

FIRE SAFETY IS ESSENTIAL TO CONTINUOUS PRODUCTION

One of the world's largest oil companies sustains 24/7 operations with a turbine-safety system that combines three critical applications in one

Case Study

“With Honeywell, you are dealing with true experts in fire and gas safety. The team brings experience to every stage of the project. They distinguished themselves with their high degree of flexibility and insight, from planning to commissioning.”

—PROJECT ENGINEER

GAS TURBINE **FIRE SAFETY**



Protecting gas turbines from fire is critical – for safety, and for the high value of each turbine. So when one of the world’s largest petroleum producers needed safety controls for a new flagship gathering center for crude oil, only one company had the expertise to integrate its cutting-edge requirements into a single system: Honeywell.

THE CHALLENGE

- All-in-one system: flame, heat, and gas detection plus suppression
- NFPA 72® compliance, and redundant turbine controls with SIL-2 certification
- SIL certified data exchange between main turbine control panel and fire and gas detection system
- Complete client ownership of end-to-end solution

THE SOLUTION

For the world's largest petrol producers, three benchmarks are critical to daily operations: productivity, safety, and dependability.

Industrial-scale equipment must be able to operate continuously, with safety measures that can reliably respond to the earliest signs of fire or gas buildup.

So when this leading oil company began work on a new plant, it wanted the most rigorous capabilities available to protect its gas turbine.

They specified a redundant fault-tolerant system certified for a "safety integrity level" of SIL 2 and compliance with NFPA/EN codes. The system must combine multiple applications – flame, heat and gas detection as well as suppression. And finally, the main turbine control panel and the fire and gas system must be capable of exchanging critical signals using SIL-certified loops.

Few companies have both the engineering and expertise, and in the end, the challenge had just one solution: a Honeywell industrial fire system.

Honeywell's familiarity with turbine protection made the project go smoothly from day one. The client was particularly impressed by how easy the HS-81 Fire and Gas Control Panel is to integrate and program for three safety applications.

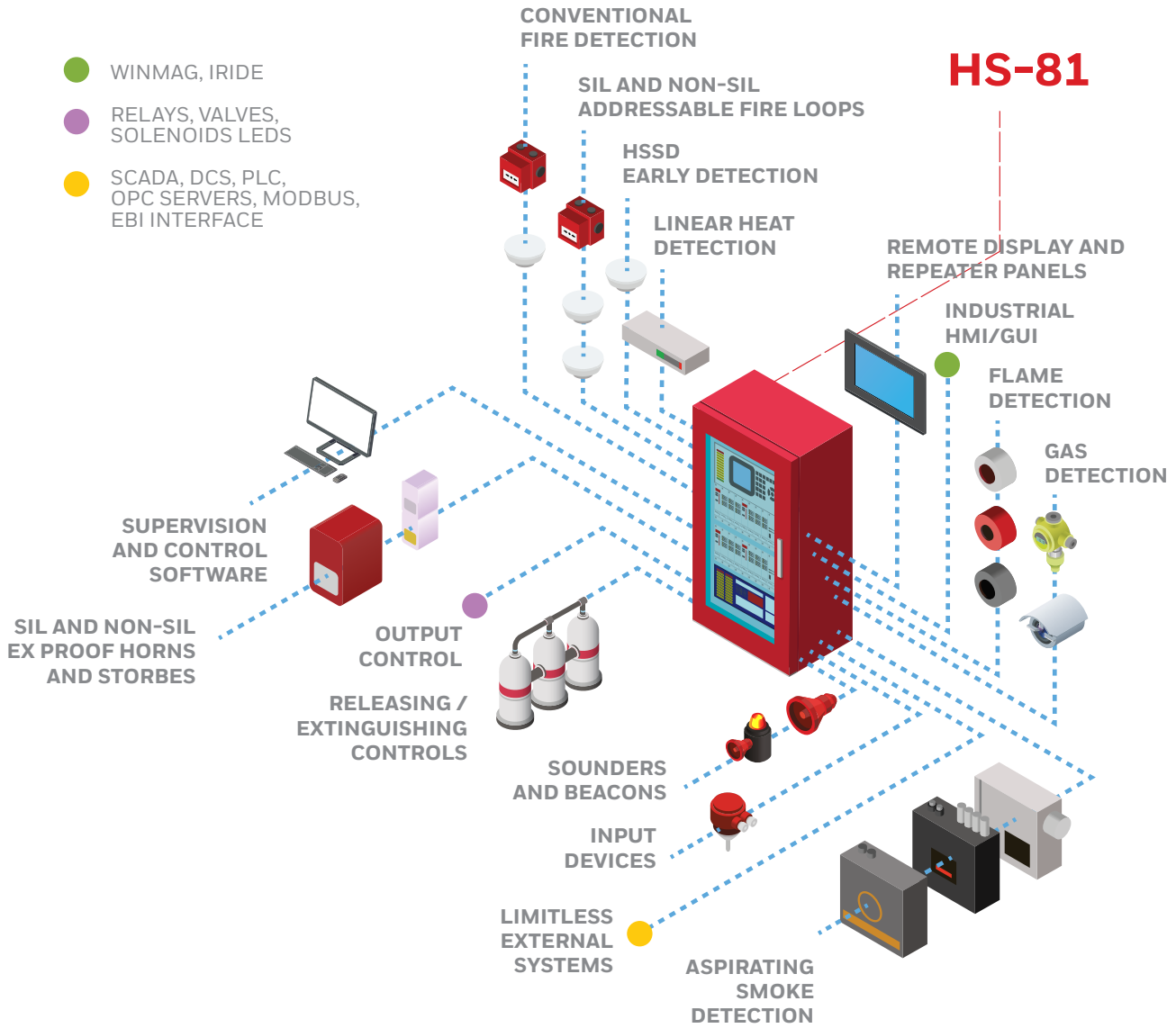
They also admired the methodical precision of the Functional Acceptance Tests, using 100% field simulators. As for the hospitality of the local Italian team? That was simply an added delight.

THE RESULTS

- Met or exceeded all client expectations with protection for three zones: turbine chamber, coupling, and accessories room
- Single system for detection + suppression, and proven compliance with international standards: NFPA 72, EN listed, and SIL 2 certified, as specified in IEC 61508
- Low-demand mode architecture with redundant controls, and hot-swap capability to replace faulty components with minimal downtime
- Daily operations and uptime are now safeguarded with comprehensive, precise detection for rapid warning and response



THE TOTAL PACKAGE



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INDUSTRIAL FIRE SOLUTIONS