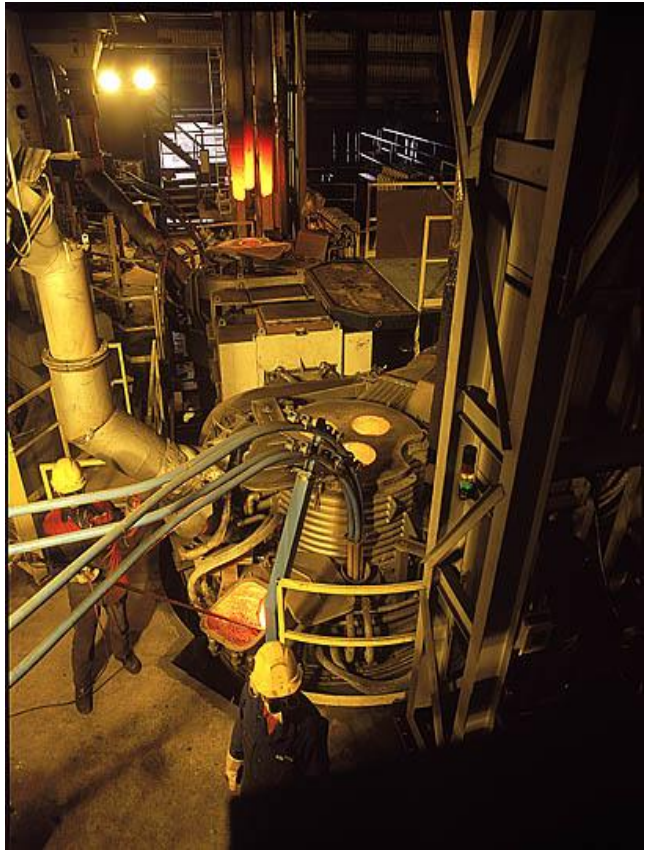
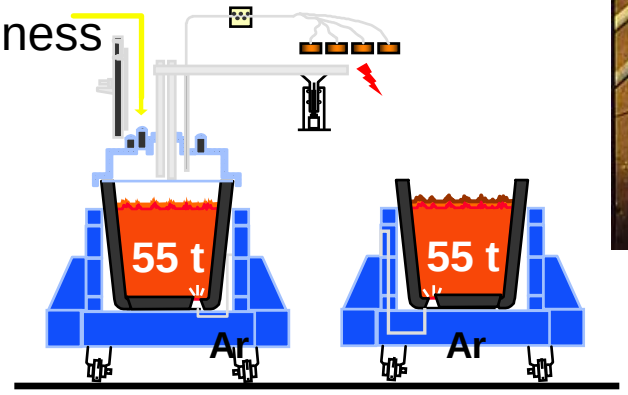
Ladle furnace

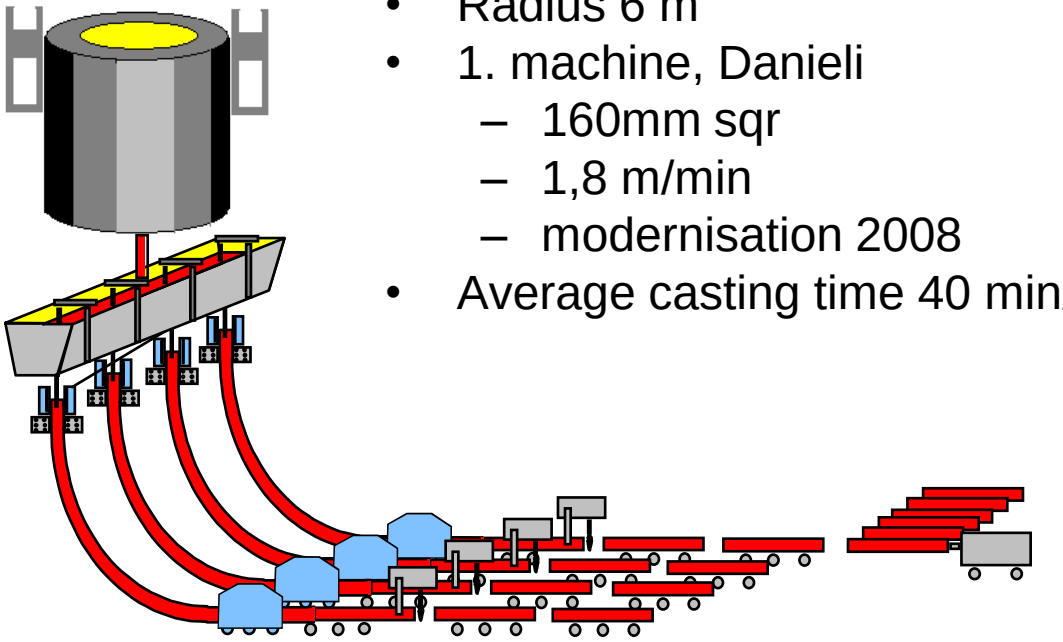
- The ladle furnace was built 2001
- Two stations with shared electrodes
- Technical information:
  - Charge: 55 t
  - Max effect 15 MW
  - Heating effect + 5.5 °C/min
  - Electrode wear 7 g/kWh
- Alloys: wire and silo feed
- Benefits of ladle furnace:
  - Better alloying hit rate
  - Better temperature control
  - Better steel cleanness





Continuous casting machines

- There are two casting machines and they have been revamped and renewed several times during the years.
- Both have 4 strands
- Tundish size: 12,5 t
- Radius 6 m
- 1. machine, Danieli
  - 160mm sqr
  - 1,8 m/min
  - modernisation 2008
- 2. machine, Danieli
  - 160/145/130 sqr
  - 2,8 m/min
  - renewed 2007
- Average casting time 40 min/ladle.



Cooling beds

- After casting the steel is cut to billets
  - 1. machine: 7,2 m (max. 10.6 m)
  - 2. machine: 11,3 m (max. 12.6 m)
  - Propane started oxygen cutting
- 2. machine equipped with deburring.
- The billets are marked on the cooling bead with mechanical stamping.
- On the cooling beds the billets are cooled down, and to keep the billets straight, they are turned 90° at every step.

Billet handling and stock

- **Billet handling**
  - bundling (Alblasserdam billets)
  - Visual surface inspection
  - Grinding of possible surface defects
  - Removal of cutting burr
  - Placing of billets in stock

- **Billet yard**
  - Maximum stock 60kt
  - Trucks and billet carriers
  - Loading of trucks for Dalsbruk (outsourced) and transport to harbour (Alblasserdam)

Produced steel grades 2008