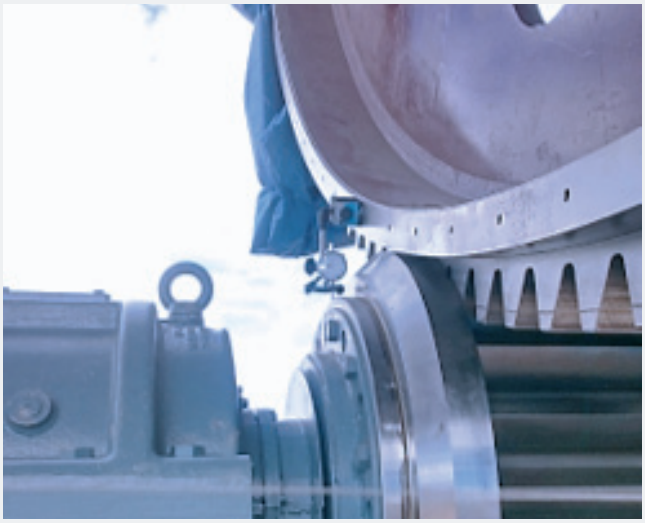
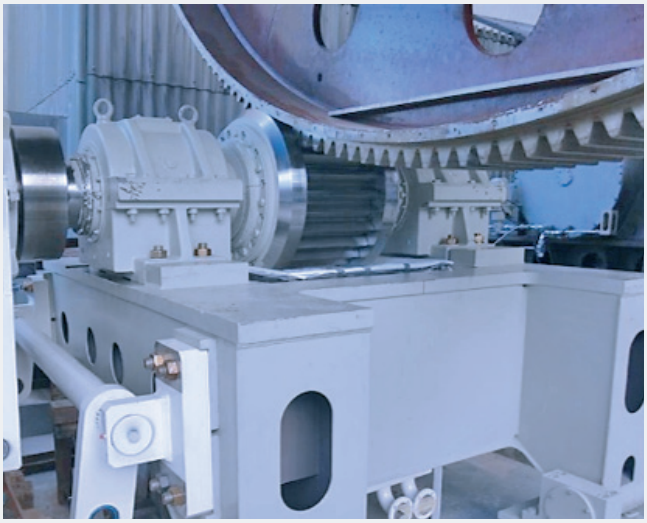
polguide drive concept

thyssenkrupp



View girth gear and pinion



Overview of the drive concept

Optimal meshing of the gearing under all operating conditions

The optimum load on the kiln girth gear and pinion is achieved by means of a swivelling baseplate with a guided self-aligning pinion. This mechanism compensates for operationally related meshing interference between the pinion and girth gear at all times. The optimum contact ratio thus maintained means that much smaller tooth sizes than before can be used for the girth gear and pinion due to the lower point load.

Design and function

The pinion unit of the polguide system consists of the pinion shaft, the spherical plain bearings and the self-aligning pinion. The spherical bearings allow flexible mounting of the pinion shaft. The self-aligning pinion compensates for the wobbling that occurs during operation as the pinion body always follows this wobbling, ensuring that the tooth flanks make contact uniformly across their entire width, thus reducing the load.
In addition, the baseplate of the girth gear and pinion is designed to ensure that the pinion always follows the radial movement of the girth gear. In order to ensure the radial and axial backlash are always the same, the girth gear and pinion are each equipped with two guide rings.

With polguide, it is possible to build two-support kilns with greater length/diameter ratios than with the classic girth gear/pinion concept. Furthermore, in the case of multi-station kilns, our polguide drive concept significantly lengthens the service life of your girth gear and pinion.

Fixed distance

Your service advantages

- Optimal tooth gearing under all operating conditions at all times
- Compensation for radial movements (radial runout), angle changes (axial runout) and axial movement (expansion)
- Low wear
- Double-pinion operation possible
- Can be used for rotary kilns of all sizes

Jens Opperbeck • P: +49 2525 99 9086
jens.opperbeck@thyssenkrupp.com • service.cement@thyssenkrupp.com
www.thyssenkrupp-polysius.com