

**Schenck Process**

weighing feeding screening automation



# STEEL INDUSTRY OVERVIEW

1 2

5

10

20

40

75

125 years



we make processes work



# IBS Heavy



## Industries:

- Cement
- Sand & gravel
- Coal (users)
- **Steel**
- NF-metals
- Power plants (fossil)
- Foundries
- Gypsum
- Vibrating machines
- Screening technology

## Applications:

- **HD continuous feeding systems**
- Coal dust feeding
- **Heavy load weighing technology**
- Secondary fuel feeding
- **Static weighing technology**
- Train & truck loaders
- **Mass flow & raw material acquisition**
- Screening, shake-out, cooling, drying and vibratory transport systems for foundries
- **Hot material - screening, cooling**
- Extraction in the process industry
- Spare parts
- Repairs
- Commissioning

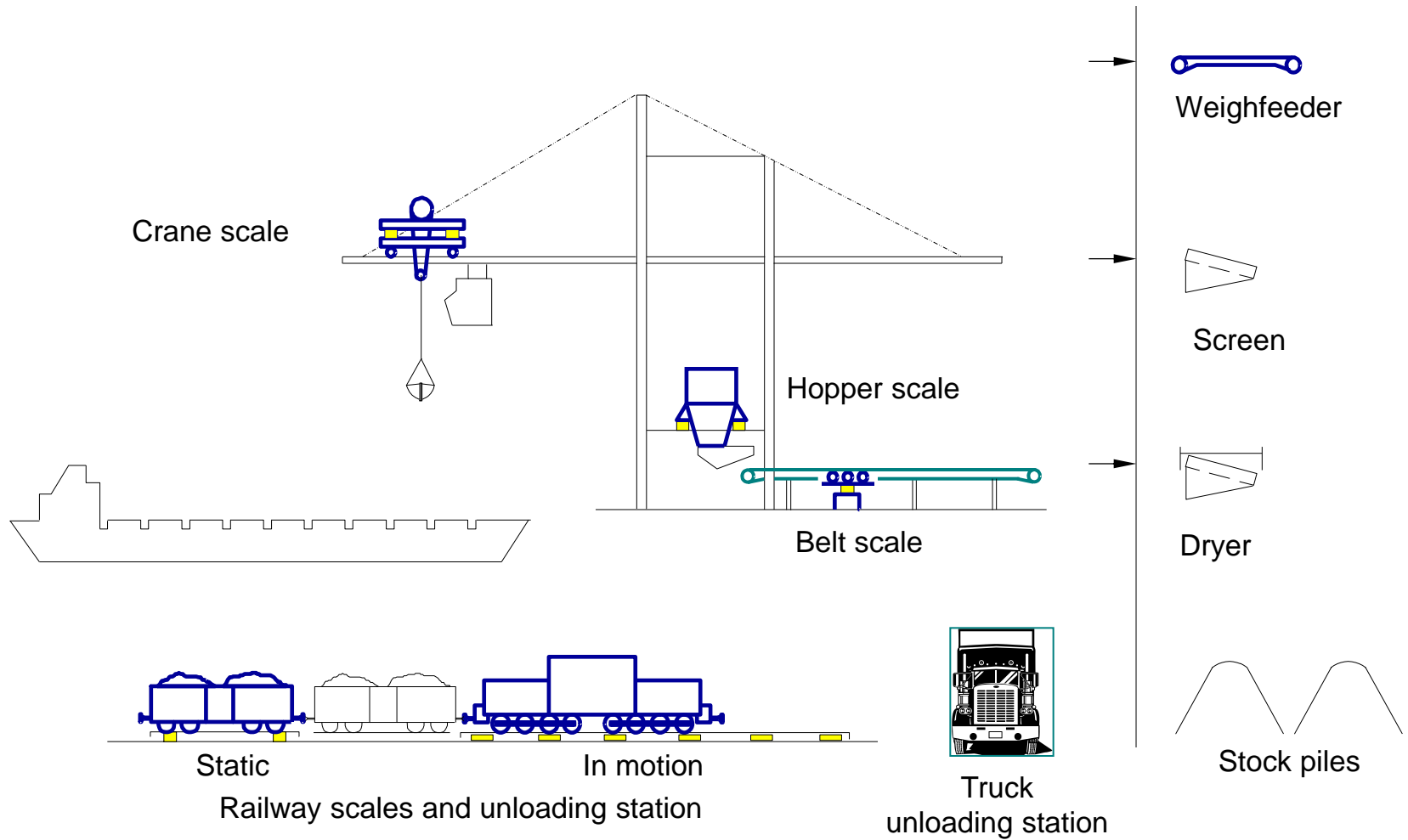
## Products:

- **LinaClass® and RotaClass® Screens**
- Heavy load weighing modules
- Rail Scales
- Feeders
- Conveying
- Filtration
- Injection

