

Overflow control:

**At -163°C reliability must
be taken seriously**





The harsh operating conditions of an LNG carrier put higher demands on safety and reliability. We offer two separate and independent radar-based systems for level gauging and alarms.



Introducing radar-based overflow control for LNG carriers

Time for a technology upgrade. The reliable radar-based Rosemount TankRadar overflow control (HL&OF alarm system) lets you maximise capacity without compromising safety. You can fill to the limit confidently. A radar-based system is reliable because there are no moving parts inside the tank. A radar beam doesn't get stuck. It never wears out. It's just like the radar-based level gauging of the CTMS – you can count on it at all times.



What you are looking for is something that works reliably in an extreme cryogenic environment.

Radar is unaffected by harsh conditions. It is reliable regardless of temperatures and pressures. A radar-based system is practically maintenance-free. There is never any need to open the tank – any service you may carry out is performed under closed tank conditions. And you can forget about manual, inconclusive function checks.

What's more, the system runs its own automatic self-tests.

Technology leadership

We pioneered radar measuring for marine applications in 1976. We have developed and supplied radar systems for liquid gas applications since 1986 – ten years before the competition – and our first radar gauging system for LNG was installed in 1993.

Today, there are more than 60 LNG carriers sailing with our systems in use. We are the technology leader in this field, with unmatched application knowledge and experience. Our products are the natural industry benchmark – more than half of all new-built LNG carriers are equipped with Rosemount TankRadar CTS as their primary gauging systems.

High safety awareness

The introduction of our radar-based high-level and overfill alarm is yet another link in the safety chain for LNG carriers.

Probably no other branch in the marine industry has a safety awareness as high as that of LNG management.

Now, no one has to settle for mechanical alarm systems.

Time for an upgrade

Few in the LNG business would even consider using floats as a primary system. And it stands to reason.

Why would anyone want to use a mechanical system for the high-level and overfill alarm?

Introducing Rosemount TankRadar OFC (overflow control). You get higher reliability and a more productive ship. You get less hassle, less worries and less maintenance. And lower system life-cycle cost.

	FLOAT	RADAR
Separate, independent measuring	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Service under closed tank conditions	<input type="checkbox"/>	<input checked="" type="checkbox"/>
No moving parts inside tank	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Reliable over time	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Robust at sloshing and vibration	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Onboard configuration	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Automatic self-testing	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Service life over the ship's lifetime	<input type="checkbox"/>	<input checked="" type="checkbox"/>



Fill up to the limit confidently

With a radar-based system, the gauging of alarm limits is accurate. The signal is reliable. This means that you are in control of the situation when topping up. There is no guesswork.

Because this is an alarm system that you can trust, you will also be able to utilise your time slot more efficiently.

Time for an upgrade

With float-type high-level and overflow alarm systems you can't do this. You never know when they won't work – because there is no

sure way of telling if they have broken down, are stuck or frozen, or are too worn to rely on.

You can of course do a manual function test – but since you cannot see what condition the floats are in, your test will not make you any wiser.

The radar-based Rosemount TankRadar OFC works exactly like the radar-based gauging of the Custody Transfer Measuring System (CTMS).

There is only one difference: the alarm system is specially tuned to measure and trigger

alarms at two specific points: the set high-level point and the overflow point.

A smart investment

Several factors contribute to the low life-cycle cost of our high-level and overflow alarm. It's virtually maintenance-free. Service is quick and easy. Operation is reliable and convenient. And it lasts through the vessel's lifetime.

What's more, lead times are drastically cut in the order-to-installation process. The equipment is set and verified on site. Follow-



Overflow control for LNG

- ▷ Rosemount TankRadar OFC is separate and independent of the Custody Transfer Measuring System – and is intrinsically safe.
- ▷ Retrofitting is easy. When replacing an old mechanical device, the same tank penetration is used. Retrofitting can be performed during a regular service docking.
- ▷ All service and maintenance is performed from the outside. There is never any need to open the tank.
- ▷ Fits current penetration standards.

ing charter and class acceptance, the alarm points can subsequently be revised and set onboard using the embedded software. There are no costly last-minute shipping of physical components.

Easy retrofits
The installation of the system could not be easier. Our high-level and overfill alarm will fit in most existing float penetrations.

This means that a ship fitted with a float system can easily and quickly be retrofitted with our radar-based system.

Complete tank monitoring
The high-level and overfill alarm system is the perfect complement to a Rosemount TankRadar CTS. This makes your tank monitoring set-up complete.



Rosemount TankRadar OFC can be used for all LNG vessel types – both Moss and Membrane carriers. Old float-type systems are easily exchanged, using the same penetration.

Complete tank expertise

Emerson Process Management Marine Solutions is your source of expertise within Marine Tank Management (MTM) for all types of vessels and offshore applications.

Through the Emerson trademarks Rosemount TankRadar, Damcos and LevelDatic, you get complete, integrated solutions for cargo handling and control as well as ballast, fuel oil and service tank monitoring and control, supported by best-in-class products and a global service network.

Emerson Process Management Marine Solutions ensures better business than usual – supporting all phases from specification to long-term profitable operation of the vessel.

For contact information, addresses and facts about our global sales and service network, please visit:

www.emersonprocess.com/marine

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