



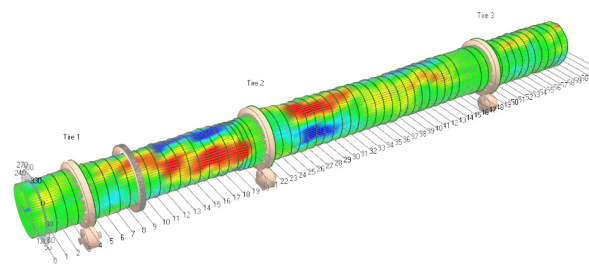
Kiln Maintenance - Kiln Shell Profile Analysis

Rotary kiln reliability depends on correct kiln geometry and alignment. Changes caused by foundation settlement, uneven wear or incorrect repair lead to overloading of individual components. This can result in significant damage and loss of production. IKN's mechanical inspection of the rotary kiln eliminates this risk by applying predictive technologies carried out by the maintenance team on site. The results of the analysis are then submitted to the client as well as recommendations on necessary repairs. IKN's preventive maintenance strategy aims at ensuring undisturbed kiln operation without unplanned interruptions.

- + Process optimisation
- + Reduction of kiln stoppages
- + Trouble-free kiln operation
- + Mechanical stability of equipment

Maintenance strategy

Operation of the rotary kiln gradually leads to permanent shell deformation mainly due to irregular temperatures on the shell or improper alignment. The shell of the non-circular shape has a variable section modulus with regards to the direction of the constant bending moment during rotation. In combination with the bended geometric axis of the kiln, this can cause a much larger deformation of the cross section of the kiln shell. Deformation of the kiln shell affects the life of the lining and core kiln components.



Deformation map

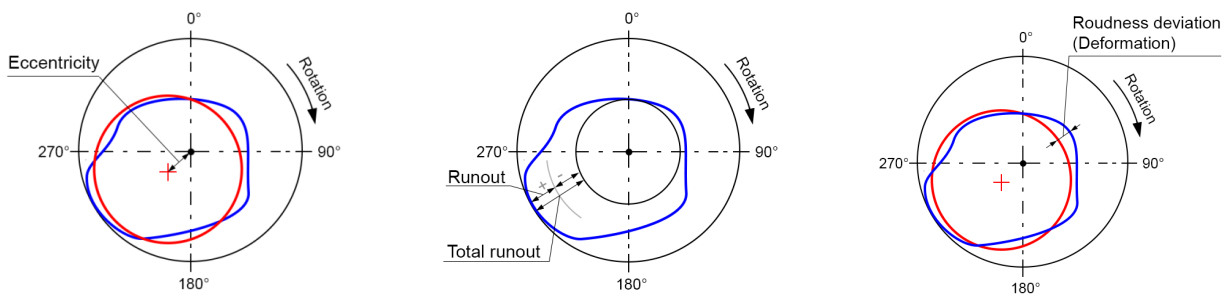
Measurement description

Measurement is performed with a contactless laser measuring device at various points evenly distributed over the entire length of the shell during normal operation. At each measuring point, we can locate the following values and conditions:

- Shell eccentricity
- Shell runout
- Circular deviation/deformation
- Temperature profile

Measurement benefits

- Different types of shell deformations can be determined, which adversely affect the refractory life and various parts of the kiln.
- Annual precautionary inspections can prevent unplanned interruptions such as loss of production due to unforeseen downtime.



Shell parameters examples

Contact

Please contact our after sales department for a customized offer at aftersales@ikn.eu.

