



Assembling the oil sump of a double pinion drive



Oil distribution with an inward-running pinion

A girth gear lubrication system that offers maximum operational reliability

The girth gear and pinion drive of a rotary kiln requires continuous lubrication. The aim is to protect the tooth flanks from premature wear in order to achieve the longest possible service life for the girth gear and pinion drive. The tooth flanks are the surfaces subjected to the highest Hertzian load. With optimal lubrication as well as maintenance of the system, pitting of the tooth flanks can be avoided.

Design and function

The tooth flank lubrication system is basically a sump filled with lubricant underneath the girth gear and pinion drive. The teeth of the pinion dip into this lubricant bath, meaning that the contact surface between the girth gear and the pinion is continuously lubricated.

In addition, the lubricant in the bottom part of the oil sump is drawn by means of a circulation pump and fed across the entire width of the inward-turning side of the pinion by means of a pipe system. The highly viscous fluids flow off and do not result in material build-up like with the use of a spray lubricating device.

The lubricant bath is thoroughly mixed and evenly heated through the rotation of the pinion and by means of the circulation pump. At the lowest point of the oil sump, there is a collecting cup with an oil drain pipe and a dewatering line. The lubricant level can be monitored via a sight glass or centrally via a filling level monitor at the control desk.

If necessary, an oil heating system can be used at low ambient temperatures to ensure optimum viscosity at all times.

Your service advantages

- Protection against increased wear
- Maximum operational reliability
- Can be retrofitted to any kiln (provided that it has a girth gear and pinion drive & there is a foundation drawing available)
- Centrally monitored filling level by means of a filling level monitor
- Wear-free system
- Lubricant change requires only a short amount of time