

Life Safety: Fire Detection & Alarm Systems for ZADCO's Zirku Island Facility

Case Study

"The new Fire Detection and Alarm system has improved safety, security, productivity, profitability and regulatory compliance for our facilities along with meeting the insurance and Abu Dhabi civil regulation requirements."

- Mohamed Riad Ismail, ZADCO, UAE

Background

Zirku Island, ZADCO's main operations center, is located 140 kms. north west of Abu Dhabi, UAE. With its advanced oil and gas installations, Zirku is considered the main industrial base for the processing, storage and export of oil from the Upper Zakum, Umm Al-Dalkh and Satah Fields. There are also modern living facilities to host more than 1000 personnel.

Challenge

ZADCO needed to improve plant safety, provide safe operations for their personnel, and ensure asset protection for their AREA-B facilities, which covered over 100 buildings at Zirku Island. The required fire detection and alarm system should comply with local UAE regulations and International Codes & Standards (NFPA & UL).

ZADCO selected Honeywell for this project as a leading fire detection supplier covering the entire scope from detection, panels, alarms, mitigation and operation level, in addition to seamless integration with the existing Honeywell Distributed Control System (DCS) Experion® PKS and Emergency Shutdown (ESD) Systems Safety Manager.

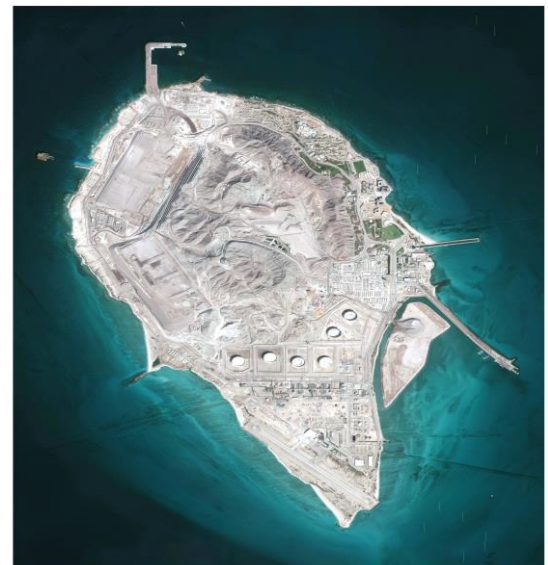
As ZADCO's main operations center, the Zirku Island offshore facility required installation and all site activities while the plant was running online process control.

Solution

Honeywell's Middle East capabilities and UAE expert engineers, along with highly qualified project management, provided extensive experience with offshore implementation projects and a strong understanding of local standards.

The project followed Honeywell's high quality global implementation model, and delivered by a comprehensive solution using a wide range of technologies, including:

- **The XLS3000 & 140 Fire Alarm Control Panels** with advanced intelligent, flexible analogue/addressable expandable modular design and functionality, UL/FM approved, Fire Suppression capabilities, true peer to peer communication, along with user friendliness to ensure highest safety standards and reliability. A network of fiber optic cable among the Fire Alarm Panels was established for approx. 25 Km around the entire Zirku Island.
- **Sensors and devices**, including smoke, heat, manual call points, horns and strobes, providing full coverage, early detection and eliminating false alarms to

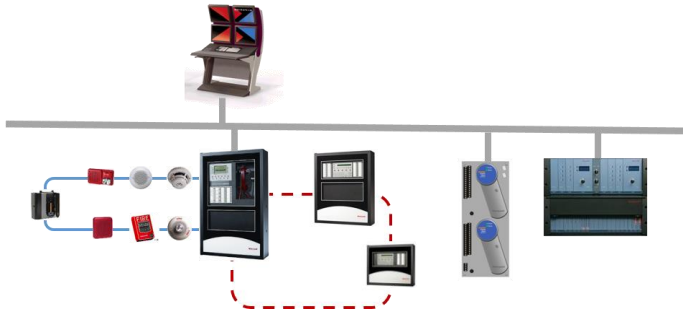


Zirku Island, ZADCO, Abu Dhabi, UAE.

The Zakum Development Company (ZADCO) was incorporated in November 1977 to develop and operate the Upper Zakum field with Abu Dhabi National Oil Company (ADNOC), ExxonMobil, and Japan Oil Development Company Limited (JODCO) as the major shareholders.

minimize hazardous conditions and improve safety.

- **Experion® Enterprise Building Integrator** server and workstations for data collection, Operator HMI functionalities, providing a wide range of physical security options along with tight integration with the plant control systems.



Honeywell's Fully Integrated Fire & Gas Solution (XLS3000 Fire Alarm Control Panel along with Experion® PKS Distributed Control System (DCS) and Safety Manager Emergency Shutdown (ESD) System.

Benefits

ZADCO and Honeywell worked together to select panel and detector locations and types, system design, and integration with ESD and DCS.

Working together, the team tailored a solution that precisely fit the plant's requirements and complied with UAE regulations and international codes and standards.

The solution provides a modern, comprehensive fire detection and alarm system with control and monitoring of the entire facility from the central control room and additional essential locations (airport, main offices, sub-stations etc.). Local fire alarm panels and sounders warn of any detected abnormal situation.

With automated alarms and responses and tight integration with the safety and control systems, the site has significantly reduced response

times and dependence on operator actions. The result is a much higher standard of safety that also meets all relevant national and international standards and reduced insurance premium.

During the project implementation, Honeywell's expert team, in coordination with ZADCO support, managed to reduce site work risks, time and effort.

ZADCO now has the latest Fire Detection and Alarm System technology that can be easily expanded to cover the entire site for a unified Integrated Fire & Gas System.

With a fully integrated solution from a single supplier, ZADCO reduced engineering test time, commissioning and startup in an offshore running plant.

Results

Without interruptions in operations, Honeywell, as a single supplier, implemented a fully integrated fire detection and alarm system within a tight project schedule in an offshore operating plant, resulting in reduced engineering, commissioning and testing time.

Covering the entire Zirku Area-B facility by Honeywell's latest state of the art solution provides continuous monitoring and automated systems for alarms and responses. By eliminating false alarms, it enables safe, smooth and continuous production.

Honeywell continues to support ZADCO in maintaining, improving and expanding the system to cover the entire site. Currently Honeywell is implementing a new expansion to this Fire Alarm System.

About Honeywell's Fire & Gas Solutions

Honeywell's layered approach to safety encompasses a fire and gas solution that integrates seamlessly with Experion® PKS and Safety Manager. It helps users respond rapidly and coherently to safety issues, ensuring maximum plant uptime while protecting people, assets and the environment.

For More Information

To learn more about how Honeywell's Fire & Gas Solutions can improve safety, security, productivity, and profitability, visit [Integrated Fire & Gas Solutions](#) or contact your Honeywell Account Manager.

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SS-16-14-ENG
September 2016
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