

Valmet Furnace STL IR Camera System For Ladle Metallurgy Furnace (LMF)

Key Advantages:

- Unobstructed View of Entire LMF
- Observation of Argon Stir Bubble
- Improved Productivity and Product Quality
- Better Operator Safety with
- Real-Time Monitoring

Innovative Product Features:

- Remote Focus and Iris Adjustment
- Insulated Heavy Duty Shroud
- Digital Viewer Software
- Patent Pending Cross Flow Lens



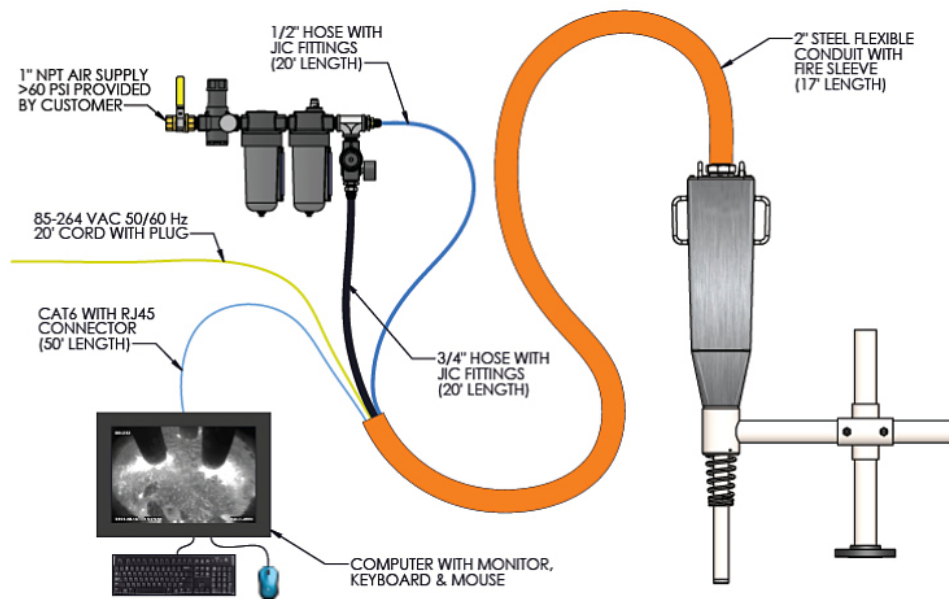
The Valmet Furnace STL infrared camera system provides enhanced visibility, allowing operators and engineers to monitor key developments throughout the LMF steel making process.

The Valmet Furnace STL Camera System is well-protected and provides unprecedented operational views of the Ladle Metallurgy Furnace (LMF). It also

allows for an unobstructed view of the entire tapping process, virtually unaffected by dust, steam, arc flash, UV light or fireball.

Specially designed for industries using extreme high-temperature processes, including steel, power, pulp and paper, and petrochemical. Valmet Furnace Infrared Cameras are engineered for durability and longevity.

Valmet Furnace STL Camera System Layout & Connections



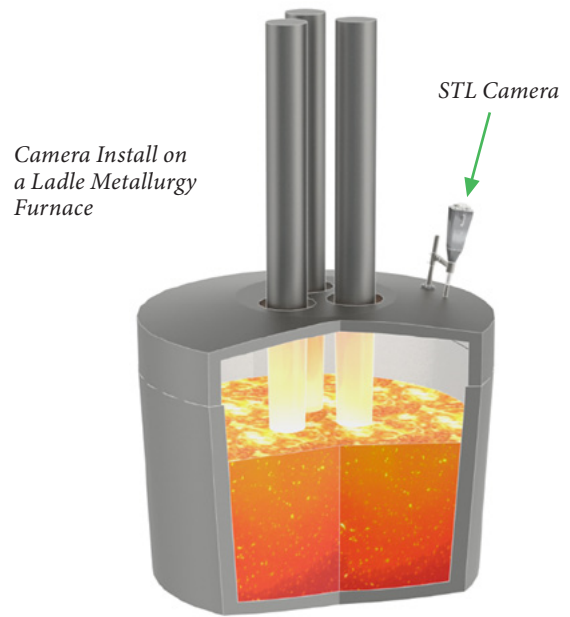
Key Benefits of using Valmet Furnace STL Imaging System:

- Unobstructed view of entire LMF process during full operation.
- Clear IR view, virtually unaffected by intense UV produced by the arc, off-gassing, flames or steam.
- Observation of argon stir bubble throughout heat process.
- Improved productivity and product quality.
- Reduced refractory consumption.
- Monitor feed procedures, ladle freeboard, and stirring conditions in real time.
- Helps in preventing slag line breakouts.
- Ability to see water leaks.
- Improved temperature and ladle alloying control.
- Better operator safety while monitoring conditions in real time.
- Reduced time at LMF per heat operation.
- Yearly time savings estimated to be \$600,000 US sales potential.

