



Robust and „desert-proof“: LED displays in kaolin surface mining

Extremely weather-resistant, perfect readability

Kaolin raw earth with its parts of kaolin, feldspar and quartz is an important raw material in many industries, especially in the ceramic, paper, glass and construction industry. The company „Amberger Kaolinwerke“ can look back on more than 185 years of surface mining. At that time the „Kaoliner“ still had to work without modern LED technology regarding visualisation. Today LED displays made by the supplier of system electronics microSYST ensure high visibility and reading distances, for example at the weighing stations of the modern sand and kaolin plants.



Advantages at a glance

- Process optimisation due to visualisation
- 24/7 LED technology for use in extreme weather and environmental conditions
- Maintenance-free and durable system

The company „Amberger Kaolinwerke“ has already often used microSYST's displays for its large production plants. „Although the conditions for electronic devices are very harsh, almost desertlike in surface mining – **extreme weather and environmental conditions with high variations in temperature and a high degree of pollution** – the first installed displays are still operating without any problems even after 25 years“, informs Jürgen Heinz working in the electrical engineering at Amberger Kaolinwerke. In addition to normal LED displays a truck loading info display as well as a LED traffic light system with day/night function in the truck loading area ensure that the trucks and the loading zone are precisely organised.

Visualisation of the weight regarding conveyor and truck

The latest installation of powerful LED outdoor displays has been at the weight stations of the conveyors and trucks. The requirements have been clear: perfect readability from a distance of up to 30 meters and „**desert-proof**“ – for outdoors and for a **24/7 operation**.



Red display colour defies reflections from sand and heat streaks

microSYST therefore has customised numeric LED displays of the Migan series. According to the chosen configuration, one display shows the delivery volume of the kaolin sand on the conveyor belt, another display visualises the weight of the truck which will be loaded with sand.

The red display colour and a character height of 100 millimeters guarantee a maximum reading distance of 40 meters. Reflexions caused by kaolin particles, by heat streaks or by autumn mists are no problem due to **powerful, high-contrast diodes**.



Direct signal transmission due to an integrated A-D converter

An integrated A-D converter ensures that the weight of the delivery volume and the truck is transmitted directly from the scales to the display where they can be processed and visualised. As the displays are used outdoors they are completely protected against dust and water according to the **protection class IP65**. Furthermore, due to the fanless technology microSYST's LED displays are designed maintenance-free – a real benefit for a 24/7 use.

„Reliability, support and operation period are most important“

Upon delivery the displays are ready for installation and have an operating voltage of 230 V-AC: therefore, it is very easy at any time to move the displays due to reasons relating to production or to turn them to another direction. „The **reliability of the displays** and the support by microSYST are perfect. According to the slogan „Never change a winning team“ there is no reason for us not to rely on microSYST's display know-how in the future,“ summarises Jürgen Heinz the business relationship. „And then, there are our older displays which are running smoothly without any problems – 25 years and more are really impressive...“.

