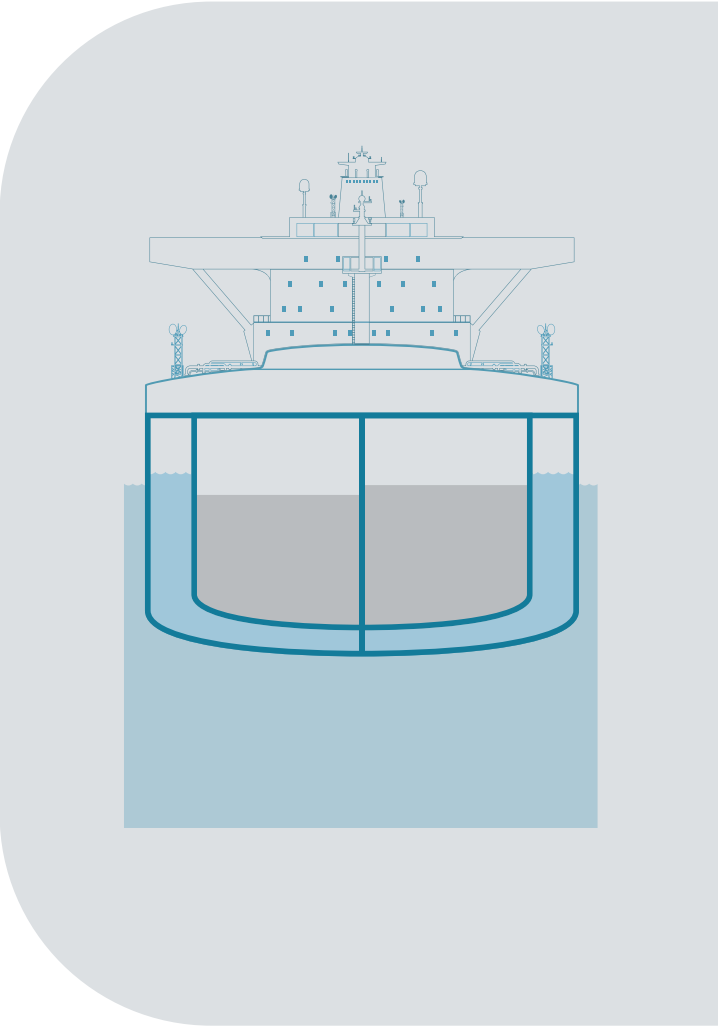
Tank management

SURVEYOR SYSTEM

Introduction

The Scanjet SURVEYOR system is a versatile and highly scalable package solution for tank management onboard ships and in industry applications. Scanjet Surveyor system is marine type approved as a system for Cargo Monitoring in cargo tanks onboard tankers, for Level Measurement of Ballast, Draft and Miscellaneous tanks on any ship and for High Level and Overfill Alarm handling.



Application

The Scanjet SURVEYOR system is designed for monitoring of cargo tanks onboard tankers. This type of system is often referred to as a Cargo Monitoring System (CMS). Such a system typically measures level, temperature, and pressure in all tanks, and often also has manifold or line pressure sensors. It has a workstation for operators, and the system is also connected to other systems onboard.

Another usage for SURVEYOR system is the tank level gauging of other tanks onboard ships. Such tanks may contain ballast water, fuel or various liquids needed onboard the ship. It is also common to include draft measurement in such a Tank Level Gauging (TLG) system. Most types of ships require a Tank Level Gauging system, not only tankers.

The SURVEYOR system is also used as an independent system for High Level and Overfill Alarm (HLOA) onboard ships.

The SURVEYOR system can also come as a full cargo control system onboard. Together with the Scanjet Pump and Valve Control system (PVCS) you get a full solution, not only monitoring your cargo, but also controlling the operations.

For land and industrial use, we can tailor the SURVEYOR system to the unique customer needs. We have experience from fuel depots and small chemical and industrial plants with storage tanks.