Digital Viewer Software

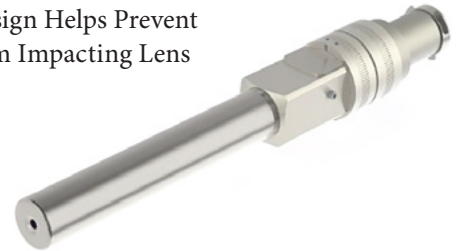
The Valmet Furnace STL Camera System comes with our proprietary image processing software. The software includes all of the following features:

- Video Colorization
- Remote Control of the Camera's Iris & Focus
- Timed Video & Image Capture
- Automatic Disc Space Management
- Digital Pan/Tilt/Zoom
- Accepts Multiple IP Video Streams
- Easy to use Interface

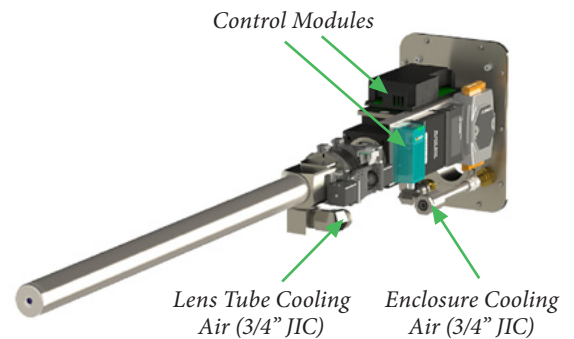
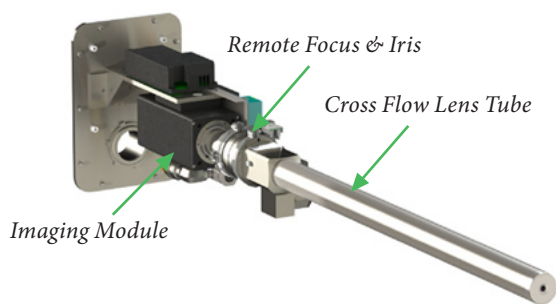


Valmet Furnace STL Cross Flow Lens

- Patent-Pending Innovative Design
- Reduced Air-Flow Requirement
- Robust Design Helps Prevent Sparks from Impacting Lens



Valmet Furnace STL Camera Components



Specifications

Imaging Unit Dimensions:

- Camera Housing & Lens Tube 46" x 10.5" x 10.5" (1168 x 267 x 267 mm)
- Air Filter 28" x 16" x 8" (711 x 406 x 203 mm)
- Pipe Mount 20" (508 mm) V & H Adjustment, 360° Rotation, 25" x 28" (711 x 711 mm)

Standard Lens:

CF 120/34 (HD Tip), 120° Field of View,
D 1-5/8" x L 34" (D 41.3 x L 864 mm)

Lens Performance:

Focal Range 12" (300 mm) to Infinity

Detector:

- Frame Rate 30 Hz
- Resolution 640 x 480
- Auto Correction Automatic Gain, Automatic Level

Weight:

- Camera & Lens Assembly 10.5 lbs (4.8 Kg)
- Air Filter 20 lbs (9 Kg)

Operating Temperature:

- Camera 0°F to 130°F (-17 to 54°C) Non-Condensing
- Filter System 32°F to 175°F (0 to 79°C)

Camera Power Requirements:

80–250 VAC, < 2 Amps

Video Output:

Analog – NTSC / Digital – MJPEG & H.264

Cooling Air Supply:

- Pressure Plant Service Air, Regulated
> 60 psig (4.14 bar, 414 kPa)
- Consumption At 80 psi (5.5 bar) Inlet Pressure, < 60 SCFM (1699 L/min)
- Maximum Inlet Temperature < 130°F (54°C)