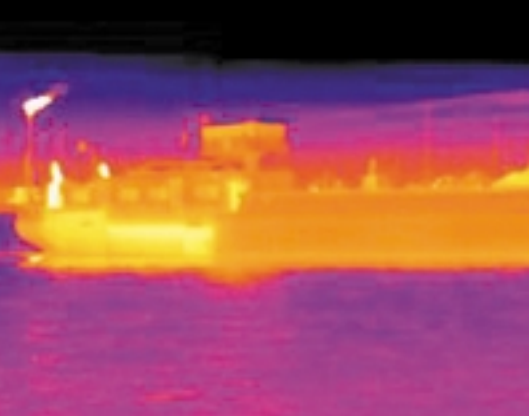


ThermaCAM™ E25
S h i p i n s p e c t o r

Discover
hidden problems
thanks to
thermal imaging



Use the ThermaCAM™ E25 and improve safety on board of every ship

Keep your fleet operational at all times

Thermal imaging is an easy-to-use diagnostic tool to perform all types of marine surveys and inspections. Pre-purchase inspections, inspecting systems when a vessel is handed over to the owner, insurance surveys, appraisal and damage inspections, all can be done with the help of infrared thermography.

Since vessels need to be operational at all times in order to avoid costly downtime, or even worse, fires or explosions, thermal imaging is the perfect tool for predictive maintenance.

Avoid fires, use thermal imaging

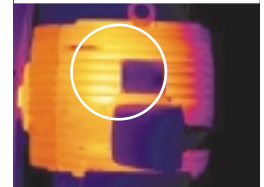
A small electrical problem in the engine room can have big consequences. Heat is generated and sparks might fly around setting the environment on fire.

Furthermore, the recently introduced SOLAS (Safety Of Life At Sea) regulations require areas of a ship whose surface temperature may exceed 220°C to be subject to thermal surveys. Machinery, associated flammable fluid systems and adjacent hot surfaces are the obvious candidates.

