenance approximately every two weeks when no cleaning was performed, a two-month maintenance interval was sufficient when water jet cleaning was performed.

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