



A higher level of performance

## Application Reference

### Concentrate Thickeners

#### Optimizing performance by monitoring dense “BED” level and providing information feedback to upstream process



**Application Problem:**

The customer from the mining industry wanted to optimize their Concentrate Thickener on site.

1. They wanted to monitor the heavy dense bed level to further optimize the underflow density being pumped to concentrate filter presses.
2. They wanted to use the heavy dense bed level measurements, for inventory control analysis.
3. They wanted improved information on the suspended solids levels in the recovered liquid flowing over the launders for upstream process feedback.

**Solution:**

1. Concentrate thickeners generally use gravity (no chemical floccing) only to settle out the concentrate particles. Therefore we must use a higher powered 7 crystal arrayed sonar transducer to penetrate the suspended solids to monitor the heavy density bed level. This provides adequate control and monitoring for the underflow pump to guarantee a high density bed being pumped to the concentrate filter press.
2. By monitoring the heavy density bed it allowed for repeatable measurement for inventory analysis on a programmed basis.
3. The second output of the array sonar transducer can be used to monitor the turbidity of suspended solids between the heavy bed density and the launder level, giving the process engineers feedback to their upstream process conditions.
4. Normally, concentrate thickeners utilize a surface boom scum rake that rotates around the surface of the thickener, to remove settled out scum/slag build-up. We utilize our impact plate cleaning mechanism, for the sonar transducer to ride over the surface boom, also as a means of cleaning the face of the sonar transducer.

Hawk manufactures the largest range of sonar transducers to provide optimized performance, for all bed level thickener applications. Hawk also provides in-situ scum cleaning for the transducer.

**Ordering information:**

Part no: OSIRDYX + OSIRT703S4XC6 + OSIRSC-E + OSIRME-L3

**Application guaranteed!**



*Hawk is a world leader in level, position and flow measurement, providing cutting edge equipment to the global industrial market. We have 30 years of experience and a record of success in a wide range of areas including mining/mineral processing, water supply/waste water, bulk material handling and chemical. Our on-going commitment is to provide industry leading technology and cost effective solutions.*

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