Avoid fires on board



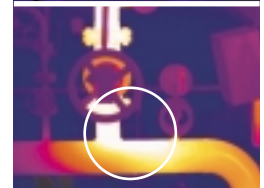
Avoid unnecessary repairs



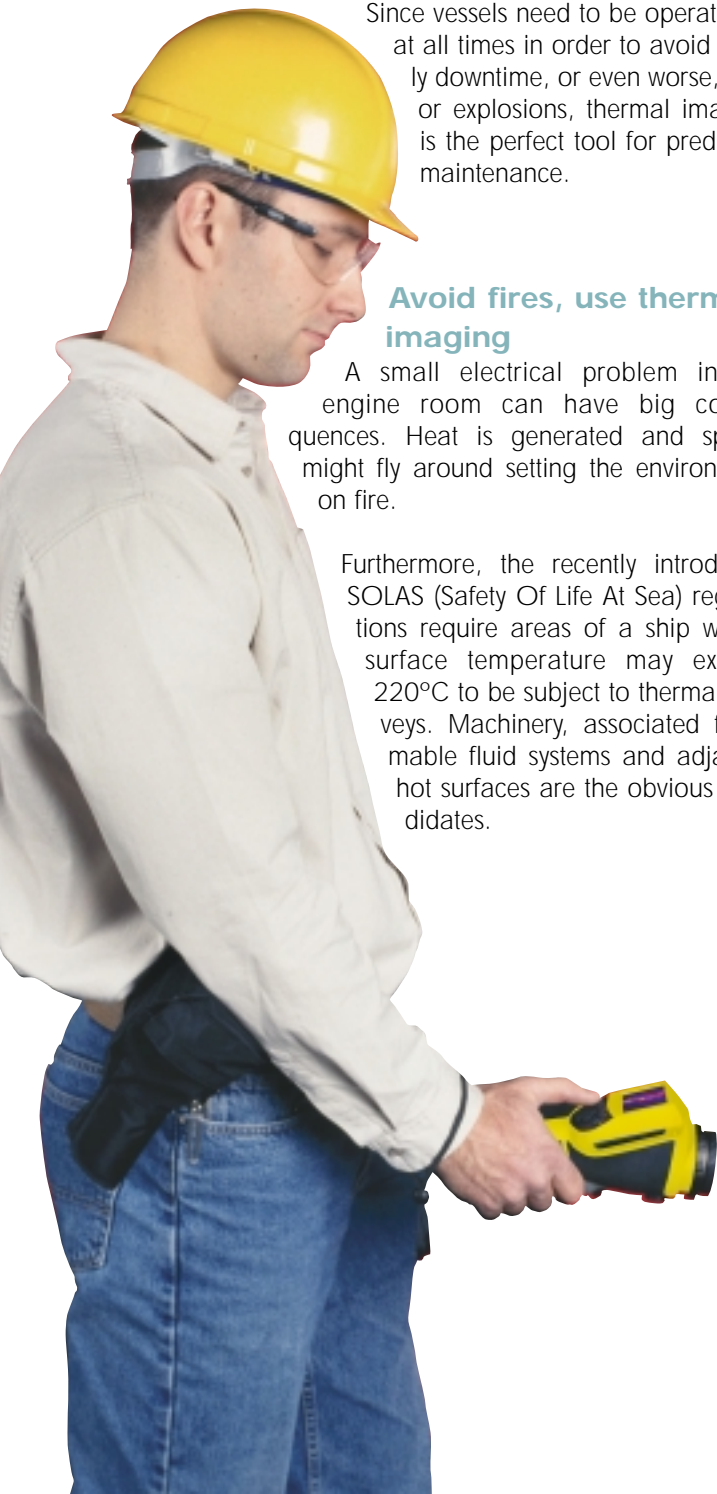
Improve safety



Verify repairs



Evaluate new installations



ThermaCAM™ E25

S h i p i n s p e c t o r

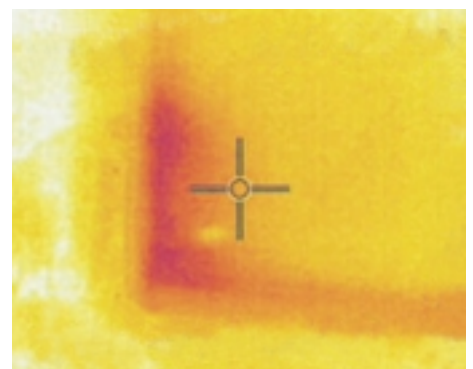
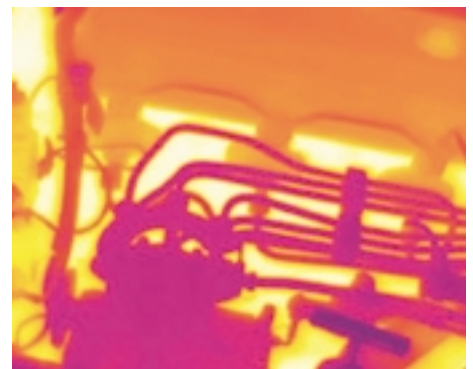
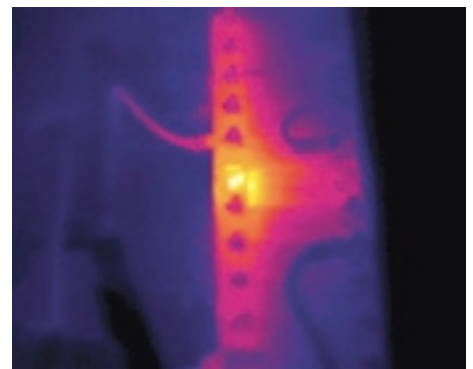
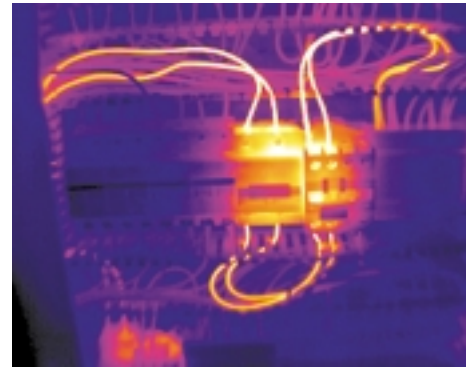
IR at work

Ships contain a lot of electrical circuits and connections. Overheated electrical circuits are commonly detected with the help of a thermal imaging camera. Inspections can however be safely performed while systems are under load, without hindering performance and without putting the inspector in harms way.

