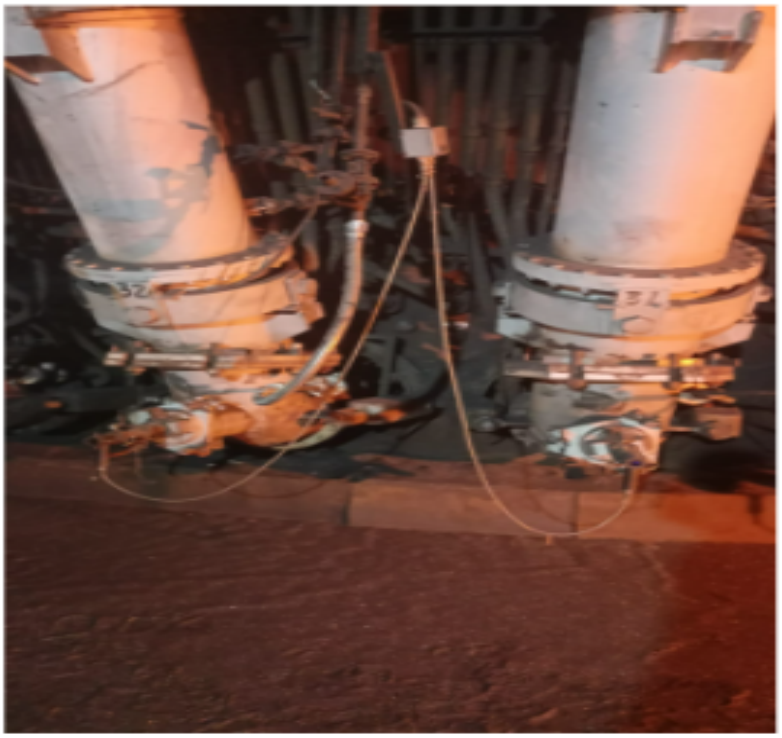
Toshniwal Industries Pvt. Ltd.
Experience • Expertise
MG Toshniwal Group

TUYERE CAMERA

STV4800 Series



Feature

Hardware Feature

- Viewfinder design / Operator can see through the peephole lens.
- Audible alarm/buzzer.
- Easy to install with a quick-release adapter.
- No N2 or Air or water cooling is required.
- Sensor 1/3 Inch CMOS sensor.
- Advanced Heat-Insulation Protection.
- Lens Light Transmission Rate 1: 1.0 Ultra Fast Lens.

- Working Temperature- 20℃～70℃
- Compact pen size design.
- Camera electronics size is approx 15mm dia.
- No modification is required at the peephole pipe.
- Can design for an enclosure for 300℃ ambient temperature (Near the tp Hole.)
- Anti-glare coating lens

Software feature

- Real-time monitoring inside furnace conditions
- Real-time video display without legging.
- Intelligent software provides theoretically calculated temperature profiles.
- Approximately 24 -28 Cameras can be displayed in a single screen.
- System can be designed up to 60 Tuyeres.
- Each camera view can zoom & zoom out and Focus in & out.
- History videos can be recalled with time and date stamping.

Introduction

Blast furnaces in steel plants continue upgrading the process to achieve higher efficiencies, minimize operating costs, Increase productivity, improve final product quality & reduce yield losses. Tuyere Monitoring is one such advanced camera-based state-of-the-art technology that enables an operator to observe & inspect the health of the tuyeres from the control room.

Benefits

- The Tuyere camera system helps the operator to observe abnormalities i.e. tuyere jamming.
- Coal and Air ratio.
- PCI coal if it damages the inside tuyere tip can be detected by the Tuyere camera system.
- Record all the videos in history.
- Saving coal fuel by monitoring processes.
- Lance pipe condition monitoring
- Helping in cross-checking of RAFT calculation.
- Race full moon viewing to monitor PCI burning

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- PCI burning in the center of Tuyere tip.
- Provide the theoretical temperature which helps to keep the temperature in center heat.
- No need of N2 cooling or purging, can save Rs 1 cr per BF.
- Special intermittent purging helps the moisture dew point generation.