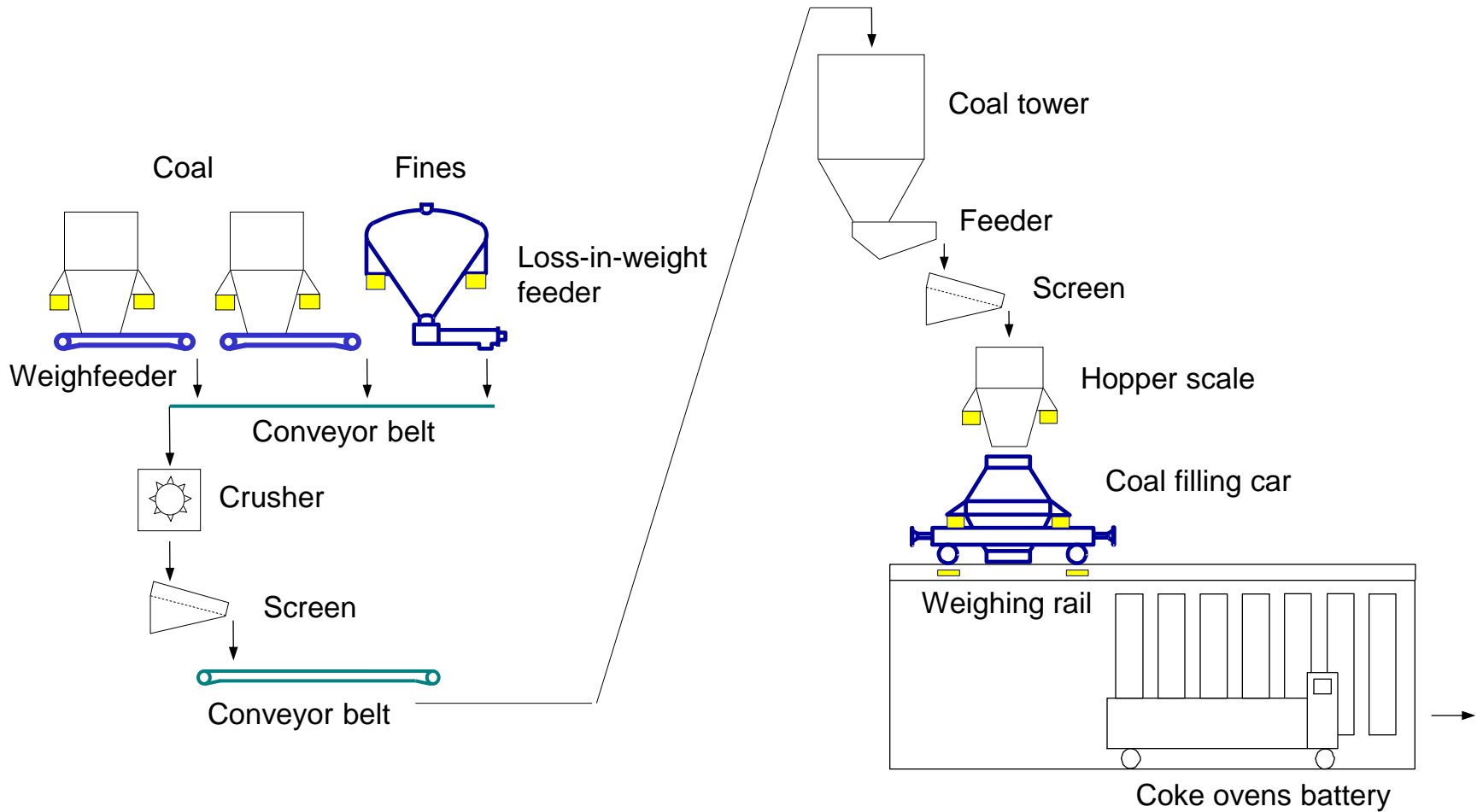
# STEEL PLANT OVERVIEW



# Raw material: Unloading and preparation

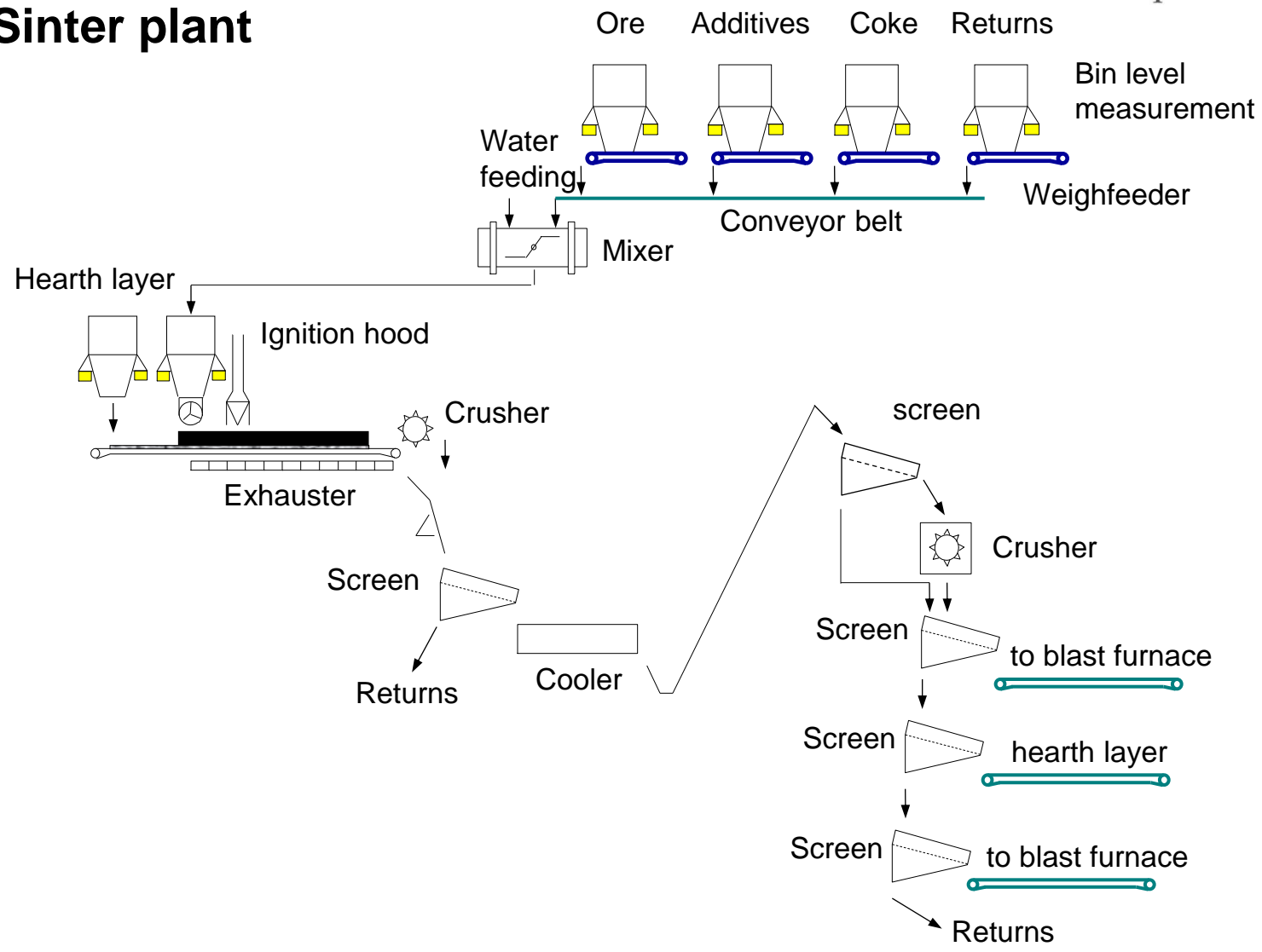


# Coking plant

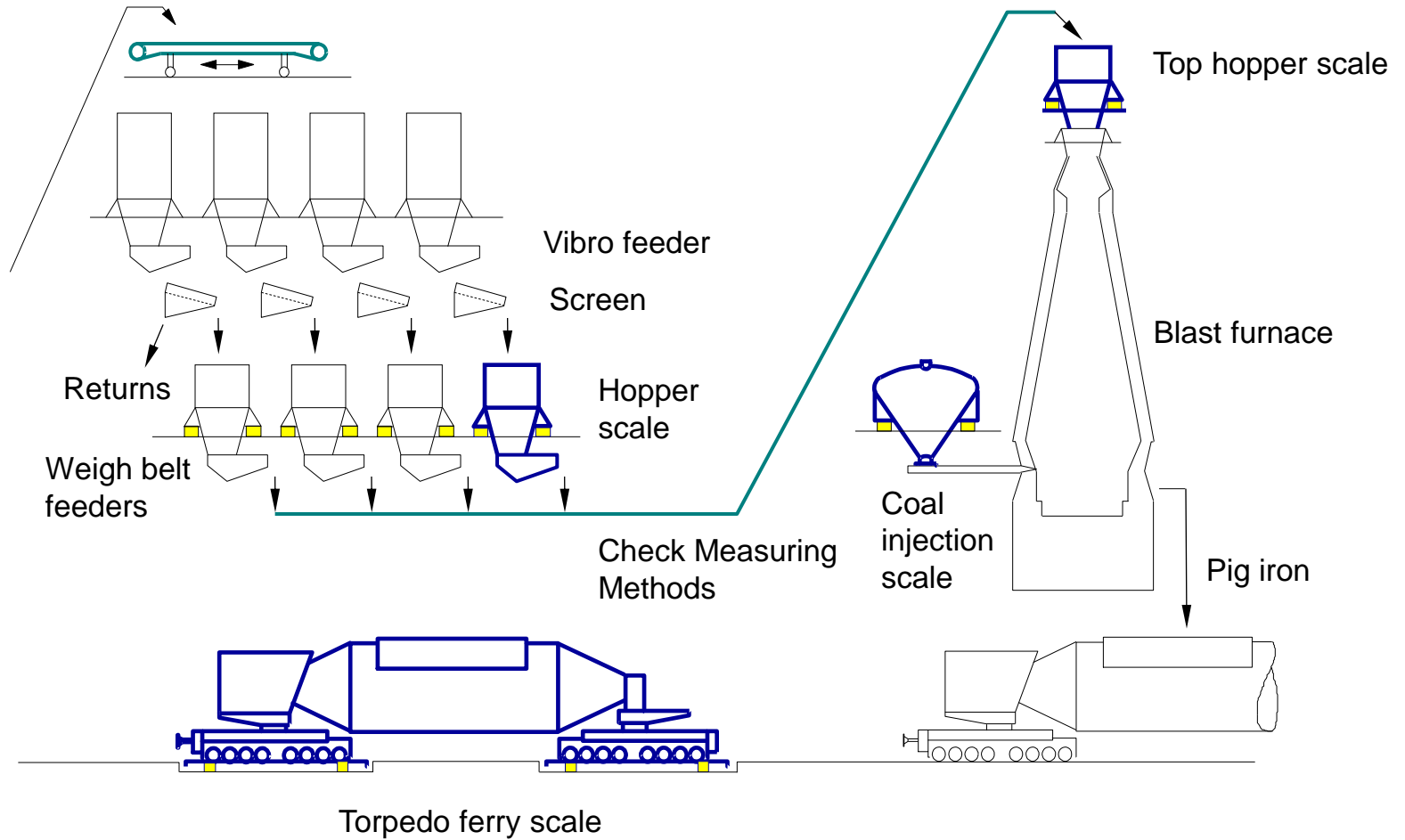




