polscan® - a high-precision opto-electronic measuring method for checking the rotary kiln geometry

We continue with our #TheServiceTeam special: Our field service experts around Ansgar Päschke offer competent support for all types of services, for example drone inspections, the poldrive® checkup of drives or the

polgrind® grinding solutions. This time, the focus is on a very specific service solution: The high-precision polscan® scanning process.

„Through our polscan® service, malfunctions on the kiln can be detected and corrected at an early stage. This results in higher availability of the rotary kiln." Tristan Schulz is part of #TheServiceTeam at thyssenkrupp Polysius and the responsible supervisor for this service. Since polscan® was introduced in 1985, our experts have measured over 2,500 rotary kilns in more than 75 countries. The measurement systems are stationed in numerous regions to ensure local support. The service enables highly accurate, opto-electronic measurement of rotary kilns during operation.

Vertical and horizontal deviations of the rotary kiln axis as well as deformations, eccentricities and ovalities on the kiln shell are reliably diagnosed using polscan® analyses. In Germany, approx. 70 measurements take place per year. As damage is detected at an early stage, the availability of the rotary kiln is increased in many times over.

Different methods are used for this:

- Carrying out measurements to check the axis of the rotary kiln
- Recording deformations and eccentricities on the kiln shell
- Measurement of the kiln shell ovality
- Re-measurement of the rotary kiln axis after the adjustment of supporting roller bearings
- Calculation of the kiln statics

All measured values are stored and are available for later calculations. The complete program takes a maximum of five days. After completion of the measurements, an approx. 50-page documentation with meaningful protocols is prepared directly on site, which is discussed with the customer and then handed over.

In general, it is advisable to have a rotary kiln measured every two years. This is the only way to give the customer a good picture of changes to his kiln and to plan measures in advance to minimize production losses or even avoid them altogether. A measurement of the rotary kiln is particularly necessary before or after major repair work on the kiln. A measurement should also be carried out if there are problems with the refractory lining or cracks in the kiln shell.

“In the last two years, we were able to successfully carry out more than 200 measurements on the rotary kiln worldwide – especially under the difficult pandemic conditions, this was a great help for our customers.“”

Tristan Schulz, Chief Supervisor polscan® Service

The bottom line: #TheServiceTeam supports customers from all over the world by means of numerous field & workshop services, such as ad-hoc repairs, technical assistance, maintenance work, inspections and many other services. The service experts detect and eliminate problems on site before they can cause major damage to rotary kilns, mills or crushers. Visual inspections and state-of-the-art scanning methods enable preventive maintenance and modernization work.

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