

# What If You Could Lower Your Risk and Play It Safe?

## Introducing Emerson's Certified LNG Bunkering Solution

- Emerson has 30 years of cryogenic measurement success
- Global approvals for custody transfer
- Solutions for all your marine and offshore applications



### LNG Expertise

- Solutions for every application involving LNG measurement
- Algorithm for automatic temperature correction of the non-linearity of Young's Modulus at cryogenic temperatures

### Turnkey Solution

- One Stop Solution including Coriolis Mass Flow Meter, Gas Chromatograph, Flow Computer, Vaporizing and Sampling system
- Certified support, dedicated project team and lifecycle services

### Transparency and Traceability

- Certified third party approved LNG Bunkering Solution for custody transfer
- Visibility to the process and historical log

# Taking on the Tough LNG Bunkering Challenges

## Custody Transfer Requirements for LNG

Introducing liquefied natural gas (LNG) as a fuel has turned out to be a successful solution and is considered one of the best ways of meeting the regulations set by IMO (MARPOL) and those in the ECA-zones. With the introduction of dual fuel engines LNG bunkering is gaining acceptance correspondingly. Though there are volumetric flow technologies, the solutions are either too small, are difficult to adopt in a bunkering system or have trouble handling the varying temperatures of LNG, as its extreme low temperature and density are very difficult to measure. Coriolis technology addresses many of the limitations of the alternative technologies as it has no moving parts and no wetted dynamic components.

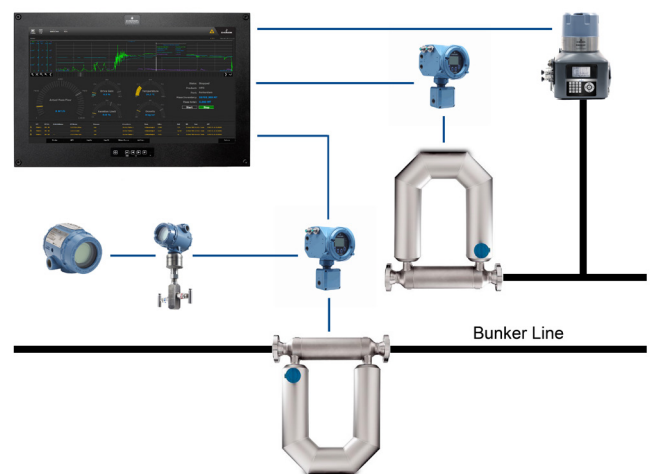
Because of the differing energy content level, LNG custody transfer is carried out in British Thermal Units (BTU) or Kilojoules per hour (kJ/h) and Methane number (M), which are all definitions of energy content in the fuel.

In an LNG bunkering operation, buyers and suppliers measure the energy content which has been transferred. This involves measuring the quantity in mass (or conversion to mass if volume is measured) and measuring the Gross Calorific Value (GCV) of the fuel.

## Emerson's Certified LNG Fuel Bunkering Solution

Emerson holds the MID type approval T11158 for LNG bunkering systems and is currently the only company providing an MID approved solution. Emerson's type approved LNG bunkering system allows the highest measuring accuracy on LNG in mass, density and volume within the regulations of MID and OIML thanks to the unique and patented design and geometry.

Emerson not only provides a complete product portfolio to measure transferred energy, but also offers certified service, dedicated project support and lifecycle support globally to ensure smooth sailing of your vessels.



## CONTACT US

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