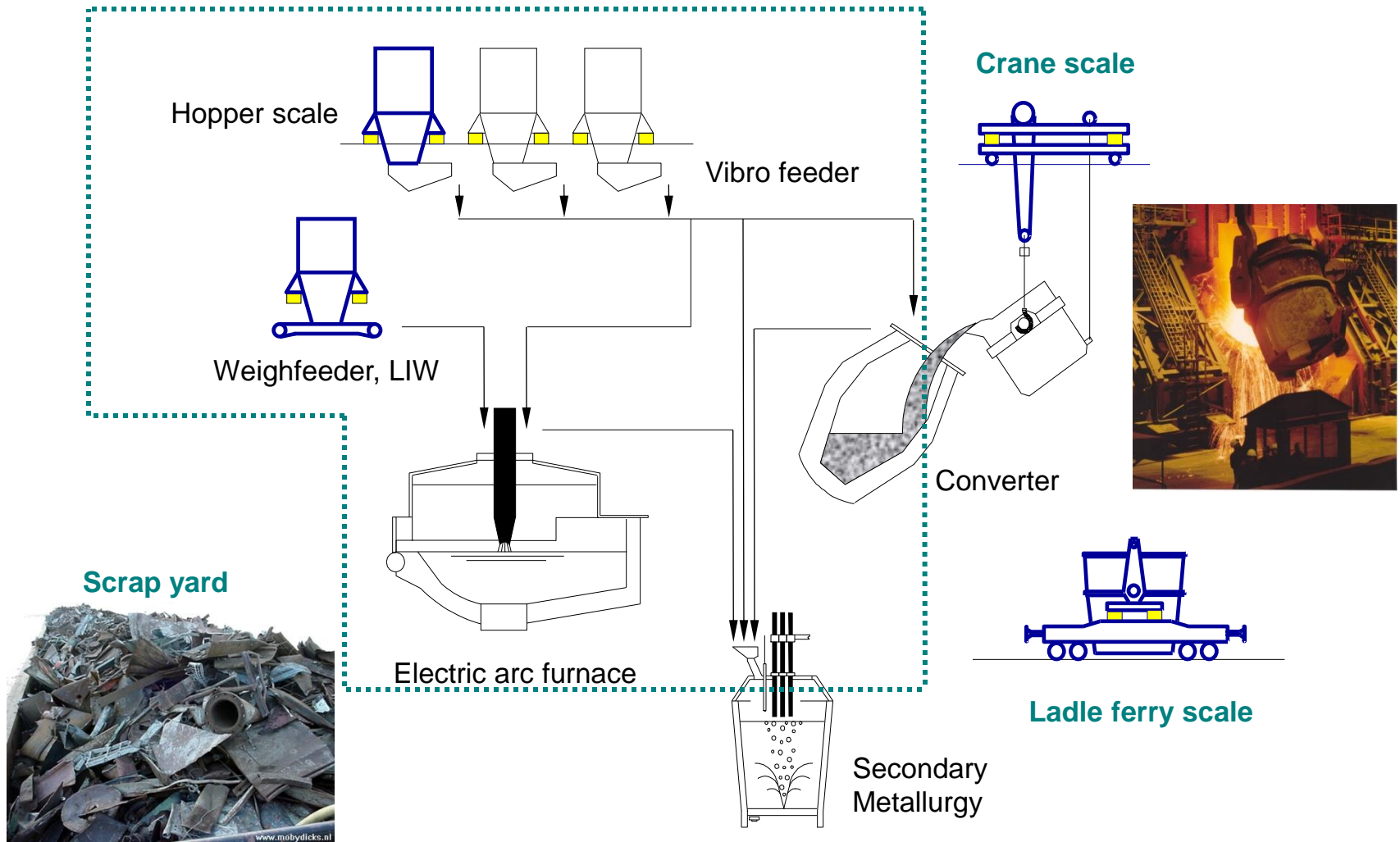
# Sinter plant



# Blast furnace: Burdening, reduction, smelting



# Steel work: Smelting, Alloying

