



## 80-GHz radar level measurement makes cryogenic applications secure on the high seas

The liquid gas market is booming. LNG and LPG, liquefied natural gas and liquefied petroleum gas, are among the most promising sources of low-emission mobility in the future. When the first LNG-powered container and cruise ships are launched in the next few weeks, extraordinarily cold-tolerant level sensors will also be on board

It is not only the extreme temperatures that make life difficult for measuring instruments when they are being used at sea or measuring [liquefied gases](#). [Petrochemical](#) products are characterized by their low dielectric constants and are generally difficult to measure. Because they are temperature decoupled from the process, the 80-GHz radar sensors from VEGA are optimized for the extreme process temperatures that prevail in [LNG applications](#): they easily withstand temperatures as low as  $-196^{\circ}\text{C}$ . Ice does not form on the housing, nor is there any condensation on the antenna system. In addition to cryogenic applications, the specially protected housing and front-flush antenna cover of PTFE are also suitable for reliable measurement of aggressive media, whether acids, alkalis or abrasive substances. From the top of the housing to the business end of the measuring cell, the sensor is extremely robust and equipped with high-quality components. The key element is its highly resistant stainless steel housing, which thermally decouples the sensitive electronics inside.

But it's also their high dynamic range that makes the 80-GHz radar sensors [VEGAPULS 64](#) so unique – they can detect even the tiniest of signals. This is especially important when measuring hydrocarbons. The sensors can detect virtually all media in the petrochemical industry, from crude oil to cryogenic liquefied gases, with high reliability despite their poor reflective properties.

Published on  
Wednesday, October 17, 2018

Length  
4083 characters

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