



## Level Control for Scum Collector at a Steel Plant.

The steel industry plays a crucial part in our everyday lives and uses a large amount of water for a variety of processes which include cooling, dust suppression, cleaning, temperature control, transport of waste materials, and others. Using a lot of water means, that somewhere along the line, there will be a vast amount of wastewater which contains suspended solids and many dissolved substances and chemicals.

Most steel manufacturers now have on-site wastewater treatment facilities before the wastewater is either released into the environment or transported to a municipality for further wastewater treatment. Part of this treatment process includes collecting sludge or scum.

Scum collection is the removal of suspended solids from the wastewater and is a crucial part of the process for all steel manufacturers. Solid particulates become suspended

in process water streams during cleaning and cooling of flue and off-gases, slag granulation, descaling, roll and product cooling, flume flushing in rolling mills, and during product rinsing in finishing operations.

### **The scum collecting process**

Scum collectors remove the thickened scum that is difficult to get rid of. The scum collected from the clarifiers is sent to a concentrator where it is further separated, heated, and mixed. This process reduces the volume and improves scum handling and disposal.

If the scum is removed continually in small batches, it presents few problems in the settlement tank process. However, if it is allowed to build up it can become an issue. That's why a steel manufacturer based in Asia reached out to Microcems for help controlling this process.

### **Health and safety is paramount**

Traditionally, the end-user had always measured the water level of their scum collection process with a tape measure.



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## MICROCEMS: SCUM COLLECTOR

This not only is an inconvenient and inaccurate way of getting the level measurement for staff at the steel plant, but it also presents a huge health and safety risk with staff coming into contact with the scum. Scum is often mixed with chemicals and other substances that make it a very hazardous medium to deal with. Additionally, the surface around the application was slippery and dangerous, leaving staff at risk of injury. Keeping staff safe and healthy was of most importance to the end user, so Microcems suggested a non-contacting level measurement solution so that they could get an indication of the scum level without encountering the scum.

### Level measurement made simple

Microcems decided a dB6 level sensor coupled with the Ultra Lite controller would be the perfect solution for this application. With its robust design and powerful signal processing, the dB6 transducer can withstand the harsh conditions of the scum collection process. The Ultra Lite and dB6 system work by sending an ultrasonic signal down to the medium and precisely measuring the time taken for the signal to return to the transducer. This is converted into a local display of level measurement displayed on the Ultra Lite controller, mounted locally to the application.

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## More Information

**dB Transducers:** <https://pulsarmeasurement.com/db-transducer>



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