

# Advanced Industrial Sensors (AdvIS) Your partner for On-line Instrumentation

## Gauges for the sinter plant

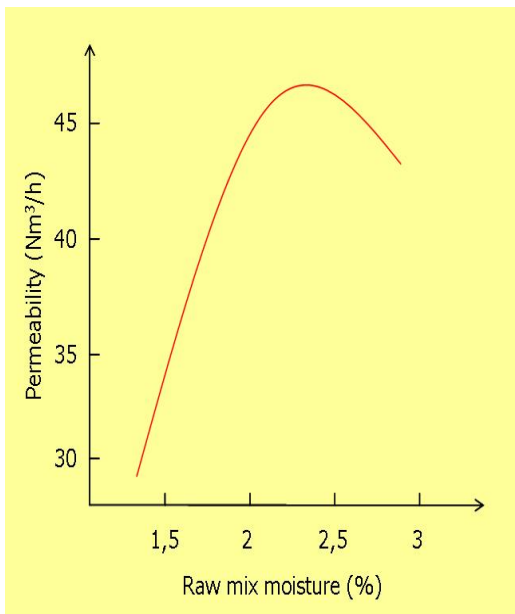


The sintering process has for long suffered from a lack of relevant instruments to control its essential operating parameters.

In cooperation with a specialized research centre, **AdvIS** have developed dedicated on-line gauges and control systems, to substantially increase the overall performance of the lines.

More than 70 customers have successfully used the **Sinwad** and **Sincad** gauges worldwide.

The **Sinwad** gauge helps at optimizing the water addition to the raw mix, by measuring the sinter permeability.



The permeability is related to the raw mix moisture and shows a maximum value depending on the actual raw mix composition, thus enabling the quantity of water to be constantly adjusted to its optimum level. The positive effect on the burn-through point position is also obvious.

The gauge is usually installed in the strand feeding hopper, but it is also available as an off-line instrument, continuously fed by a representative sample of the raw mix.

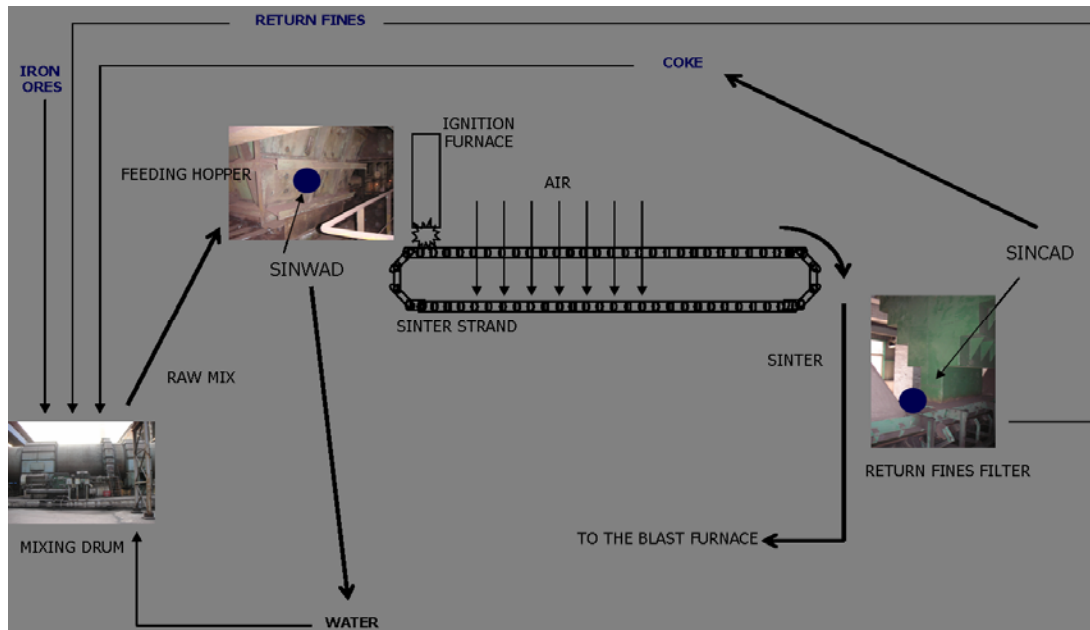
The **Permeability Control System** is supplied as an option, to automatically adjust the water addition to the raw mix and help the operator to keep the permeability and the line performances at the maximum.

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The **Sincad** gauge is detecting the iron oxides in the sinter cake, before it is transported to the blast furnace. The level of iron oxides being linked to the proportion of coke in the raw mix, the gauge will help to optimize the coke consumption and control the sinter properties, such as reduction strength (500°C, % < 5 mm) or chemical reducibility.



It uses a magnetic coil, designed for harsh measuring conditions (abrasion), to detect the iron oxides in the cooled return fines. The calibration with two samples (minimum and maximum) will give a magnetic index (MI) to the operator, to be used manually or in closed-loop control, thanks to the optional **Sincad Control System**.



The combined use of the **Sinwad** and **Sincad** gauges ensures a smooth and efficient operation of the sinter process, bringing significant improvement in the line parameters. Typically, the coke consumption is reduced by 1-3 %, sinter reducibility is increased by 1-3 % and reduction strength is improved by 5-10%.