

## AOS - Activity Optimized Source

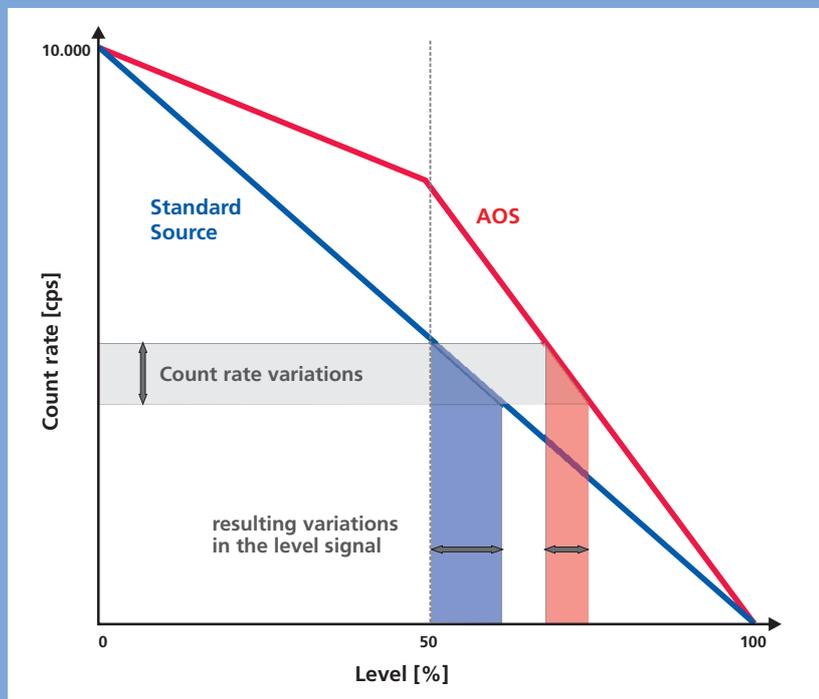
The Activity Optimized Source AOS is used for the measurement of mould level. The advanced source permits a significant increase of accuracy in the upper part of the measuring range – where the improved accuracy has very positive effects on the steel quality. The optimized activity distribution accomplishes these enhancements without increasing the total source size at all.

Alternatively, when the accuracy is to remain unchanged, the source activity can be reduced by several factors. Especially when installed on small moulds, the AOS is highly efficient in terms of shielding costs and radiation protection matters.



Photo: SMS Siemag AG

## 2 Spans for Outstanding Measurement Performance



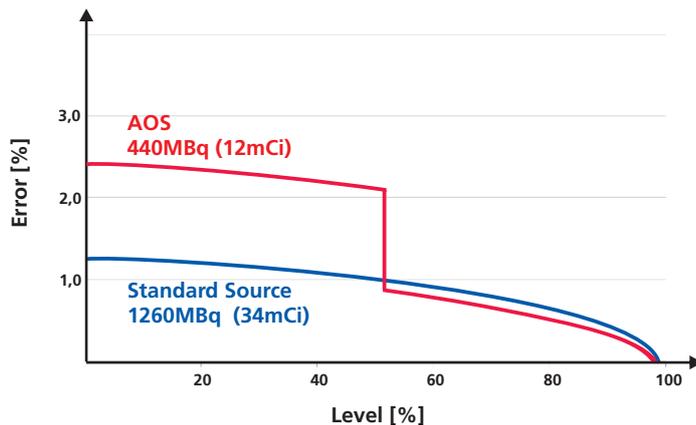
The bottom measuring range is characterized by a significantly reduced source activity. The AOS provides sufficient counts for a reliable measurement during the start of casting.

In the upper measuring range, the AOS produces a measuring signal, which is usually only achieved with much higher source activities. This characteristic results in an increased resolution and a considerably improved measuring accuracy. Most of all, the effect of count rate fluctuations on the measurement is drastically reduced – the signal is now measurably calmer.

## Reduction of Source Activity

When using the AOS, the source activity can be significantly reduced, depending on mould size and measuring conditions. This allows for the use of smaller shieldings, which is a major benefit in terms of space and costs. In individual cases it is also possible to work with the cost-effective lead as shielding material instead of Tungsten.

Example for the Reduction of Source Activity:  
Error curve of an AOS compared to a standard source



In this example the accuracy at the operating point is given with 1%. Considering the mould size and wall thicknesses, following source activities were determined for a Co-60 rod source:

|                 |                 |
|-----------------|-----------------|
| Standard Source | 1260MBq (34mCi) |
| AOS             | 440MBq (12mCi)  |

## Benefits at a glance

- Best accuracy at the operating point
- Calm level signal
- Short response time
- Small and cost-effective shieldings
- Low dose rates

## Sources made by BERTHOLD

BERTHOLD TECHNOLOGIES operates the only Co-60 rod source production with continuous activity distribution throughout the world.

State-of-the-art plant technology is used to produce custom-made sources according to highest quality standards.

