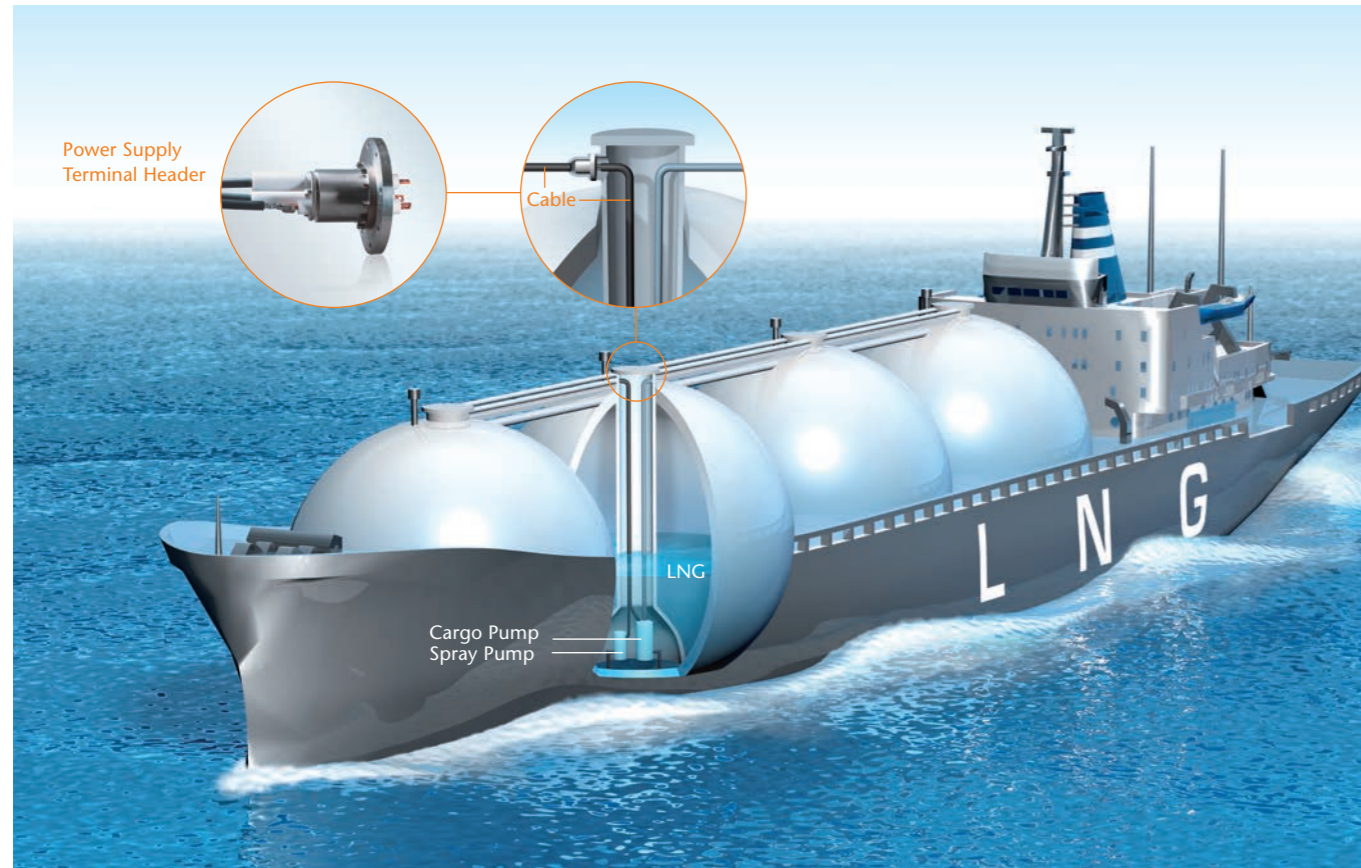




SCHOTT
glass made of ideas

Small component –
Big impact.

Even the smallest element is
key to uphold the pressure
vessel integrity.



Why are terminal headers safety-critical components of LNG vessels and terminals?

Consequences of failure can be disastrous

In 1979, an accident took place at the Cove Point terminal when liquefied natural gas leaked through an inadequately tightened electrical penetration seal on an LNG pump. The LNG vaporized, and led to an explosion that killed one plant employee and caused millions of dollars in damages.*

While this was an incident caused by a specific set of circumstances, it nevertheless demonstrates that the reliability of all safety-related components – even the small ones – is crucial, for the consequences of failure could be disastrous.

* Source: CH-IV International: Safety History of International LNG Operations, Rev. 12 February 2012

Quality of terminal header is critical for preventing leakage

Electrical terminal headers must safely provide electricity and data to submerged LNG pumps, turbine expanders and compressors. At the same time they must maintain the integrity of the pressure vessel.

The sealing of the electrical connections represents a potential weak point: other terminal headers that use epoxy or ceramic sealing materials could compromise the pressure integrity, resulting in leakage and electrical malfunction.

High quality, leak-tight terminal headers are therefore absolutely critical for the safety of the entire system. By choosing SCHOTT Eternaloc™ terminal headers, you rely on the safest, most proven solution available in the market.



Terminal headers serve as the hermetic feedthroughs for three-phase electrical power, as well as control and instrumentation signals in submerged LNG pumps, turbine expanders and compressors.

SCHOTT Eternaloc™ Electrical Terminal Headers – made to last.

SAFE

- Manufactured using only inorganic, non-aging Glass-to-Metal Sealing in unique compression technology
- Proven to withstand extremely high pressure and thermal shocks
- Comply with ATEX, IECEx as well as local regulations
- 100% final inspection quality assurance process

PROVEN

- Performing maintenance-free in more than 6,000 LNG pumps and turbine expanders since 1985 in both on- and offshore applications.
- SCHOTT's glass-to-metal sealing technology is also proven in other safety-critical applications, such as automotive safety systems (airbags) or nuclear power plants.

MAINTENANCE-FREE

- The use of non-aging materials means that Eternaloc™ penetrations are maintenance-free, thereby reducing the total cost of ownership.



For more technical details, please visit www.schott.com/lng

About SCHOTT

SCHOTT is an international technology group with a workforce of around 15,400 employees worldwide and more than 130 years of experience in the areas of specialty glasses and materials and advanced technologies.

About SCHOTT Electronic Packaging

SCHOTT's Business Unit Electronic Packaging is a world-wide leading supplier of hermetic feedthroughs for harsh environment applications that require the highest level of safety and reliability, e.g. electrical penetration assemblies for nuclear power plants.

Since the 1930s, we have been developing, manufacturing and optimizing hermetic packaging solutions by using specialized glass, glass-to-metal and today also ceramic-to-metal sealing technology.

With 1,500 employees at five production locations in Germany, the Czech Republic, Singapore, U.S.A. and Japan as well as competence centers worldwide, local customer support and co-developments are at the heart of the business.

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