



System integration and fail-safe communications
of several offshore / onshore sites

ENI GAS / Libyen

REFERENCE



ms NEUMANN ELEKTRONIK GmbH

Efficient Solutions for Information and Safety

Reliable Communications in the Libyan Desert

Together with ALCATEL Italy, ms Neumann Electronics realized a state-of-the-art plant warning, public address (PA) and intercom system with connection to the public telephone system and to an existing fire alarm system for the customer ENI Gas in the Libyan desert and the Libyan coastal region.



System integration and fail-safe communications of widely separate sites:

- **Wafa Desert** – a storage location for natural gas in the Libyan desert
- **Mellitha Station** – a storage location for natural gas on the Libyan coast
- **Sabratha platform** – an offshore oil platform off of the Libyan coast
- **530 km of pipeline**
- **18 pump stations**
- **5 satellite stations** near the Mellitha storage location
- **The company-owned airport**

Fail-Safe Communications made possible along 530 km of Pipeline

The project encompassed the integration of several, widely separated sites: Wafa Desert - a natural gas storage location in the Libyan desert; Mellitha Station – a storage location for natural gas on the Libyan coast; the Sabratha platform – an offshore oil platform off of the Libyan coast; and the company-owned airport.



The Wafa Desert storage location is connected by a roughly 530km-long pipeline to the Mellitha station. There are 18 pump stations along this stretch that were each equipped with PA systems from ms Neumann Electronics, and these systems are also connected via radio over the Multi Service Network to the central office at Wafa Desert. This guarantees that “remote-controlled” PA communications, and emergency warnings, can be transmitted to all stations from the Wafa Desert central office.

In the surrounding area near the Mellitha storage location, there are 5 satellite stations that produce natural gas. These stations were also integrated into the communications concept: they are connected to the system via the Multi Service Network, thus guaranteeing PA communications with the individual stations around the clock.

Maximal Operational Reliability through Redundant System Design

Due to the increased safety requirements involved in providing communications to oil platforms, pump- and satellite stations, the entire communications network is constantly monitored as to its proper functioning and the possible occurrence of failures. The redundant system design ensures that failure of one subsystem still allows the other systems to continue normal operations. In addition, the entire communications system has been conceived such that it can be accessed via the public telephone network across all sites.

A direct connection to the fire alarm system and the integration of the alarm systems from ms Neumann Elektronik guarantee the highest level of safety. All areas can be selectively reached by voice communication from the individual command centers, thus allowing quick, effective evacuation of a site in emergency situations.

The "Western Libyan Gas Pipeline" project was realized with especially high performance systems and components due to the high safety requirements in the natural gas producing industry. These systems and components included approximately 1.500 explosion-proof loudspeakers, 7 MDK systems and 15 amplifier systems, as well as the Management Systems from ms Neumann Electronics. It goes without saying that state-of-the-art management systems were used to integrate the different communications equipment in order to guarantee the highest safety levels.



Product information is available at our internet site:
www.neumann-elektronik.com