

## AST BF – 1600

### Key Features

- Tight structure and well-sealed probe
- Automatic operation of pneumatic ball valve after probe withdrawal
- Option to choose between video camera and infrared camera.
- Temperature data saving and simulation temperature field analysis
- Air purge device for cleaning the probe head.
- Auto protection device for water cut off, air cut off, and power cut off.

### System components-

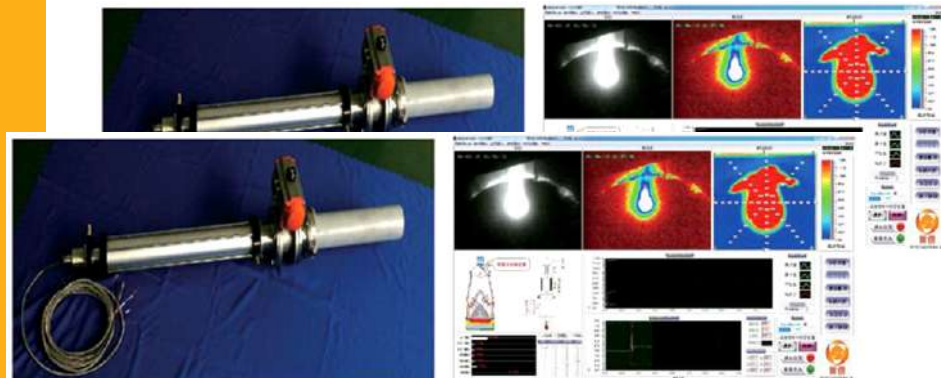
- Camera and Pinhole Lens.
- Camera/Lens Probe with N2/Water Cooling.
- Control Case, Remote Control Panel.
- Air Filter.
- Video Cable, Control Cable, Power Cable.
- Monitor (optional).
- Computer (optional).
- Camera Monitoring and Analyzing Software (optional).

## BLAST FURNACE CAMERA SYSTEM



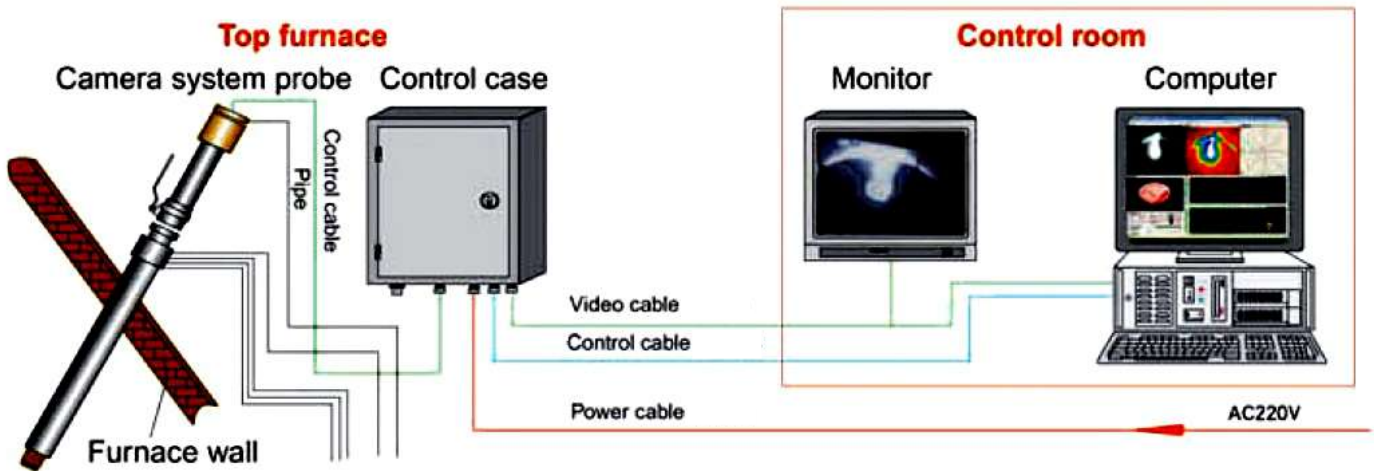
The blast furnace infrared camera imaging system is a specialized infrared camera system designed for iron works. It features a ball valve sealing and is cooled by water and air. The system utilizes a water-cooling device outside the probe and forced cooling with compressed nitrogen to cool the camera and lens. It creates an air curtain in front of the puncture, effectively preventing lens erosion from high temperatures and furnace powder. The camera lens is securely fixed to the kiln wall, allowing direct observation of charging, surface conditions, burning, and material temperature. This technology enhances safety, improves the working environment, reduces workload, and enables centralized direction and automation in the manufacturing process.

The two-cylinder high-temperature camera system is designed for blast furnaces. Unlike traditional systems, it eliminates manual probe handling, reducing labor and safety risks. It automatically withdraws when over-temperature or over-pressure conditions are detected, enhancing safety and efficiency.



# Specifications

Technical		Min. Object	>Φ5mm
Environment	Up to 2000°C	Power supply	15~24VDC
<b>Requirement of compressed nitrogen</b>		Power consumption	150mA(max)
Pressure	0.2~0.7MPa	Output	4~20mA, 1~5V, RS485
Volume flow	0.1-0.4 m3/min	<b>Image parameters (THERMAL VIEW)</b>	
Temperature	<35°C	Infrared camera resolution	640*480/384*288
<b>Requirement of Cooling Water</b>		Video camera resolution	Max 1920*1080
Inlet pressure	0.4~0.8MPa	Infrared viewing angle	9mm:60°*44°
Volume flow	min 0.2m3/h	vision viewing angle	100°
Temperature	≤35°C	Communication mode	Coaxial video temperature control
<b>CCD Camera and lens (VIDEO VIEW)</b>		Max. temperature inside furnace	2000°C
Image sensor	1/2" CCD Sensor	Retraction system	Temperature, pressure, flow
H. Resolution	580 TV lines	Air inlet pressure	≥0.3Mpa
Video output	1.0 Vp-p, 75Ω	Air consumption	≈20m3
S/N ratio	More than 48dB (AGC off)	Power consumption	Pneumatic 10W
Shutter speed	1/50~1/100,000 Sec	<b>Full HD IP Box Camera (Video View)</b>	
Min Illumination	0.0003Lux	Image Sensor	1/2.7" 5 Megapixel progressive scan CMOS (6.858cm)
Power	DC 12V 120mA	Minimum Illumination	0.005 Lux@F1.7
Pinhole lens	Focal 2.1 mm (Infrared lens)	Effective Pixels	2592(H) x 1944 (V)
Field of view	110°C	Shutter Speed	Auto/Manual, 1/3 s-1/100000 s
<b>Temperature parameters (THERMAL VIEW)</b>		White Balance	Auto/Natural/Steet Lamp/Outdoor/Manual
Temperature range	-50°C-1000°C, 600°C~1800°C	Lens	C/CS
Accuracy	±2%FS, repeat accuracy±2%	Power Source	DC 12V (±25%), AC 24V (±25%), PoE (802.3af), ePoE
Resolution	1°C	Operating temperature	-30°C to +60°C (-22°F to +140°F)/ Less than 95 % RH
Emissivity	0-0.99		
Value mode	Instant, peak, and averaging.		
Object distance	0.6~infinite meters		



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