Technical Specifications

Parameter	Description
Model no.	STV 4800
Camera Resolution	0.5 to 1 MP 1 MP to 3 MP.
FPS	Upto 180 FPS in all resolution
Shutter Type	1/1,00,000 times
Data Rate	1000 Mbps
Working Temperature	(-)10 Deg C to 80 Deg C
Power Input	12 VDC
File Format	BMP
Lux	Color:- 0.20 lux Black & White:-0.025 lux
Brightness	Auto iris (Electronic based)
Focus	Auto/Manual
Cooling	Not required up to 80 Deg C ambient
Enclosure Material	SS/ Al alloy

Selection Table

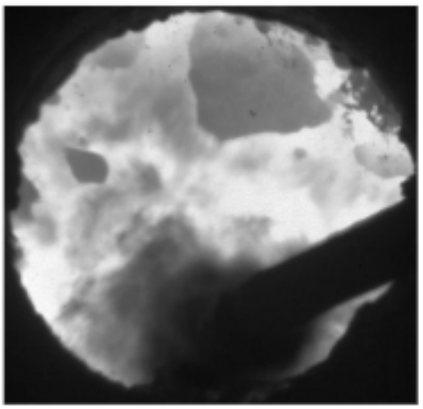
Example - CA1JB1CC0VC1SC3PC2OC2LCD19

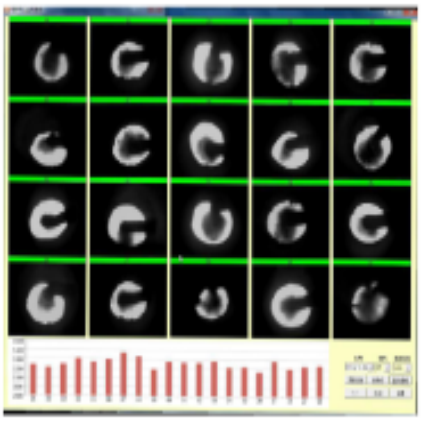
STV4800	BF TUYERE CAMERA
10	**Camera Type**
CA1	Analog
CA2	Digital
CA3	Digital with Onvif
20	**Joint Box**
JB1	Analog
JB2	Analog ex-proof
JB3	Digital
JB4	Digital Ex-proof
30	**High Temperature Power Camera Cable (2 core x 0.5mm2)**
CC0	None
CC1	500m
CC2	750m
CC3	1000m
CC4	1250m
CC5	1500m
CC6	1750m
CC7	2000m
CC8	2250m
CC9	2500m
40	**High-Temperature Video Cable (2 core x 0.5mm2)**
VC0	None
VC1	500m
VC2	750m
VC3	1000m
VC4	1250m
VC5	1500m

VC6	1750m
VC7	2000m
VC8	2250m
VC9	2500m
50	**High-temperature Ethernet Video Signal Cable (2 core x 0.5mm2)**
SC0	None
SC1	500m
SC2	750m
SC3	1000m
SC4	1250m
SC5	1500m
SC6	1750m
SC7	2000m
SC8	2250m
SC9	2500m
60	**Main Power Cable (3x1.5mm2)**
PC0	None
PC1	300m
PC2	500m
PC3	750m
PC4	1000m
70	**Fiber Optic Cable 6 Core**
OC0	100m
OC1	200m
OC2	300m
OC3	400m
OC4	500m
OC5	600m
OC6	700m
OC7	800m
OC8	900m
OC9	1000m

80	LCD Small
LCD19	19" Monitor
LCD20	20" Monitor
LCD21	21" Monitor
LCD22	22" Monitor
LCD23	23" Monitor
LCD24	24" Monitor
90	**MCC Panel**
N	None
MCCX	Customized
100	**Wall Mount Monitor**
M55	55" Monitor
M65	65" Monitor
M75	75" Monitor
M82	82" Monitor
110	**Half Way Junction**
HW1	Single Panel
HW2	Dual Panel
120	**UPS Capacity**
UPS0	None
UPS1	1 KVA
UPS2	2 KVA
UPS3	3 KVA
UPS4	4 KVA
UPS5	5 KVA
130	**History Storage**
HS30	30 days
HS60	60 days
HS90	90 days

Proven Track Record





Order Note:

1. Consult us by calling us at 8448441044 or emailing info@tipl.com for special designs.
2. Evaluate the exact Application, and working conditions at the pressure detection point before ordering to avoid losses due to wrong product selection.
3. TIPL will not be responsible for losses due to the wrong selection of specifications.
4. Customers should ensure power supply grounding, and installation of anti-lightning (surge protection) devices to minimize the chances of product failure.
5. The photos, color, form, and dimensions of the product are indicative and can change based on product selection without prior notice.