

# Salvico for Tankers



When Safety Matters



**Gas Detection Systems**  
*Reliable and Customized Solutions*

# Salwico GDS

## *Unique loop configured system design - Sampling solutions*

### Salwico Gas detection system solutions for demanding customers

Efficient gas alarm systems are of vital importance for the protection of lives and assets at sea.

To meet these demands Consilium offers state of the art gas alarm systems, developed for the most demanding marine environments.

Consilium offers the widest variety of solutions in the market to care for all needs and requirements concerning the subject of gas detection. We have developed and produced our well known Salwico Gas Detection Systems since mid 1960's and have today the most competent and experienced staff of all makers.

We provide standard as well as custom-designed solutions for CO<sub>2</sub>'s, PC's, LPG's and LNG's using our different system families; GC/KVC previously used for continuous measurement, SW2020 for scanning sampling detection and our totally unique loop-configured analogue addressable system GS3000, which has been the preferred choice for previous, current and future LNG installations.

Salwico GDS are designed and developed to meet the requirements of all major Classification societies, the EN-54 rules which is applicable for the addressable type and the new European standard MED. The systems are designed



with user-friendliness in mind and when software-based with self-instructing control panels, which with clear and easily understood menus on the display, leads the operator through the various functions.

### Customer orientation

Having been a major supplier of fire and gas detection systems for all these years has given us valuable experience how to best serve our customers; yards worldwide as well as ship owners operating all over the globe. Lessons learnt from working with yards in all parts of the world is very much based on local presence and support as these customers have high expectations on local service from their preferred suppliers, a service that is tried and proven year round still.

Consilium Marine's expertise in equipment development is therefore focused on simplifying the work in the field, where the installation and commissioning work is done under time pressure with little margins for unwanted surprises.

Our belief is that if we are the most effective supplier to work with the yards will by themselves find that the efforts necessary to put in when choosing a Salwico gas detection system for their projects are reduced when comparing us with the competitors.

Some solutions made a real impact in these aspects and for instance our unique counter-pressure design for the scanning sampling Salwico SW2020 system, when released back in 1998, cut down radically on equipment as well as installation time, yet offering the highest level of system performance in the market.

This design is still the most sold worldwide as we have refined it over the years and even if some of its features have found their way into competing suppliers products it is still the most relied upon system around.

## User orientation

When taking delivery of a vessel the ship owner expects everything to be working and performing as specified. This is very much dependant on the selection of supplier in the evaluation and purchasing process, later on how well the installation follows the manufacturer's guide lines, followed by the commissioning of respective equipment as well as the final training of the crew before the ship leaves for its maiden voyage. Each and everyone of these factors can and most likely will affect the total outcome in various ways as well as having an impact on the system's total life time, of which the latter definitely will catch the interest of concerned ship owners.

Supported by the able and experienced After Sales organisation in Consilium Marine the right choice will be even more enhanced over the years as the possible need for prompt and dependable service will be executed swiftly.

Regardless of whether the need is for an easy-to-install system or for the long-term operational safety Salwico Gas Detection Systems is the better choice.

## Typical applications

All things considered; experience is an important factor between success and failure simply because one is learning from one's mistakes and the more experience you have gathered the lesser mistakes you are making.

As a natural result of all our installations in the past decades we have learnt lots of things and have also developed our equipment with that as the main basis together with valuable user inputs naturally always looking at current and coming rules and regulations adapting these to the systems.

We will below exemplify some typical designs for Salwico GDS to give you an idea of how we can solve your needs; starting with a typical set up for a crude oil tanker followed by a couple of other examples.

## COT

Here can a requirement demand the supplier in an effective way to monitor the air contents in the pump room together with a system for monitoring the atmosphere in the water ballast tanks and void spaces in the cargo area. Since regulations state that the  $\nu/r$  system shall be independent it will result in a solution with two separate systems. Our choice of equipment will be to have a scanning sampling Salwico SW2020 for each area, however slightly different even if based on the same type of system. Both of them are mounted in the same cabinet for space saving reasons.

