



Furnace Clinker Monitoring System

- Temperature: Max 1927 °C
 - Angle: 270° Right/ Left
- Lens Type: Straight, Obtuse, Right Angle
 - Air Cooling System

for accident prevention

ORBIS Co., Ltd.

Furnace Clinker Monitoring System

Overview

Monitoring of clinker in the furnace/boiler by the use of special camera installed on the boiler wall for visual view of accumulated clinker. Operational availability increment and prevention of failure against accumulated clinker and creation of huge clinker by real-time monitoring

Configuration



Components

High Resolution Camera

Imaging Device	1/2" Ex-view HAD CCD
Total Pixels	811 (H) x 508(V)
Horizontal Resolution	Color : 600TV lines (Min.) B/W 700TV lines (Min.)
Min. Illumination	Color : 0.1 Lux(50IRE@F1.2) B/W : 0.01Lux(50IRE@F1.2)



High Temperature Lens

Temperature	1927°C
Lens	Straight/Obtuse/Right angle
Length	12", 18", 24", 28", 36", 38", 65"
Cooling Type	Instrument air



Signal Processing Diagram

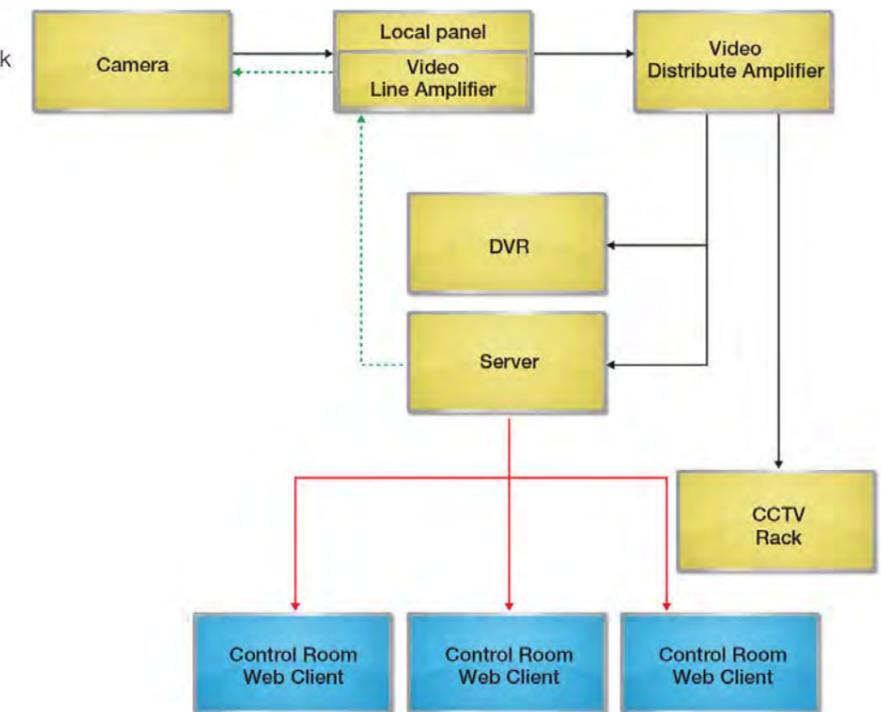
DVR

Video recording and playback

Server

Camera rotation
I/O signal processing
I/O signal link
Video Digital Streaming

→ Analog signal
--- Digital signal
→ Control signal



Software



Furnace Clinker Monitoring System

Installation



Effective

- Lifespan extended and heat efficiency increment by optimization of soot blower operation
- Prediction of overhaul by detection of clinker accumulation consistently
- Economic loss cost save by clinker falling accident

Reference

2008.	5	 KOREA EAST-WEST POWER CO.,LTD.	Dangjin	#8
2009.	11	 KOREA EAST-WEST POWER CO.,LTD.	Dangjin	#5
2010.	6	 KOREA EAST-WEST POWER CO.,LTD.	Dangjin	#7
	12	 KOREA EAST-WEST POWER CO.,LTD.	Dangjin	#3
2011.	5	 KOREA EAST-WEST POWER CO.,LTD.	Dangjin	#1, 2
	6	 KOREA EAST-WEST POWER CO.,LTD.	Dangjin	#7
	6	 KEN KOREA ENERGY	Yeongheung	#4
	8	 KOREA EAST-WEST POWER CO.,LTD.	Dangjin	#4
	11	 KEN KOREA ENERGY	Yeongheung	#5, 6
	11	 KOREA EAST-WEST POWER CO.,LTD.	Dangjin	#9, 10
	11	 wp KOREA WESTERN POWER CO., Ltd.	Taeon	#5, 6
2012.	4	 wp KOREA WESTERN POWER CO., Ltd.	Taeon	#1, 2
	7	 KEN KOREA ENERGY	Yeongheung	#4
	10	 KOREA EAST-WEST POWER CO.,LTD.	Honam	#1, 2
	12	 wp KOREA WESTERN POWER CO., Ltd.	Taeon	#9, 10
2014.	2	 KOMIPO	Shin-Boryeong	#1, 2