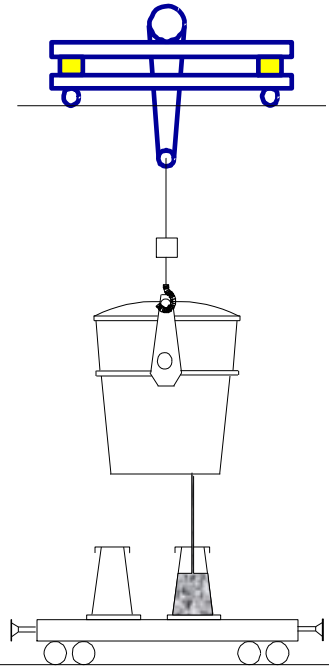




# Casting

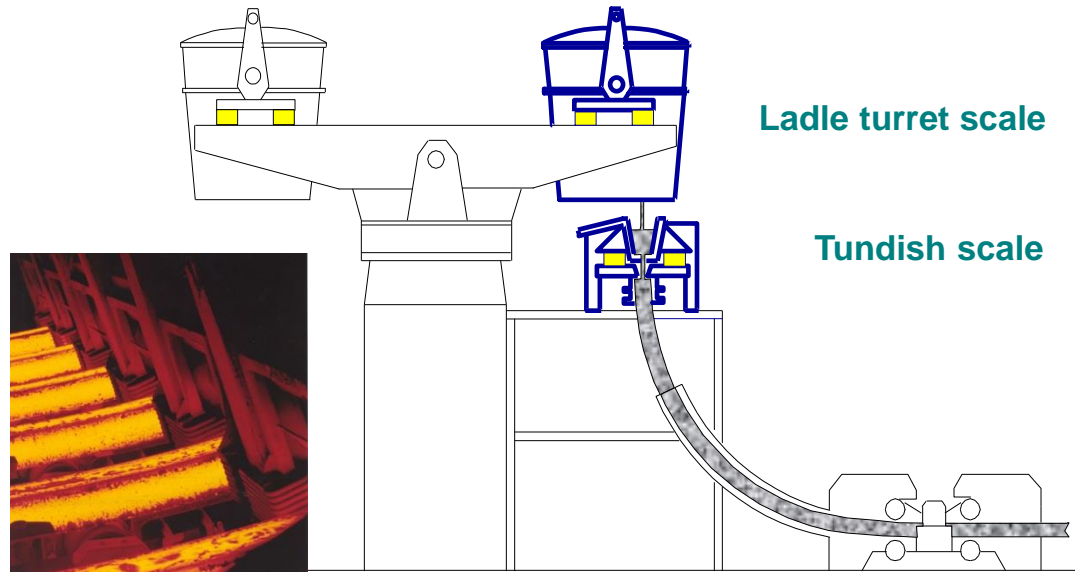


Teeming crane scale

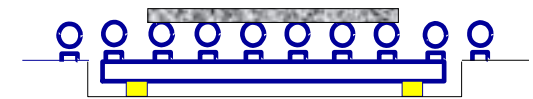


Ladle turret scale

Tundish scale

