



## Oil & Gas

OGD I & II - ACE 100

Fully Duplicated Public Address & General Alarm System

Tyco Fire & Integrated Solutions Business Unit: Spector Lumenex, Nottingham

### Scope of Work

Project management, detailed design (electrical and software), system manufacture, testing, delivery, installation supervision and commissioning.

### Scope of Supply

Public address and general alarm system with UPS and operator access panels, hazardous area digital intercom party paging system, acoustic booths complete with call back telephones, 1500 'Intelligent' loudspeakers plus 'Intelligent' beacons and exterior connection to PABX and fire and gas system.

### Location of Project

Abu Dhabi

### Tyco Fire & Integrated Solutions Client

Technip/Bechtel Joint Venture (TBJV)

### End User

Abu Dhabi National Oil Company (ADNOC)

### The Project

The project covered the \$1.3bn construction of Gas Treating, Condensate Production and Sulphur Recovery facilities with gas throughput capacity of 1bn cfd. The Tyco Fire & Integrated Solutions component was the provision of an integrated system (value circa £1.5m) designed to give networked site wide safety critical PAGA coverage, accepting both direct voice input and providing automated responses to inputs from the fire and gas system; a site wide Digital intercom and party paging facility and safety related hotline type telephones, all linked back to a central control room. These systems were required to be expandable to accept future project phase extensions.

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### What was unique about the project?

The solution was required to operate initially as a fully duplicated networked system, but with the option of adding future nodes to enable the system to be expanded to meet the requirements of planned site expansion. The ACE 100 system is uniquely suited for this application, insofar as it not only managed the initial 40,000 watt amplification output, but enabled new nodes to be added later, as required, to cater for the planned expansions. Further expansion still is easily achievable.



Moreover, the ACE 100 system is site configurable to enable amendments to be made to the topography, to re-allocated zones, add new tones and pre-recorded voice messages and to re-assign the 16 simultaneously accessible speech paths, without recourse to the manufacturing factory.

It is also possible to remotely access the system to carry out diagnostics, system interrogation and diagnostics, so adding to the integrity of the system and providing the client with an additional layer of service support.

The client opted for 'Intelligent' loudspeakers and beacons – this feature enables the central equipment to automatically poll individual loudspeakers and beacons at pre-determined intervals, to verify the integrity of the cable loops and the voice coils and if required to reset the tappings from a central location, thereby adjusting the volume output of loudspeakers without the need to gain physical access.

This feature was especially beneficial on such a large site where the application of a fully automated, maintenance check routine, was essential to achieve enhanced safety.

### Further Information

The original project was completed in 2001, however additional project phases have been added to the original installation, including OGD III, which was supplied to Bechtel during 2006 and the Habshan 1.4 phase, which is currently under manufacture for ABB of Norway. Both these systems are required to integrate with the earlier OGD I + II phases.

Additional orders for the Habshan site have also been received from Tyco UAE for the MCR project and for the Facilities project – these are related to the original project but do not require full integration.

For further information contact your local Tyco Fire & Integrated Solutions office on: [tfis.marketing@tycoint.com](mailto:tfis.marketing@tycoint.com) for a brochure or visit our website at [www.tycofis.co.uk](http://www.tycofis.co.uk)

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