



Fluid level measurement of aluminium liquid

In aluminium casting plants or foundries, the cast is poured into shape to form small bars, known as pig irons.

The charging level in the forming process is critical in ensuring consistent weight of the pigs. Using a special non-contact measuring device, the depth of fill is recorded. For these applications, system builder Hertwich Engineering GmbH of Austria, uses the scanCONTROL 2700 laser scanner.

With a casting performance of 10 t/h and a pig iron weight of 8-10 kg, only 3 seconds are available for performing these measurements. The scanner is mounted to a frame above the conveyor belt and captures the charging level while cycling. The scanner is built into a protective housing, which is cooled by compressed air, so that it can withstand the harsh casting conditions. Despite the reflecting surface of the aluminium, the scanner obtains satisfactory measurement results. In these types of application, the aluminium is either already fixed or still fluent. By applying the laser line sensor instead of a laser point sensor, measurement errors due to shiny, reflective surfaces and from the influence of ambient light can be reduced.

Enviromental conditions

- High temperature
- Dust
- Mechanical agitation

Advantages

- Measurement on solid and liquid aluminium
- Stability of measurement due to line instead of point
- High offset distance

System design

- scanCONTROL 2700-100
- Cooling housing provided by customer