

## **OVERVIEW**

In order to keep the mill performance at a certain level, mills need to analyze different samples of the process. Metris AVA (Advanced Visual Analysis), is a new, fast, reliable and cybersecured measurement system for all processes and environments, which provides operators a visual view as usable numbers. Metris AVA

consists of compatible toolboxes that give opportunities to collect the data in order to improve mill performance. Recovery Boiler (RB) Toolbox is designed for the recovery boiler environment. The solution enables balanced recovery boiler performance due to exact online data for process optimization with decreased maintenance needs.

In addition, utilizing the toolbox and analyzing the data ensure less fouling and washing and increases the process uptime, which again increases the mill efficiency. When the process is optimized, the mill can benefit, for example by increased chemical savings, and decreased emissions and laboratory tests.



# Safe and balanced recovery boiler performance

Metris AVA RB Toolbox consists of five tools, and by using the tools, personnel and process safety can be increased, and boiler performance can be balanced in order to achieve savings.

## 1 CARRY OVER TOOL

is designed to measure flue gas particles and it provides data to control liquor temperature and flow, sootblowing and air distribution. Analyzing the carry over data for example, increases availability and decreases emissions.

## 2 SPRAY ORIENTATION TOOL

measures the liquor spray direction and opening angle from the liquor burner. It provides data to control carry over, char bed location and spray burner maintenance. Analyzing the data can improve chemical recovery, ensure longer spray burner lifetime and balance char bed.

## **3** SMELT FLOW TOOL

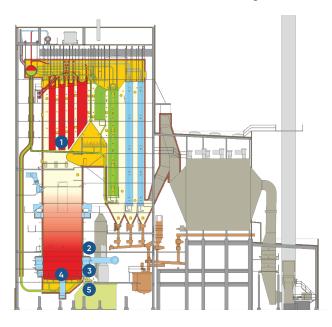
measures smelt volume and velocity. and gives numerical information for spout fouling and flashing. By analyzing the data from fuel supply, air distribution, spout cleaning and green liquor quality, safety and savings can be achieved.

## 4 CHAR BED TOOL

creates 3D models from char bed and measures volume and highest points in order to provide data to control fuel supply and air distribution. By analyzing the data, the mill can improve safety and chemical recovery, balance combustion and reduce carry over.

## **5** SMELT REDUCTION TOOL

is designed for reduction efficiency measurement and it provides data to control fuel supply, char bed, air distribution and green liquor quality. Regular measurement of the smelt reduction can improve chemical recovery and reduce carry over.



## **Benefits**

## **MORE SAFETY**

- Safe measurement tools
- Increased overall safety by process stability

## **MORE PRODUCTIVITY**

- Increased efficiency
- Balanced boiler processes
- Variability

## MORE SAVINGS AND CAPACITY

- Increased chemical recovery
- Decreased shootblowing steam
  - Decreased laboratory analyses
- Less emissions
  - Balanced boiler processes

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