IN-SITU RE-SURFACING (*grinding / machining*)

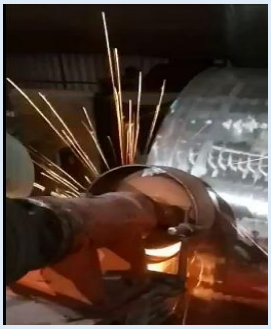
1. **TYRE:**

We are a proficient service provider for grinding on kiln tyre and support rollers, while the kiln operates in normal operation. The grinding being carried out consistently without any stoppage. Our methodology ensures, the grinding can be successfully carried out, even when following abnormalities observed on a kiln:

a. High shell run out
b. High tire wobbling
c. Mis-alignment in kiln axis
d. Improper support roller axis

The kiln rotational movement is complex when most of the operational forces are acting against each other / together includes the kiln axial displacements. Correct contact between the tyre and support rollers is guaranteed only when the raceways of both the components are cylindrical in shape or the axes are not skewed.

Unfortunately, even during normal operation, rotary drum is exposed to numerous forces, leads to abnormal wear / deformations on the contact surfaces. And, results in the rolling components lose their original shape to an extent. This makes the kiln operation erratic with the reduced reliability. And, the surfaces need to ensure the square, for better load distributions and longer life. **Options available are: Machining or Grinding.**





MACHINING:

The shape can be restored in a traditional way by dismantling the component and machining in workshop. In such case, the downtime is inevitable. If the support rollers / guide rollers are refurbished, the downtime will be shorter (a few dozens of hours). However, in case of the tyre, the downtime will be fairly longer (several weeks). Over and above, the cost of restoration will also be sizeable, includes the followings:

a. dismantling and re-assembly (in case of the tyre, refractory need to dismantle and often the kiln's shell needs to be cut),
b. transport (difficult, as the parts are usually oversize),
c. machining (machine tools are few and expensive).

Resurfacing (machining / grinding) without dismantling of any parts at the facility, even during its normal operation can significantly reduce such huge costs. In case of the support and thrust roller, where axis of the rotation is relatively stable, for turning and grinding operations, we can use more or less, the adapted traditional machines.

Whereas, in case of tyre raceway, continuous change in the axis position, necessitates much more sophisticated and refined technology, unavailable on a day-to-day basis. The resurfacing requires also a deep knowledge and an extensive experience in measurements and adjustments of such equipment's (kiln/dryer). And, the methodology suitable for the tyre grinding, mastered by Allan Smith Engineers.

SCOPE OF SERVICE

We had developed tyre grinding machine, specialized to take care above mentioned deviations in the kiln during operation. Also, supported by our engineering knowledge of rotary drums related problems, we can offer you a complex service of support rollers, thrust rollers, tyre raceways, and tyre thrust face resurfacing.
Our service contains:

APPLICATION

- Grinding of the raceways of support rollers, tyres raceways, tyre thrust face and the thrust rollers of rotary Kiln without dismantling.
- In-situ Grinding of ball mill trunnion surface, slide ring,
- Technology of resurfacing by turning has been replaced by the technology of grinding.

APPLICATION I GRINDING