

# Furnace Monitoring Video and IR imaging



8 m long water-cooled measurement probe inserted in power plant boiler. 1" water inlet and outlet connections, 60.3 mm probe diameter.

# References

(list not complete)



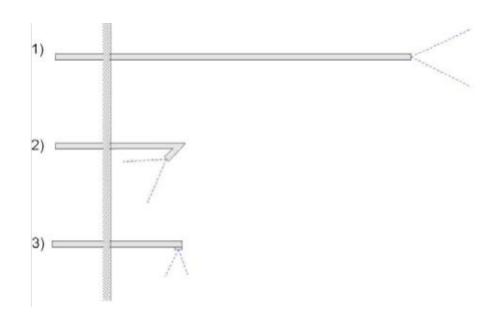
- FLSmidth, Denmark
- Babcock & Wilcox Vølund, Denmark
- Major operators power plants in Denmark

All water-cooled probes are designed to fulfil customer requirements.

### View of Probes fits Application

Examples

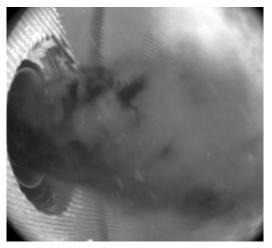




Long water-cooled video probe (up to 9 m) with field of view forward, 2) field of view of video camera backwards (e.g. to see slag deposits at burner) and 3) tilted field of view. Probe diameters typical 22-60.3 mm.



Video of burner row useful to see ignition and symmetry of flames.



IR still image showing fuel (wood dust) in flame.

#### **Movable Systems**





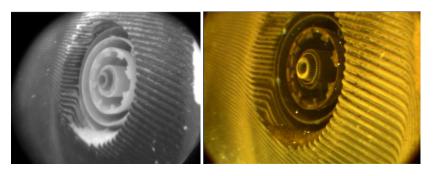
Movable system for burner inspection with fan cooling system. Only power and pressurized air is needed.



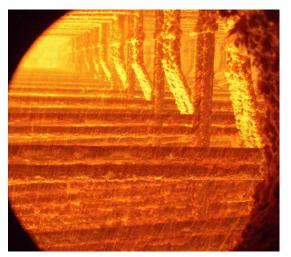
Peli 1770 flight case with water-cooled video probe in 3 parts. Other parts are found below foam. Video probe is approx. 3 m long assembled.



Portable combined video and IR imaging system for boilers using evaporation cooling (5-10 liter water per hour).



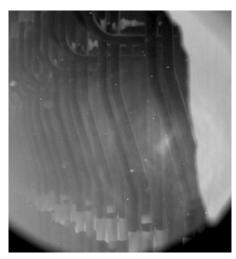
Combined IR and video. Left: IR image, right: video image.



Video monitoring of super heater section.

### Deposits





IR imaging of SH tubes, deposits will be seen as bright areas (nice clean tubes). Significant better view than with video.



Long term video monitoring of burner with deposits problems during operation, two still images.