ladle handling
and casting systems

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ladle handling and casting systems

ladle handling
and large ingot-casting facilities
ladle-transfer cars
ladle tilting/lifting equipment

Large ingot casting portals handle the ladles for casting purposes.
Ease and flexibility in handling allows a high improvement of overall productivity.
They are conceived so as to receive the ladle with direct loading by the over-head cranes or picking up of the ladle from dedicated ground stands or transfer cars.

The overhead cranes are not engaged in casting and are therefore free to work out other tasks i.e. work on transferring and handling, increasing in turn the overall productivity of the casting-shop.

The casting portals are radio-controlled by the operators during ladle loading/unloading and ladle positioning over the casting point.
Cast quantity and casting rate are evaluated by means of a weighing system with load cells fitted into the lifting system.
The casting rate can be controlled by adjusting the ladle's bottom sliding gate to a fissure position (through the actuation of the dedicated cylinder).
The monitoring of the facility is ensured by a state-of-the art diagnostic system which supervises the status of the instruments and sensors.
Casting portals have the following main features:

- ground and/or overhead runways;
- electrically driven main travelling direction;
- electrically driven secondary carriage for ladle cross positioning;
- ladle lifting by means of hydraulic cylinders or cable-winch system;
- ladle cover handling device;
- hydraulic fluid aggregate, power centre and control system (PLC, operator interface) fitted on board;
- power supply by means of conductor bars or cable and cable-reel;
- Remote Radio Control (both from control pulpit inside the cabin and hand-held device);
- heat shields;
- weighing system;
- technical gases (O2, N2, Ar) fed onboard with hoses and hose-reels;
- onboard gangways to allow access for the operators.