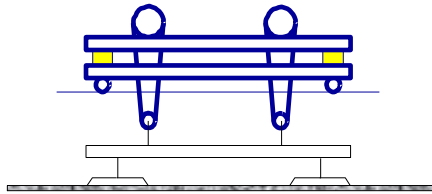


Roller conveyor scale

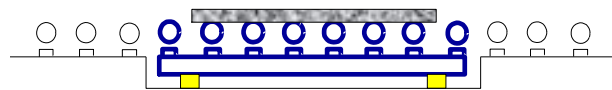
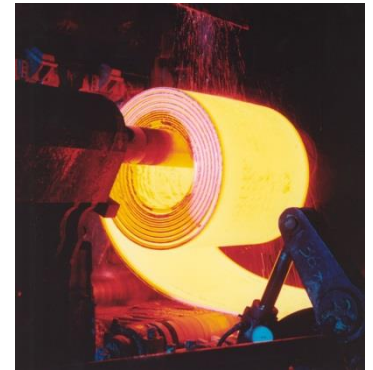
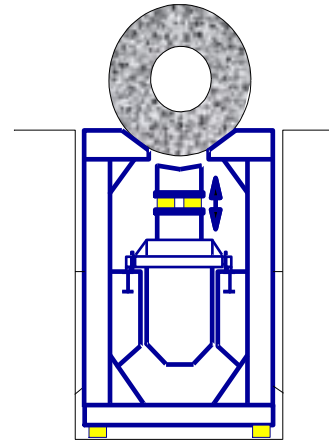


