

Furnace and kiln surveys and inspections

Thermaltec is an independent company supplying thermal imaging surveys and inspections to domestic, commercial and industrial organisations in the UK and abroad.



All furnace and kiln structure and refractories are subject to deterioration once commissioned. This deterioration may be in the forms of general and normal refractory wear or possibly in structural damage caused by movement and cracking.

This structural deterioration and damage is likely to be apparent during routine monitoring or visual surveys and inspections.

The extent of any refractory wear rate deterioration is unlikely to be neither apparent nor accurately assessed during a visual survey or inspection.

However, with the aid of thermal imaging techniques refractory wear rates can be more accurately assessed.

Refractory surface temperature data can be collated, monitored and trended. This allows any developing faults or problem areas to be highlighted at an early stage, assisting companies with their hot work maintenance programmes and also allows more precise and accurate planning of future remedial repairs and rebuilds.

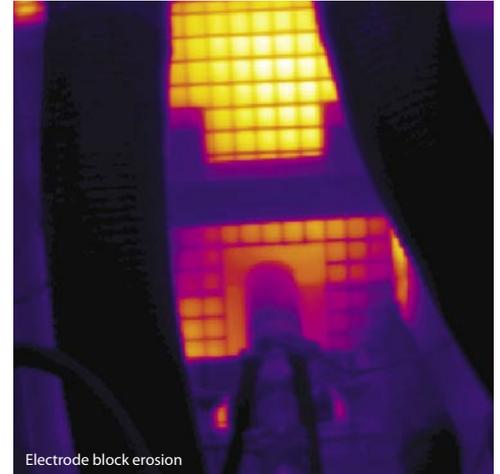
In serious cases these faults or problem areas can be brought to the client's attention immediately, allowing the necessary remedial action to take place at an early stage, possibly preventing dangerous occurrences and catastrophic failures.

A furnace or kiln thermographic survey or inspection can be completed at any time convenient to the client, and can be incorporated into existing predictive and preventative maintenance programmes and risk avoidance measures.

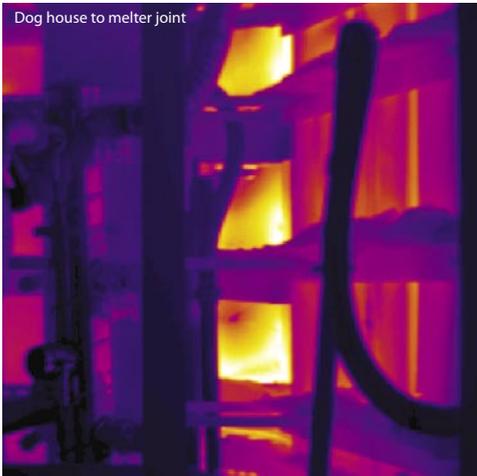
However, following the commissioning of a new furnace or kiln or following remedial repairs to a running furnace or kiln is an ideal time. Base line measurements can be taken and logged, then referred back to during future surveys or inspections to monitor the furnace condition.

Key points

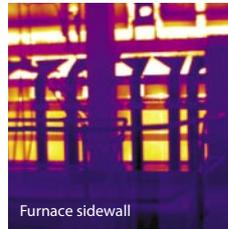
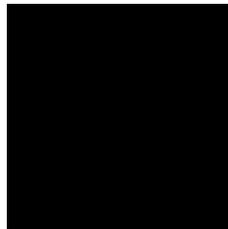
- ▶ Structure and refractories deteriorate once commissioned.
- ▶ Wear rates are not always apparent with visual monitoring.
- ▶ Wear rates can be more accurately assessed with thermal imaging techniques.
- ▶ Data can be collated and monitored, allowing more precise and accurate planning.
- ▶ Instant fault or problem area diagnosis.
- ▶ Early stage remedial action.
- ▶ Reduced risk of dangerous occurrences and catastrophic failure.



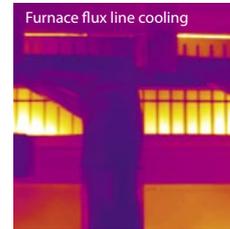
Electrode block erosion



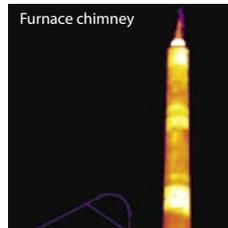
Dog house to melter joint



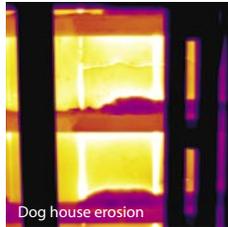
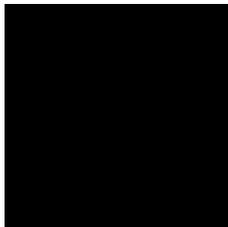
Furnace sidewall



Furnace flux line cooling



Furnace chimney



Dog house erosion

Furnace applications include:

- ▶ Condition monitoring
- ▶ Refractory wear rates
- ▶ Insulation integrity
- ▶ Structural defects
- ▶ Cooling systems
- ▶ Boost systems
- ▶ Remedial work integrity

Contact us for further information on how thermal imaging can enhance your company's performance and help detect problems before they happen – saving you lost production time and money.