



# LNG

## A future proof LNG measuring system

The use of LNG as an alternative source of energy is an upcoming market. Many different kinds of LNG installations are being designed and developed, from dispensers to large industrial production installations. Are you a manufacturer of LNG dispensers or LNG bunkering installations? Then you most certainly will know that there is still a lot of uncertainty about which regulations and legislation to apply when placing your products on the market.

### CLEAR ADVICE

As an independent testing and certification institute, NMI is ready to assist you in this process by translating the latest requirements into clear advice. Our experts will provide you with up-to-date specifications, if desired from the very first stage of your designing process. When building an LNG measuring system or when certifying your LNG meters, the performance of the measuring system is determined by a number of factors that need to be taken into account. For instance how to control the filling of a warm tank, the measurement of the gas return, making sure that all piping remains filled with LNG, yearly recalibrations, which parts to use or not to use etc. Professional advice from NMI in the development phase will help you take the right decisions to create a future-proof product. Development and purchase costs can thus be dramatically reduced, while shortening the route from design to end product.

*“NMI certifies innovations: they include the first Coriolis meter, the first ultrasonic meter, the first LNG dispenser and the first bunkering system.”*

### WORLDWIDE ACCEPTANCE

When it comes to certifying your product, NMI is able to assist you in performing all necessary tests according to the applicable standards and recommendations. In our state-of-the-art laboratories, situated in the Netherlands and Italy, we can test several components of your LNG measuring device after which a worldwide accepted (part) certificate can be issued.

With this documented proof of performance, you will be able to place your product on the market and convince both authorities and your clientele that your system or instrument performs as required. Thanks to our global reputation, NMI certificates are globally accepted and will open doors to many markets without re-testing.