# Milling and product finishing

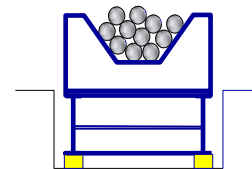
Crane scale



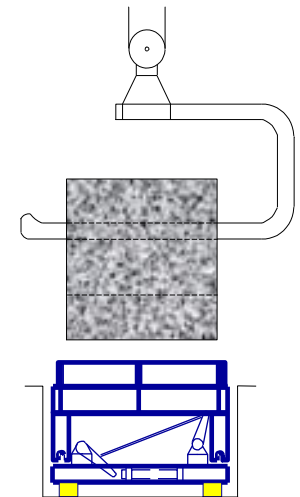
Coil scale



Roller conveyor scale



Mould scale for profiles



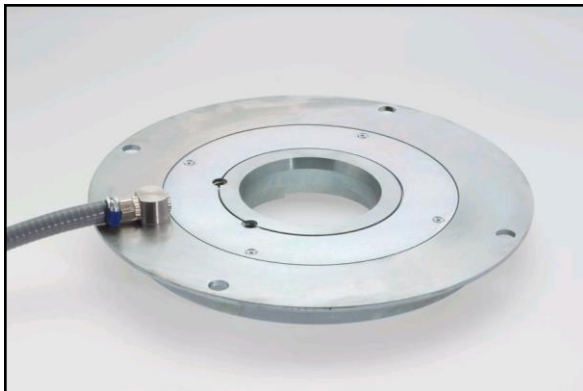
Raising platform scale

# ACTUAL INSTALLATIONS



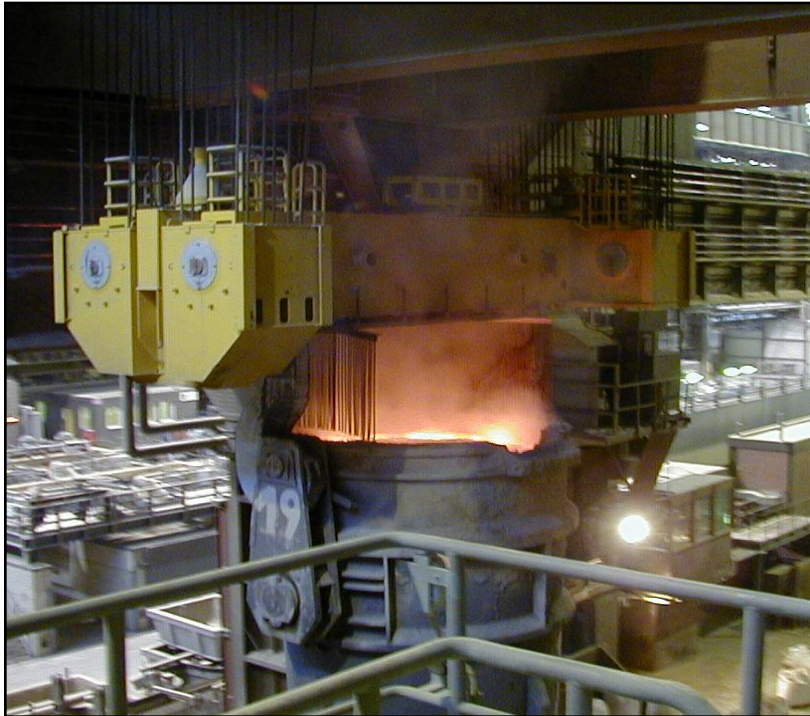
# Weighing - Main Components

1. Weighbeams
2. Weighdisc
3. Radial Force Sensors
4. Measuring Eyes



## Crane Scales

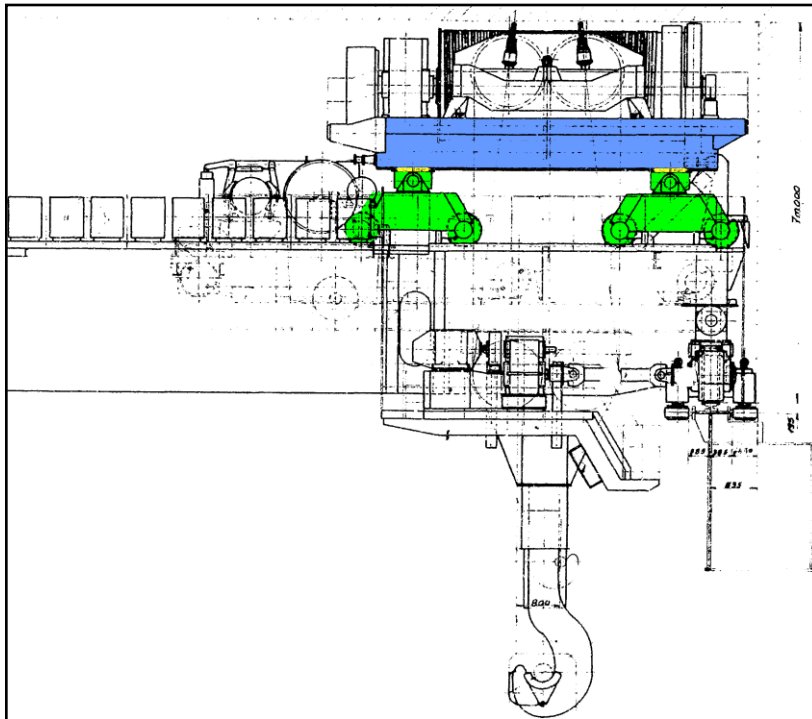
1. Are completely mobile allowing weighing to take place at every position in the production area
2. Increase safety of crane operation
3. Allow total mass balancing and yield optimisation
4. Removes guess work



