Clean and cool in one go

www.disagroup.com
Compared to a traditional shake-out, sand cooler and casting cooler the DISACOOL offers:

- Lower capital investment
- Low operation costs
- Less noise
- Low energy consumption
- Minimum service and maintenance
- Easy installation
- Short cooling times
- A highly efficient combination of mould shake-out, sand cooling, lump crushing, homogenisation and casting cooling in one process.
- Complete integration with moulding line
- Enclosed process for a cleaner and quieter foundry

Effective cooling of castings and sand

The moulding sand and castings are cooled by evaporation of residual water in the sand and by evaporation of the water that is sprayed into the drum.

A counter air flow through the drum removes the resulting water vapour and increases the cooling effect.

- Castings are tumbled gently with the sand in a smooth process lasting 20-30 minutes.
- Sand lumps are broken and the sand is effectively blended prior to screening off in the drum end screening section.
- The cooled castings are discharged at the DISACOOL outlet.

Optimal pre-conditioning with SWD

The Secondary Water Dosing system (SWD) takes advantage of the even process flow of screened sand from the DISA COOL.

- Controlled addition of water to the already cool and moist sand enables additional cooling of the sand to a temperature below 45°C
- Prior to recycling to the main hoppers, sand moisture content is below 2%

Process specifications

- Casting discharge temperature:
  The final casting temperature is typically between 70 and 90°C with an inlet temperature of approx. 700°C, depending on the type of casting and flow rate through the drum.

- Sand discharge temperature:
  A sand temperature between 45 and 55°C and a moisture content of about 1.5% (max. 1.8%) is normally reached if the metal to sand ratio is between 1.5 and 1.0 when entering the drum. An optional Secondary Water Dosing System (SWD) system ensures final sand temperatures below 45°C

- Noise levels:
  Noise levels are less than 85dB (A)

- Accurate control:
  The advanced DISA control system assures optimum cooling without exceeding the moisture limit. The system also detects unpoured moulds and adjusts water addition accordingly.

“He have achieved attractive savings since changing over to the DISACOOL. The gentle handling of the castings in the cooling drum itself and the low sand discharge temperature with the installation of a secondary cooling and remoistening system mean that we can directly recycle sand back to the sand plant” – V. Narasimhan, Executive Director, Brakes India Limited, India