

# polscan®

We check your rotary kiln geometry.



thyssenkrupp

polscan® is a highly accurate optoelectronic measuring method that can measure rotary kilns quickly and precisely during operation. It allows us to reliably diagnose vertical and horizontal deviations of the rotary kiln axis, as well as the deformation, eccentricity and ovality of the kiln shell. Availability of the rotary kiln is therefore significantly higher because damage is detected early.

Our experts can measure rotary kilns of any make. Assignment time and financial expenditure can be calculated in advance. Our range of services comprises various options – precisely according to your needs:

#### Option 1:

We check the rotary kiln axis and carry out various further measurements – among other things, the concentricity of the supporting rollers is checked.

#### Option 2:

We record the deformation and eccentricity of the kiln shell, including further measurements such as the axial runout of the tyres.

#### Option 3:

We determine kiln shell ovality.

#### Option 4:

Following possible adjustment of the supporting roller bearings based on adjustment distances previously determined by us, we carry out a re-measurement of the rotary kiln axis.

If requested, adjustment of the supporting roller bearings can be carried out by thyssenkrupp.

All measured values are stored and are available for subsequent calculations. After completion of the measurements, documentation with informative reports is generated on-site, discussed with the customer and handed over.

In addition, a written report is prepared that contains explanations of the measurement records, as well as recommendations for mechanical plant optimization as determined during the measurements.

Plant owners around the world find that our service represents a convincing choice. Since polscan® was launched, we have measured more than 2,000 rotary kilns in 56 countries.

### Service advantages

- All measurements take place while the plant is in operation
- Defects are detected early
- The availability of the rotary kiln is increased
- Optimization of preventive maintenance through precise analysis of the measurement results
- Assignment time and financial expenditure can be calculated in advance
- Rotary kilns of any make can be measured



polscan® - High-precision optoelectronic measuring system at on-site use.

#### Your contact:

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digitalized expertise

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# 360° Service

Service solutions throughout the entire life cycle of your plant



thyssenkrupp



## Parts & supply management

We are the experts when it comes to the supply with spare and wear parts for your plant – over the entire lifetime, at the right time and with the right quality.

### Spare parts supply

- All spare parts and components for your asset in OEM quality
- Always state of the art technology with guaranteed functionality
- Attractive frame contracts and supply agreements

### Wear parts solutions

- Development of wear parts according to your requirements
- Individual solutions in regards of quality and performance
- Innovative wear parts concepts

### Advanced parts solutions

- Engineering and manufacturing of individual spare parts
- Continuous further development of spare parts and components in order to increase the performance of your plant
- Spare and wear parts for plants genuinely not developed by thyssenkrupp



## Field & workshop services

We offer you local assistance when it comes to overhauling spare and wear parts, or when maintenance and servicing is needed.

### Technical inspections

- Forward-looking inspections of machines and components

### Repairs and field support

- Fulltime site support and advice after handover of equipment
- Fault identification and emergency repair of components
- Installation and dismantling
- Equipment adjustments and alignments

### Workshop services

- Local fabrication of spare parts
- Refurbishment and supply of thyssenkrupp and third party components

### Operator & maintenance training courses

- Customer training for all areas of thyssenkrupp portfolio
- Utilization of product experts within thyssenkrupp's global network



## Revamps & outages

Over the course of time, demands change. In order to meet these changed demands, we offer you custom-tailored revamp solutions.

### Analysis, engineering and manufacturing

- Plant status and environmental analysis and assessment
- Feasibility studies
- Basic, front-end and detail engineering
- Manufacturing of individual equipment

### Plant improvements

- Custom-tailored revamps and retrofitting solutions
- Debottlenecking through capacity extensions
- Efficiency enhancement through modernization and upgrades
- Emission reduction
- Safety and integrity upgrades
- Reliability improvement

### Revamps execution up to EPC

- Execution of complex revamp and outage projects
- Execution of EPC revamps projects
- Custom-tailored risk and profit sharing models

### Turnaround management

- Management of plant turnarounds



## Asset management

We offer you a holistic asset management approach in order to reduce the overall operating expenses of your plant.

### Consulting & audits

- Evaluation and assessment of effectiveness and efficiency
- Process mapping and gap analysis
- Derivation and supervision of improvement measures

### Technical guidance

- Implementation of improvement measures
- Technical improvement of existing machines and components
- Strategic analysis and future planning
- Improvement of processes and procedures

### Operation & maintenance contracts

- Complete or partial take-over of maintenance and/or operations activities
- One-stop operation and maintenance solutions including parts and consumables
- Custom-tailored business models focusing on a win-win situation

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