



GASSCO PUTS TRUST IN TETRA

DIMETRA IP MICRO INCREASES SAFETY AND IMPROVES COMMUNICATIONS AT GAS TERMINALS



With safety being a top priority at its gas metering and receiving terminals, Gassco has chosen to deploy a Dimetra IP Micro TETRA network which will provide robust and reliable communications between operators and maintenance staff at its plants in northern Germany. ATEX-approved MTP850Ex terminals with a 'man down' feature and SafeMobile's real-time GPS tracking solution enable workers to keep in contact throughout the plants, enhancing security and efficiency.

Gassco Norway owns some 7975 kilometres of gas pipelines and is responsible for the safe and efficient transportation of gas from the North Sea to Europe. Its subsidiary, Gassco Emden, operates three landing stations in Emden and Dornum.

Gas quality and volume is checked at the Europe metering station (EMS) at Emden, which is remotely operated from the control room at the Europe receiving facilities (ERF) 48 kilometres away in Dornum. When it arrives at Dornum, the gas pressure is reduced, then it is heated and metered before it enters the downstream distribution network.

CUSTOMER PROFILE

Company:
Gassco AS

Partner Name:
AlRadio Deutschland
(Motorola Distribution Partner)
FSN Neermoor
(Motorola Reseller Partner)

Application Partner:
SafeMobile

Industry Name:
Oil and Gas

Key Benefits:

- Reliable voice and data communications
- Integrated Man Down and GPS locationing
- ATEX approved radios for hazardous environments
- Increased channel capacity and audio quality

Product Name:

- Dimetra IP Micro with MTS2 Base station
- MTP850Ex terminals
- SafeMobile GPS Locationing
- TBG825 dispatcher

“The Dimetra IP Micro system and GPS location solution meet our high safety standards and provide peace of mind for staff working in potentially hazardous areas of the plant. The quality of our voice communications is greatly improved, while the increased channel capacity allows our maintenance staff to get on with the job without having to disturb operators.”

Frank Tabbert, Process and ICT Professional at Gassco Germany



THE CHALLENGE

Gassco needed to expand the functionality of its existing analogue two-way radio system to be able to pinpoint the location of personnel and improve safety by automatically alerting the operations centre should a member of staff be injured and unable to respond.

It also required an increased number of communication channels to accommodate operators inside and outside its plants as well as to co-ordinate different maintenance teams more efficiently. This is particularly important during shut-down periods when multiple work groups need to collaborate. In addition, the company wanted a dedicated emergency channel which could intercept all communications and broadcast a message to users simultaneously if an incident occurred.

While the gas plants at Emden and Dornum function independently, personnel work across both sites and the operation centres at each site need to be able to maintain and control both plants. Thus, both locations needed to be connected onto a central network.

The potentially explosive nature of gas distribution plants necessitates stringent safety regulations and this meant that communication devices had to comply with the required levels of protection for safe operation near hazardous materials.

THE SOLUTION

Motorola distribution partner AIRadio Deutschland and local reseller partner FSN Neermoor proposed a Dimetra IP Micro (DIPM) TETRA system, which would allow Gassco to make a smooth transition to a digital radio network that could provide business-critical voice communications and short data services simultaneously.

A web-based network management interface and ease of deployment allows for the simple operation of the DIPM system, minimising disruptions and making it easier for users to adapt to the new technology.

Two lightweight MTS2 TETRA base stations have been installed to provide best-in-class receiver sensitivity for optimum radio coverage while their compact size lowered installation costs.

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The DIPM systems at Emden and Dornum are connected via a local area network to a central switch which enables the operation centres at both locations to control each site. A TBG825 dispatcher desktop solution from Carlss facilitates the remote control of the radio terminals.

MTP850Ex terminals comply with international safety standards ATEX and IECEx and have been designed to operate intuitively and by users wearing gloves, ensuring Gassco's operators and maintenance teams can communicate safely even in hazardous areas.

Protection of personnel is further enhanced by the integrated “man down” feature - which activates an emergency alert based on motion detection and incline angle threshold settings. The terminals also have a GPS receiver which, combined with SafeMobile's GPS-based AVL localisation application, enables the precise location of personnel to be identified on site maps.

THE BENEFIT

Control rooms are noisy work environments and in the past Gassco personnel struggled to hear communications clearly. The MTP850Ex's voice compression technology provides superior audio quality and suppresses background noise to prevent transmissions from being misheard.

The ‘man down’ feature provides personnel with additional reassurance that they can automatically call for help in an emergency situation and the ability to pinpoint personnel using GPS locationing will make it easy to find staff and can also increase efficiency.

Frank Tabbert, Process and ICT Professional at Gassco Germany noted: “The GPS location application is particularly useful during weekends when there are only two operators working – one inside and one outside the plant. Previously, if a member of staff was lost in the plant, we had great difficulty in locating them.”

Gassco also plan to make use of the DIPM system's short data service for their electronic work permit system. “The intention is to use the system to send a text message to the outside operator to check whether any gas has leaked inside the plant. The operator can then simply press a button on his radio to confirm whether it's free of gas,” explained Mr Tabbert.

