

polysius® girth gear fastening system



Rugged connection between girth gear and kiln

The girth gear and pinion drive transmits the torques generated by the drive into the rotary kiln in order to set the rotary kiln in continuous rotary motion. The girth gear fastening system connects the girth gear to the kiln shell. We offer two options: This is done either by means of a tangential plate construction or via a bridge plate construction.

Design and function

With the bridge-plate construction, there are so-called bridges welded to the rotary kiln shell and bolted to the girth gear. The system resiliently absorbs the axial and radial expansion differences between the rotary kiln shell and the girth gear, and fixes the girth gear relative to the rotary kiln.



The benefit is that the system includes in-built thermal protection. Depending on the clearance between the kiln shell and the girth gear, single or double thermal protection is provided. This protects the girth gear from excessive heat radiation from the kiln. The periphery deserves particular consideration with the use of secondary fuels and higher process temperatures, or with regard to shifting of the clinkering zone.

The tangential connection, on the other hand, is a cost-effective solution for rotary dryers with low thermal loads and smaller nominal diameters.

Your service advantages

- High rigidity in circumferential direction for transmission of the driving forces
- Optimum introduction of the driving forces into the kiln shell
- High flexibility in radial direction to compensate for ovality and thermal expansion of the kiln shell
- Realignment / turning of the gear rim possible at any time due to the symmetrical and low-wear attachment
- Thermal protection against heat radiation between the kiln shell and girth gear leads to hardly any gaping of the joints
- Prevents jolting when the girth gear joints roll over the pinion and prevents wear