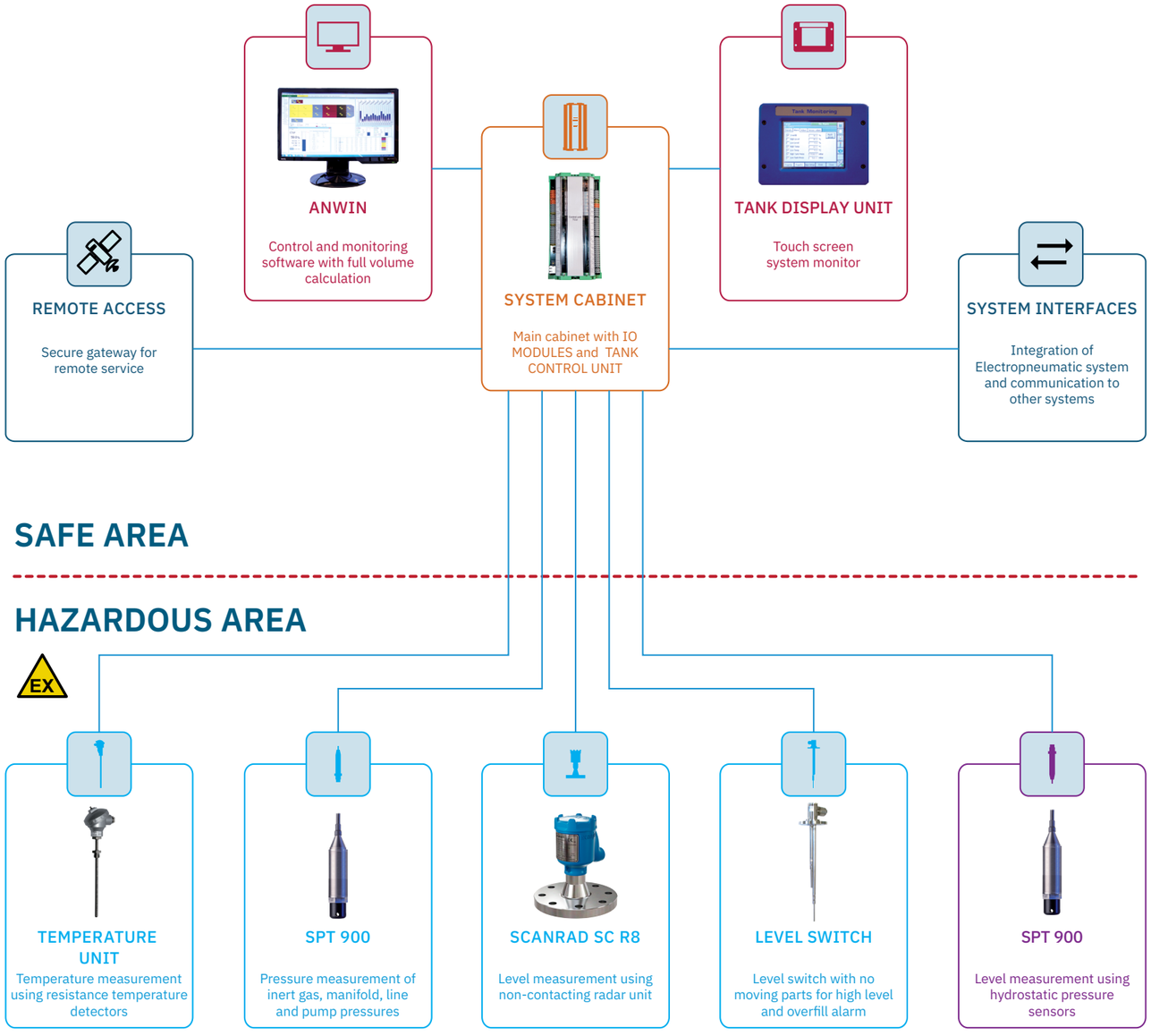
Key components and architecture
The Scanjet SURVEYOR SYSTEM comprises of different sensors for measurement in tanks and on deck, together with cabinets and workstations. The field sensors are designed for harsh marine and industrial environment on deck and for use in hazardous area. The sensors are connected to cabinets indoors in an electrical equipment room or control room. The data is presented to users on workstations in control rooms or communicated to other systems onboard.

Field sensors
Scanjet offers many types of measurement sensors that are integrated with the SURVEYOR SYSTEM. One such sensor is the Scanjet SCANRAD SC R8 radar unit, which measures level in tanks using microwaves. Another way of measuring level is by the SPT 900 pressure sensor. The SPT 900 pressure sensor family is also used for pressure measurement of inert gas pressure, manifold pressure and other line pressure.

Scanjet also has TEMPERATURE UNITs for measuring tank temperature. The Surveyor system can also be used as an overfill alarm system, with LEVEL SWITCHes as field sensor.

System cabinet
The field sensors are connected to IO MODULES that provide power and communication. Several types of IO MODULES exist, dependent on type of field sensor and application.

The IO MODULES are mounted in a SURVEYOR SYSTEM CABINET and are connected to a TANK CONTROL UNIT. This TANK CONTROL UNIT will perform calculations on the data and handle alarms. It can also communicate with other systems onboard or in the plant. A TANK DISPLAY UNIT is often mounted in the door of the SYSTEM CABINET or in a console in the plant or on the ship. It is used fort service and backup readout from the system but can also be tailored for other display purposes.



Workstation
The ANWIN is the software running on a workstation, and it is where the operator views all data and works with the system. It is a Windows based software dedicated and tailor made for marine cargo monitoring use, with integrated ASTM and API cargo calculations.

Additionally, the SURVEYOR SYSTEM can integrate with a PUMP AND VALVE CONTROL SYSTEM from Scanjet. REMOTE ACCESS, through a secure gateway, will allow Scanjet certified service personnel to do fault finding and support the crew if the ship requires assistance.

Communication
The communication to field instruments like radars is fully digital, ensuring that the SYSTEM CABINET and TANK CONTROL UNIT instantly receives full status information and exact digital level values. Some other types of sensors are analog 4-20 mA signals. Internal communication within the SYSTEM CABINET or to ANWIN is either Ethernet or RS-485 based.

Benefits

The Scanjet SURVEYOR system is developed and produced in Europe. With over 3 decades of history, the SURVEYOR system is well proven-in-use and liked by many customers.

It is very robust and stable, giving you no surprises. You get a system designed for maximizing the efficiency of cargo operations. A SURVEYOR system, with its options to include full volume calculations and integration of pump and valve controls let's you do it all in one convenient and cohesive system solution. The SURVEYOR system is certified by all major classification societies.

Scanjet take pride in keeping the SURVEYOR system updated to ensure that your investment does not become obsolete or runs out of spare parts and service. Our life cycle policy is to keep the systems running for as long as humanly possible! Scanjet extensive service and support network offers you professional support at all times.

Technical data

Approvals / Certification	
Explosion protection (Intrinsically Safe):	ATEX and IECEx Notified body and certificate details by product
Marine type approvals:	ABS, BV, CCS, DNV-GL, KR, LRS, NK, RINA, RRMS
CE Declaration:	Regulation and details by product

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Up-to-date contact details are available on our website at scanjet.net