



CasterJet® Monitoring System

Instantly detects worn and clogged CasterJet nozzles during use

Benefits

- Continuous monitoring of CasterJet nozzles during operation without visual inspection. Pressure sensors and dedicated spray controllers detect slight changes in performance that indicate clogs or wear as they occur. Audible or visual alarms notify workers for immediate corrective action
- Early detection of clogged nozzles helps prevent quality problems associated with uneven cooling
- System can pinpoint exactly which nozzle is plugged for better caster control
- On-line data logging also available for critical installations
- Can expedite or replace time-intensive quality inspections
- The AutoJet spray controller monitors and documents CasterJet nozzle performance, verifying that all conditions for high-quality slab production have been achieved
 - Production time increases since slabs no longer sit dormant during quality checks
 - Potential reduction in energy consumption by minimizing the time required for reheat due to shortened quality checks
 - Boosts production by reducing downtime



Specifications

- Pressure sensors
- AutoJet 2250 Spray Controller with specialized software
- Compatible with all CasterJet nozzles

Typical Applications



Continuous Casting

CasterJet® Monitoring System Operating Principle

Pressure Sensor Placement

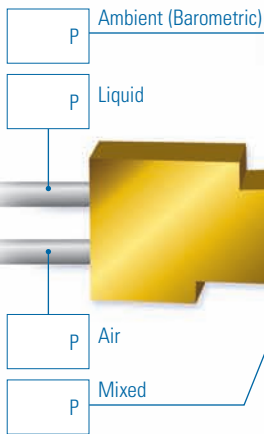
Suggested locations for installation include:

- Upper zones
- Fixed side in bending/unbending zones
- Any segments prone to clogging from dirty water or mould powder presence
- Segments where spray water is critical for shell growth or critical surface metallurgical properties



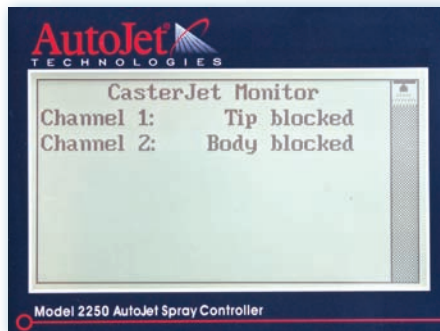
Alarm

Alarm is triggered if pressure changes go outside user-determined range and will clear when pressure returns to acceptable range



Pressure Sensor

- Sensors measure inlet water pressure, inlet air pressure, pressure after CasterJet mixing chamber and ambient barometric pressure
- If an inlet clogs:
 - Pressure in manifold will drop
 - Pressure in mixing chamber will drop
 - Alarm signals blocked inlet
- If a tip clogs:
 - Pressure in mixing chamber will increase
 - Alarm signals blocked tip



AutoJet® 2250 Spray Controller

Monitors and documents CasterJet nozzle performance



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Spray Nozzles



Spray Control



Spray Analysis



Spray Fabrication

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