

# **CANDLE FILTER OPERATION – IDENTIFICATION AND MITIGATION OF LEAKING ELEMENTS**

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Candle filters are commonly used in industry to separate particles from process or wastewater streams. It is a preferred automatic solid-liquid separation operation when hazardous materials or extreme processing conditions (e.g., temperature and pressure) are involved. The geometry of candles also enables high ratio of filtration area to filter vessel volume. However, due to the existence of multiple filter elements inside the filter vessel, it is often difficult to identify problematic ones if a few elements develop leak or get damaged. The timely identification and remediation of leaking elements is important to maintain the plant production. The standard trouble shooting procedure does not work in all situations and custom modifications are commonly used. In this work, a customized 3-stage procedure was developed to allow the effective identification and repair of leaking elements in a large industrial scale candle filter. This method was successfully implemented and resolved the issue in a timely manner.