

Graphite Seal

Effective sealing, easy-to-assemble design



thyssenkrupp

Inlet and outlet graphite seals separate the kiln process from the environment. They are designed to seal off the kiln process from leak air while ensuring maximum process reliability and availability. No additional modifications of the kiln are necessary to retrofit graphite seals from thyssenkrupp – independent of the kiln manufacturer.

Design and function

The graphite seal is the connecting link between rotating and stationary components. The sealing against rotating and axial movement is achieved by graphite blocks distributed around the circumference.

When the kiln moves axially, the graphite blocks slide on the slide ring. When the kiln moves radially or wobbles, the tensioning ropes with counter weights press the graphite blocks onto the slide ring. The air-cooled sealing casing minimizes thermal effects on the graphite blocks.

The fastening system on the kiln inlet and outlet side enables the compensation of age-related wear – independent of the kiln manufacturer.

Powdered material that gets into the seal area is discharged via a dust chute.

Service advantages

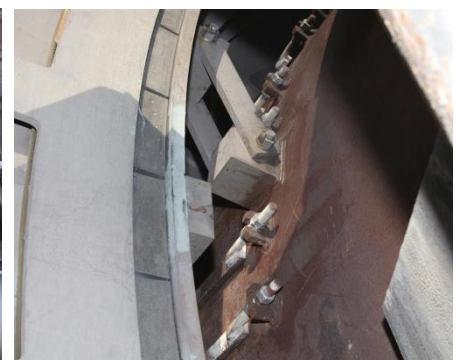
- Improves the stability of the clinker production process
- Mountable on the kiln inlet or kiln outlet section without modifications – independent of the kiln manufacturer
- High availability
- Low installation and maintenance costs
- Easy installation and short assembly time
- Rapid amortization
- Energy saving by reducing false air
- Reduces CO₂ emission



Two separate tensioning ropes for the upper and lower strand ensure easy and uniform pretensioning by steel weights.



Graphite seal at a rotary kiln on the kiln outlet side.



The tangential support on the kiln outlet side facilitates assembly if kiln shells are deformed – independent of the kiln manufacturer.

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Parts & supply
management

engineering.tomorrow.together.

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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