# Crane Scales

Installation of pre-assembled weighing units at the mechanical interface between wheelbase and trolley frame:

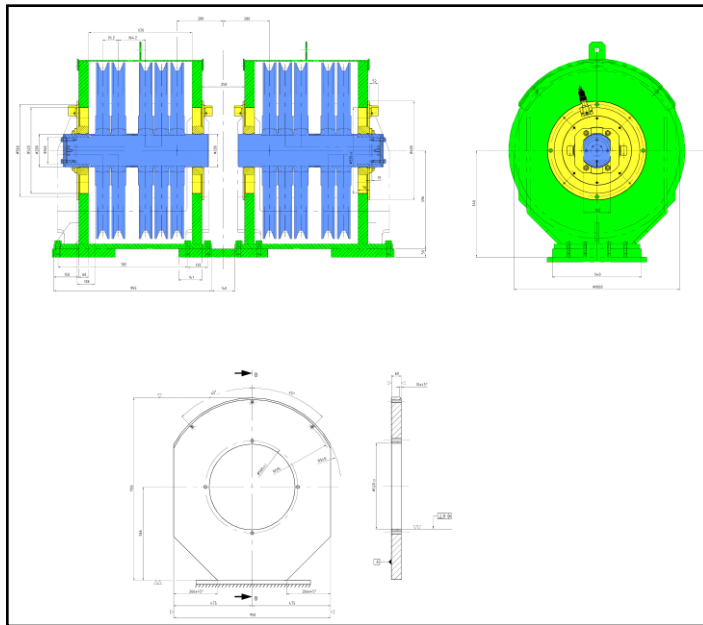
- low installation headroom required (about 200-300 mm)
- quick installation by maintaining the existing fixation elements
- no change of the crane statics



# Crane Scales

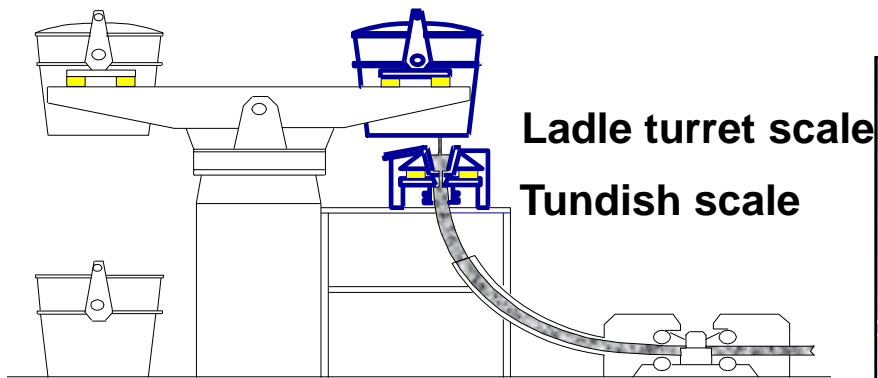
Replacement of the existing upper sheave block by a weighing upper sheave block:

- no extra installation headroom required
- extremely quick installation (typically 16 hours) of the pre-assembled small weighing sheave block (size about 1 x 1 m)
- no change of the crane statics



# Ladle Weighing

1. Decrease Losses with accurate tare weights
2. Maximize Capacity both when filling and emptying
3. Increase Safety



**Turret Weighing**

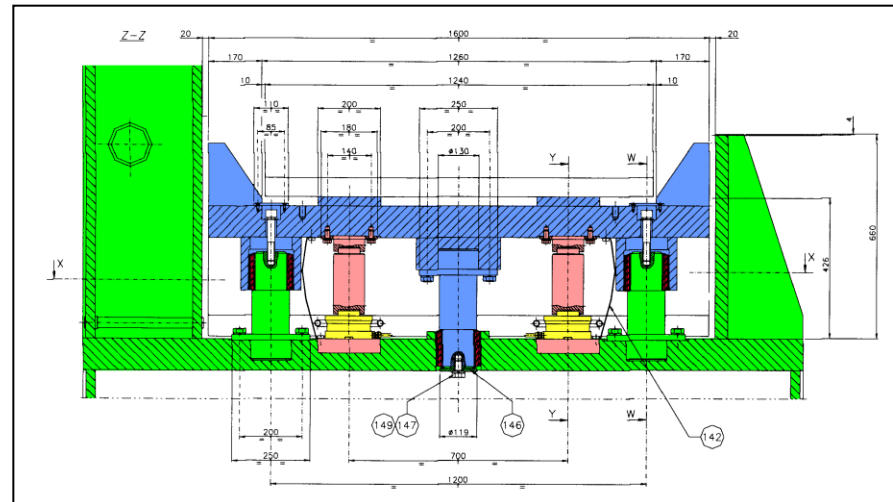




# Ladle Weighing



## Ladle Supports



# Rail Car Weighing



1. Turret Shuttle Cars
2. Coke cars
3. Scrap cars

On Car



## Rail Car Weighing



1. Legal for Trade (coming soon)
2. Cars entering or leaving plant
3. Bulk Materials
4. Scrap Cars
5. Simple Installation

