Quality

Where is the tank container currently located? Are key product properties in accordance with the specifications? While such information had to be checked manually in the past, all that is needed today is a glance at the Smart Portal, which provides precise, current information about the Smart Tank and its load. This improves transparency and transport quality because customers can be informed at an early stage, e.g. about delays or deviations from the transport route. More over, the Smart Tank's sensor equipment also guarantees:

Intelligently networked logistics

A transport innovation –

the Smart Tank from HOYER

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Safety

Liquid goods are sensitive products, and transporting them needs special attention. It is important that parameters, such as pressure and temperature, are kept stable to avoid endangering people or the environment, especially in the case of chemical products. A Smart Tank constantly measures and stores these important factors, and deviations of a predefined route or parameters can be output as warnings and then enable timely intervention. This is how the Smart Tank makes an important contribution to the safety of:

Fleet optimisation

The future of networked logistics is based on intelligent linking of information derived from the Smart Tank's sensor data. For example, the information collected and displayed in the Smart Portal can be linked to the customer's own transport management system – evaluation of the key figures that are collected enables more efficient fleet management: weaknesses in the logistics chain are identified and the container fleet's capacity utilisation is optimised.

Time and cost savings

- More efficient use of equipment
- Environmentally friendly and resource-friendly
- Avoidance of empty repositioning

consistently high product quality. Up-to-date monitoring data enable timely intervention in the event of deviations. Smart Tanks with a monitoring system for heating and cooling even ensure proactive control from a desktop PC or smartphone.

User-friendly and reliable

Safeguarding transport and product quality

Smart Tank and Smart Portal as the basis for new, innovative services

people, the environment and the product, which allows HOYER and its customers to meet this special responsibility.

Transparent product monitoring by using sensors and telematics

Automatic warning if parameters deviate from predefined values

More safety and security for people, the environment and the product

Smart Tank

Intelligently networked container fleets

HOYER Group constantly works on solutions for tomorrow's intelligently networked logistics with concepts to use the Smart Tank's digital data for innovative, customer-oriented services. The vision: forward-looking, safe, secure and yet more efficient logistics services. In future, for example, it will be possible to obtain early recommendations for a better route and to automatically determine a tank container's arrival time. Acting before a reaction is needed: that's how HOYER shapes the future of networked logistics.
Smart Tank

Intelligently networked container fleets

Smart Tank is the centrepiece of the intelligently networked logistics management of the HOYER Group. Whether chemical products, foodstuffs, gas or mineral oil: Smart Tank will transport liquid goods safely, securely and reliably – by road, rail and sea.

Sensors fitted to the tank container continuously measure important parameters. Combined with information and warning systems and its own online portal, Smart Tank ensures optimum load monitoring and offers prospective analysis options. Networked logistics services have great potential. That is why HOYER constantly works towards equipping its entire tank container fleet as Smart Tanks. This allows the logistics provider to further consolidate the pioneering market role.

**PRESSURE**
A pressure sensor measures the Smart Tank’s internal pressure – reliably and precisely. This allows additional monitoring of the loaded product’s pressure level.

**LOCATION AND COMMUNICATION**
A Smart Tank’s location is constantly determined using GPS and GSM. The communication terminal also gathers data transmitted wirelessly from all the sensors and sends it to the Smart Portal.

**TEMPERATURE**
A temperature sensor measures product temperature non-intrusively. An LCD screen mounted on the Smart Tank displays it optionally in degrees Celsius or Fahrenheit. The thermometer needs no calibration.

**FILLING LEVEL**
An optional filling level sensor is offered, and measures the filling height of the load in the tank with millimetre accuracy.

**HEATING AND COOLING MANAGEMENT SYSTEM**
On Smart Tanks with electrical heating and/or cooling, a sensor attached to the heating conductor measures the heating system’s temperature. The heating system is monitored and deviations are reported. A control unit can be used to interactively change the temperature setting remotely.
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Smart Portal

All information at a glance

The Smart Tank’s sensor data are clearly processed and presented with a high level of detail on the Smart Portal—almost in real time. The Smart Portal can be displayed and used equally well on desktop PCs and smartphones. A particularly useful feature: information in an adapted form can also be mapped in the customer's own IT systems via interfaces.

The Smart Portal simplifies the operational monitoring and control of logistics processes. This eliminates the need to manually create and update complex summary tables: a single glance shows the tank container’s location and whether its temperature, filling level and pressure are within predefined limits, or whether intervention is needed.
It is possible to store parameters for which a critical upper or lower limit violation triggers an immediate warning report for the designated recipient. Additional information about the previous transport route or the specification of geo-zones can be used to optimise logistics processes.

Fleet management reaches a new level: detailed information on the Smart Portal about fleet status, idle or turnaround times can be used to increase the fleet’s utilisation and avoid empty repositioning. Thus Smart Tank and Smart Portal make logistics not only more cost-efficient but also more environmentally friendly.
Intelligently networked logistics

A transport innovation –
the Smart Tank from HOYER

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- User-friendly and reliable
- Safeguarding transport and product quality
- Smart Tank and Smart Portal as the basis for new, innovative services

Safety
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- Transparent product monitoring by using sensors and telematics
- Automatic warning if parameters deviate from predefined values
- More safety and security for people, the environment and the product

Fleet optimisation
The future of networked logistics is based on intelligent linking of information derived from the Smart Tank’s sensor data. For example, the information collected and displayed in the Smart Portal can be linked to the customer’s own transport management system – evaluation of the key figures that are collected enables more efficient fleet management: weaknesses in the logistics chain are identified and the container fleet’s capacity utilisation is optimised.

- Time and cost savings
- More efficient use of equipment
- Environmentally friendly and resource-friendly avoidance of empty repositioning

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