

# Mixing Technology for the Metallurgical Industry



## Ore dressing

Mixing and agglomeration systems for ore fines (ore concentrates from flotation, e.g. iron ore for pellet production for direct reduction or blast furnace feed)

Pellets for

- blast furnaces
- direct reduction

## Sinter mix preparation

Mixing and agglomeration systems for feeding the sintering belt

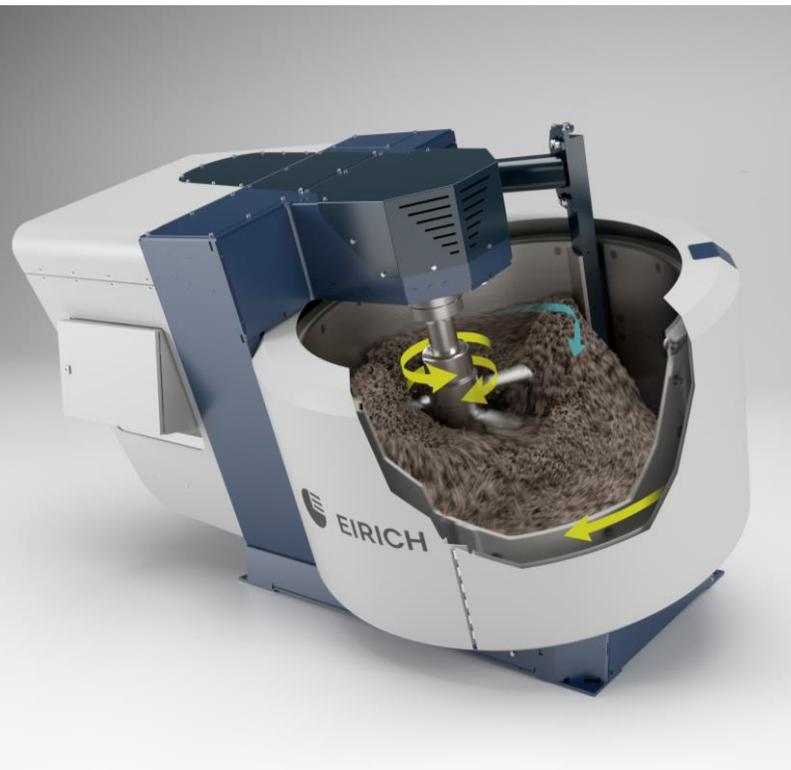
- total sinter mix
- ore fine fraction
- filter dust plus ore fines

## Treatment of residues

Recycling systems for residues (dust, sludge, mill scale, ...) for mixing, agglomerating, pelletizing, briquetting, extruding, pressing of bricks, ...

For the thermal treatment

- on sintering belts
- in Waelz (rotary) kilns
- in multiple hearth furnaces
- in shaft furnaces



## The unique working principle

### Rotating mixing pan

for material transport

### Variable-speed mixing tool,

**slow to fast**

for mixing

### The effect

The separation between material transport and the mixing process allows the speed of the mixing tool (and thus the power input into the mix) to be adjusted optimally to the specific application

## This mixing principle enables:

- The mixing tool can be run variably, at low or high speed
- The input of power into the mix can thus be controlled specifically
- High tool speeds allow e. g. dusts and sludges to be blended to granules, without material caking at the mixing tool
- Medium tool speeds allow high-quality mixtures to be produced
- Low tool speeds allow granules to be gently mixed or coated with additional substances
- One and the same mixer is suitable for mixing, granulating, coating, kneading

## Eirich customers tell from experience:

- The sintering quality increases: higher strengths, higher permeability\*
- Cost advantages: less coke requirement, the capacity of the sintering system increases\*
- Less binders are necessary if ore fines are treated
- Processing ore fines, replacement of wear parts is required not before a system's running time of 9 months
- Distinctly fewer repairs due to wear compared to mixers
- Significantly higher availability compared to cylindrical mixers

\* Improvement of granulation of raw material by using the high-agitating mixer at Kokura No. 3 sintering plant, 1995 Ironmaking conference Proceedings, 535-540

**Top-name manufacturers around the world work with Eirich mixing technology.  
We would be glad to provide references on request. Eirich is a research partner for universities.  
Put us to the test. We would be glad to tell you more.**