Bad breaker connection on main panel of a large ship. This is a serious problem that is hard to see with the naked eye. The thermal image instantly reveals and pinpoints a loose and corroded electrical connection which might lead to a fire on board of this ship.

High injector temperatures can indicate blockage. A blocked injector will show very hot on an thermal image which can pinpoint the problem before it becomes a serious and dangerous hazard.

Irregular dark spots on the thermal image represent high moisture conditions in the cored FRP laminate. Although clearly visible on the infrared image, these spots are not visible to the naked eye.



Fast and efficient marine surveys



Locate problems fast on the entire vessel

The propulsion system - comprising main engines, gearboxes and propeller; the diesel generators, switch-boards and distribution panels that make up the power generation and distribution system; fuel oil, lubricating oil, heating, ventilation and air conditioning systems; fresh, salt, black and grey water systems; fridge and freezing plant; fire, bilge and ballast systems; radar, emergency power generators, condition of the hull and much more. The ThermoCAM E25 will clearly detect failures in any of these systems on clear infrared images.

See temperatures

The ThermoCAM E25 allows you to measure the temperature of any object you are looking at in a non-contact mode, without putting yourself in harms way. Detect the most diverse problems instantaneously and see the area of concern on a thermal image.

Document your inspections

ThermoCAM E25 stores up to 100 images in JPEG format which you can easily include in your inspection reports to show your client or manager where the problem is situated.

Easy to use

Just four buttons and a joystick control the entire camera. You will be able to do your first thermal inspections within minutes.



Technical specifications

Imaging performance

| | |
|---------------------|---|
| Thermal sensitivity | 0.20°C at 30°C |
| Image frequency | 50/60 Hz non-interlaced |
| Detector type | Focal Plane Array, uncooled microbolometer 160 x 120 pixels |
| Focus | Manual |

Image presentation

| | |
|------------------|----------------------------|
| External display | 2.5" color LCD, 16K colors |
|------------------|----------------------------|

Measurement

| | |
|-------------------------|---|
| Temperature range | -20°C to +250°C (up to +900°C optional) |
| Measurement mode | Fixed spot in the middle of the image |
| Menu controls | Palettes (iron, rainbow, B&W, B&W invers), auto-adjust (automatic/manual) |
| Set-up controls | Date/time, language, temperature units °C/°F, scale, LCD intensity |
| Measurement corrections | Emissivity variable from 0.1 to 1.0 |

Image storage

| | |
|--------------|--|
| Type | Built-in FLASH memory (up to 100 images) |
| File formats | Standard JPEG |

Lenses

| | |
|----------------|---|
| Universal | Typical 19° x 14°/0.3 m (with 17 mm lens) |
| 2 x Telescope | Typical 9° x 7°/1.2 m (with 36 mm lens) |
| 0.5 Wide angle | Typical 34° x 25°/0.1 m (with 9 mm lens) |
| | ThermoCAM E25 is supplied with one of the following lenses: 9mm, 17mm or 36mm. Lenses are not interchangeable and must be specified at time of order |

Laser locatIR

| | |
|----------------|---|
| Classification | Class 2 |
| Type | Semiconductor AlGaInP Diode Laser: 1mW/635 nm red |

Battery system

| | |
|-----------------|--|
| Operating time | 2 hours continuous operation. Display shows battery status |
| Charging system | In camera, AC adapter |
| AC operation | AC adapter 90-260 V AC, 50/60 Hz, 12 V DC out |
| Voltage | 11-16 V DC |

Physical characteristics

| | |
|---------------|---------------------------|
| Weight | 0.7 kg, including battery |
| Size | 265 mm x 80 mm x 105 mm |
| Encapsulation | IP54, IEC 359 |

Interfaces

| | |
|-------------------------|------------------------------|
| USB | Image transfer to PC |
| RS-232 cable (optional) | image transfer to PC |
| Video output | Standard RCA composite video |

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