

Stata Quad Chart

Augmented Fire Watch: Edge-AI Thermal Monitoring for Hot Work

www.statatech.com

PROBLEM STATEMENT

- **Hot work is a leading fire risk** in ship construction and repair; every permit needs a dedicated human fire watch through post-work cool-down.
- **~\$6,120/month per watch position**, yet only ~50% of each shift is effective observation.
- **Dozens of simultaneous permits** per availability pull skilled shipbuilders off production to stand watch.
- **~\$4B in fire losses** at Navy and DoD sites since 2008 (GAO).

BENEFITS

- **100% documented coverage** of the monitored period vs. ~50% from a human watch.
- **~\$6,120 + 240 labor hrs/month** recovered per fire watch position offset.
- **100 positions = ~\$7.3M & 288,000 hrs/yr** returned to skilled work at a single shipyard.
- **One operator, many sites:** central watch station oversees multiple permits.
- **Audit-ready records** support NAVSEA and NFPA 51B compliance automatically.

TECHNOLOGY SOLUTION

- **Dual-sensor kit:** calibrated LWIR thermal + HD visible camera; magnet or tripod mount, sets up in minutes.
- **Edge-AI detection:** separates normal weld heat from abnormal hot spots, tracks rate of rise, flags nearby combustibles.
- **Alarms locally, no network needed** - works inside steel compartments; optional text/email alerts and live feeds.
- **NDAA-compliant hardware;** every event logged with thermal imagery and timestamps.
- **TRL 7:** live-fire tested with NAVSEA & NESAR aboard ex-USS PELELIU and proven during live hot work on Navy vessels.

GRAPHIC

How Augmented Firewatch Works



Same instant, two views — standard camera (left) vs. thermal (right). The heat signature is visible before any flame is.



Dual-Sensor Vision

HD + thermal fused into one feed



Smart Detection Pipeline

Reads heat against hot-work protocol, at the edge



Optional Cloud Access

Runs fully at the edge; cloud adds email & SMS alerts



Always-On Coverage

High-risk, low-traffic areas, around the clock