$\nu/r$ : The  $\nu/r$  set up will most often nowadays have a requirement for detecting more than hydrocarbons and we add the necessary detectors for oxygen as well as hydrogen sulphide and will have a system that can analyze all gases in one sampling pipe at the same time.

WBT: For the WBT area we will have a slightly simpler detection requirement, however now making full use of the counter-pressure function to keep the system at peak performance level.

By using the same system in both environments the user is facing exactly the same operator's panels hereby minimizing any mishaps in systems handling as well as reducing the number of system specific spare parts.



## PC's and other specialized tanker vessels

For these applications we have been asked to supply a number of different solutions, incorporating different detectors, individual designs for specialized cargos and so on. Here is a range where experience really is put to the test; - you simply have to know what this is about to be able to propose a working solution. Typical for these specialized vessels are that the specifications are charterer/operator specific due to cargo types, range and operating area.

**Cargo areas:** Certain types of vessels have for instance a pipe tunnel on deck, which can require a gas detection system of continuous measuring type. Here you can also find operator requirements for detecting hydrogen leakage, which is done through oxygen detectors.

**WBT:** For the WBT area we will use the proven SW2020, possibly with the addition of an oxygen detector.

The recent boom in LNG and to a certain extent LPG orders has caused quite some concerns about safety. This has for several reasons raised concerns about the design and performance of gas detection system solutions, as the older designs were bulky, noisy in some parts and less accurate also requiring a considerable amount of maintenance.

## LNG/LPG carriers

With these conditions and added requirements for increased system redundancy we presented our groundbreaking LNG Safety Concept in 2000 where we combined our Salwico Fire Detection System CS3000 with the world's first loop-configured analogue addressable Gas Detection System Salwico GS3000 integrated with the SW2020 on a redundant system loop connected to an IAS or similar; - a unique design in many ways and just to mention one using basically the same verified and proven hardware from the CS3000 adapting the system specific software for the two Gas Detection System types only.

Since then this has been a much-preferred solution for concerned LNG operators no other supplier can match in full.

**Accommodation – E/R areas:** - Monitoring these spaces with the added safety in loop-configuration was made possible by adapting our analogue addressable Fire Detection System into the Gas Detection world. With this design we offer the freedom of choice to connect any 4-20mA gas detector presenting its status on the display with related clear text information.

**WBT:** For the surrounding cargo areas we will use the SW2020 system, normally requiring dual detectors for measuring % LEL as well as % VOL methane.

## Communications

What we have experienced in later years as the gas alarm systems become more competent and software-based is that the demand for verified solutions and interfaces for sharing vital information has grown. The more commonly used way with relays and simple interfaces seems more and more losing ground.

As our fire detection systems already have been part of this world of digital communication for many years we have added the same proven designs to our gas detection systems, making best use of already developed parts still keeping the well-known styles. This means that should it be required to have NMEA for instance, then we have it in a verified form available for the SW2020 and GS3000.



### After Sales activities

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### Spare Parts

Being most probably the oldest manufacturer in the marine market for Gas Detection Systems we take a pride in supporting our old systems.

As the only manufacturer in the marine world for supply of Gas Detection Systems that has an already proven 25 year technical and functional support of sold systems we have the highest probability of a continued support with the same intentions and company philosophy that has taken us this far.

### Service and support

When the need is immediate, you can feel safe since we are always ready to assist. Our well-trained and experienced Service Engineers are on constant alert should there be a need for service actions.

Most likely you will find a Consilium Company or Representative office with locally based Engineers at the next port of call or in the close vicinity. Should this local support for some reason not be available you can always contact our Service Department in our Gothenburg office for information when the nearest available Service Engineer can be ready for attendance.

When choosing a Salwico Gas Detection System you know you're in the good care of competent staff covering the globe in the most frequented places for marine activities, constantly adding to our worldwide Service Network.



# Consilium Marine Group - You find us worldwide



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