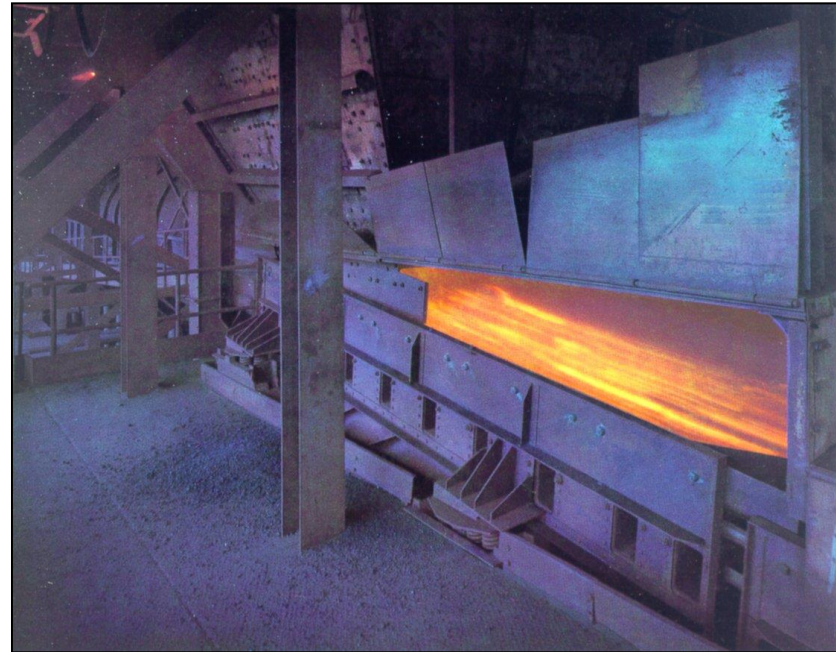
**In the Rail**

## Screens

1. Classification of ore, limestone, coal, coke, pellets, hot and cooled sinter, HBI/DRI (hot-briquetted iron / direct iron reduction) and stock additives
2. Dewatering
3. Crusher relief



**Hot Sinter Screens**



# Screens

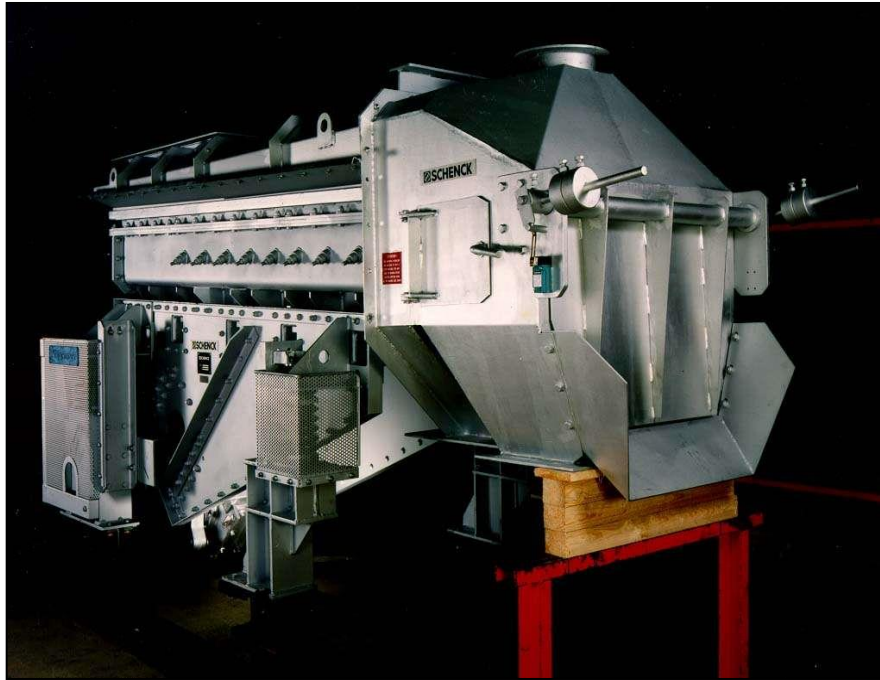


**Cold Sinter Screens**

**Coke Classification Screen**



# Screens



HBI/DRI Screen



HBI Cooler

# Basic Material Handling & Metering Equipment

Spheri® Valves



DMO Feeders



Dust Filters



# Any Questions?