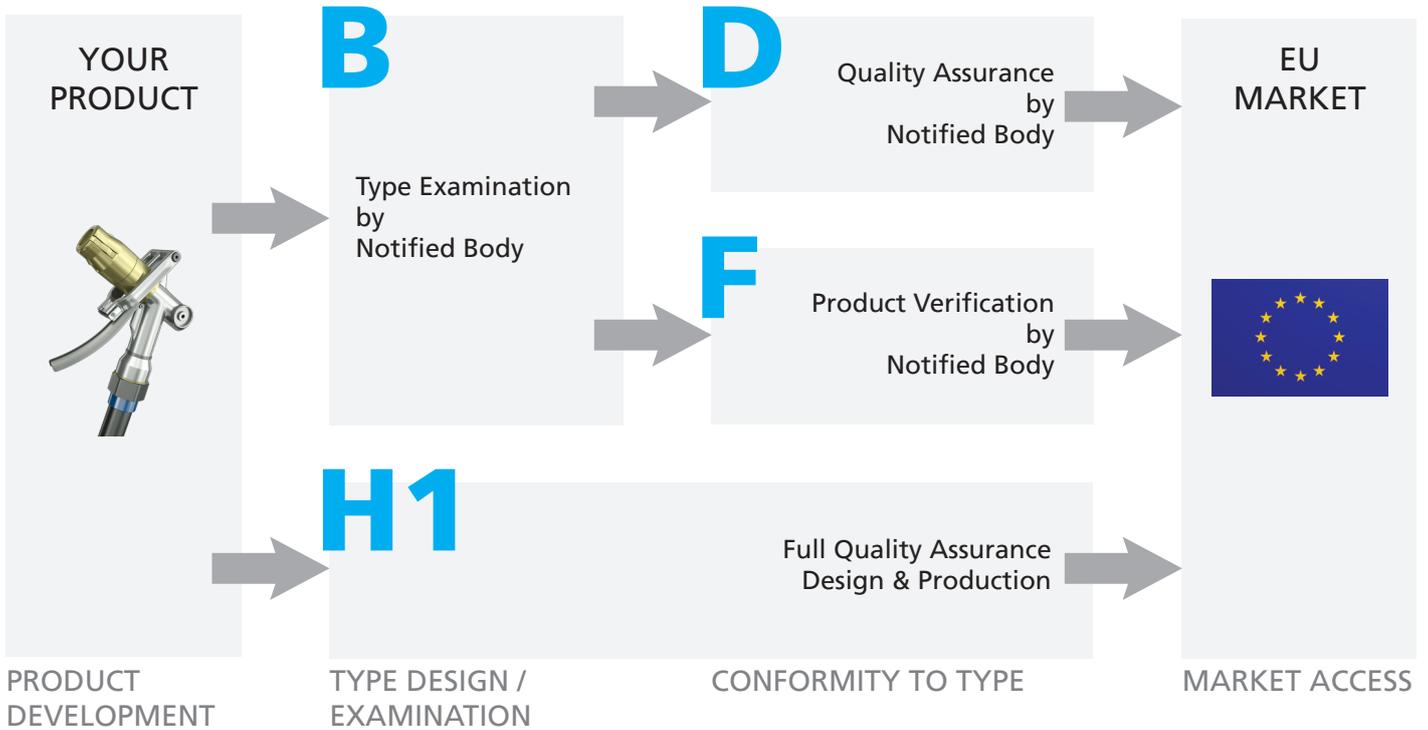
### NMI SERVICES

In the specific field of LNG measuring systems, NMI offers you the following services:

- Pre-testing for LNG measurement installations, to create a faster timeline for your project (Site Acceptance Test, Initial Verification)
- Validation of measuring installations
- Part/Evaluation Certificates for components of LNG measuring systems (e.g. sensor, flow meter, electronic counter, pressure transmitters, sampling device etc.), to increase the value of your product
- System Certification of your production quality system
- MID EU Type-Examination Certificates & Modular Evaluation Certificates
- Type Approval Management for support to countries outside Europe
- OIML R 117 test report and certificate
- Third party statements about the uncertainty of the system or (energy) quality of the LNG
- Life Cycle Management, to monitor a system's performance and uncertainty over the years and to consult when upgrading or replacing parts
- Design review of installations
- Training and knowledge transfer on requirements and specific standards

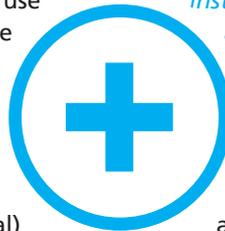


## POSSIBLE ROUTES TO CONFORMITY



When your LNG measuring instrument or -system is ready to put in use, the final phase is the 'putting into use' with a first verification. This first verification can be performed in different ways. The most common one is the field verification (Module F). It is very convenient to look into this process at an early stage of the project and discuss how the verification shall be performed. Think for instance about the type of calibration equipment that can be used and the (local) safety regulations that need to be taken into account. Another way to perform a first verification is according to Module D. In this case we verify and document your quality management system during an audit, after which you can perform the first verification yourself. We are happy to advise which solution best suits you.

*"Based on its long experience in certifying measuring instruments and systems for the Oil & Gas market, NMI is an authority when it comes to statutory requirements and standards."*



### TRAINING

NMI's tailor-made training courses will help you to acquire valuable knowledge and understanding about company-specific questions and cases. Whether on-site, online or in the NMI headquarters, our general and specialist metrology training courses will certainly be of interest. Your training is given by experts who work with measurements and examinations on a daily basis. They will explain the theory on the basis of examples from day-to-day practice and supplement them with practical exercises, enabling you to put your new insights into practice at once. Check the training calendar on our website [www.nmi.nl](http://www.nmi.nl) for the latest course dates.

## MID CERTIFICATES AND OIML TEST REPORTS

The Measuring Instruments Directive (MID) provides market access in Europe for industrial LNG meters and complete LNG measuring installations used for commercial purposes. It describes the requirements that must be met in order for you to market your LNG measuring instruments or installations in Europe. With regard to market access outside Europe and other additional requirements, we test your measuring instruments or installations for compliance with the international accepted OIML (Organisation Internationale de Métrologie Légale) recommendations. Since many of our test engineers actively participate in OIML working groups and thus are informed thoroughly, they know all the requirements of testing according to OIML R 117 (Measuring systems for liquids other than water). By combining these tests directly with the MID test plan, the type examination process is executed efficiently and your product can be launched on the global market quickly. Find out what is best for your LNG application and make an appointment with us today!

## A SELECTION OF OUR TRAINING OFFERINGS

WelmeC 7.2/MID software requirements, a course in which you will learn everything you need to know about interpreting and applying WELMEC guide 7.2.

European Market Access for LNG, BioGas and CNG applications, a course that will provide you with a comprehensive overview of the steps you need to take from initial product design to product launch on the European market.

## MORE INFORMATION?

Please contact [nmi@nmi.nl](mailto:nmi@nmi.nl) or call +31 78 633 23 08 if you like to receive more information. We are happy to answer any of your questions.