

## **REMOVING FERRIC HYDROXIDE FROM WASTEWATER – SELECTION OF THE PROPER SOLID/LIQUID SEPARATION TECHNOLOGY**

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Ferric hydroxide particles, like other metal hydroxides, are very fine and form weak fluffy aggregates. They are very difficult to settle or filter. It is always a challenge to remove metal hydroxides from a wastewater stream. Solid/liquid separation technologies that can be used to remove ferric hydroxide were evaluated and the most effective technology depends on process conditions and separation requirements. Two cases were evaluated. In the case of a large quantity of wastewater (110 gpm) with high ferric hydroxide solids concentration (3 wt%), the gravity settling with pre-flocculation was used. In another case, the quantity of wastewater was relatively smaller (15 gpm) with low solids concentration (<0.5 wt%). A continuous decanter centrifuge was selected. These examples illustrate that an understanding of the stream properties and process information is critical for the selection of the appropriate separation technology.