

## PRESS INFORMATON

### LEWA is prepared for the growing LNG market

According to industry forecasts the market for plants for the liquefaction and transfer on-shore of liquefied natural gas (LNG) will reach a volume of 60 billion Euros until 2020. So, until approx. 2012, each year 3 – 4 liquefaction plants will be operational worldwide.

LEWA, with its pump technology, is well prepared for this attractive market and can already refer to a well-known reference project: In the coming year the first natural gas liquefaction plant in Europe, in Hammerfest Norway will be started-up by Statoil. One particularity of this plant is, that the greenhouse gas, carbon dioxide, accrued during liquefaction will be pumped back. For this, LEWA supplies the biggest high-pressure process diaphragm pumps that have been built so far. Each pump conveys 110 m<sup>3</sup>/h liquid carbon dioxide against a pressure of 215 bar.

Background: Natural gas contains up to 9% carbon dioxide and traces of hydrogen sulphide, both components are nearly completely removed during processing. With traditional technology these waste gases are exhausted into the atmosphere – however, according to the Kyoto-protocol, which provides a limitation of the carbon dioxide emissions, a rather out-of-time method. As Norway even imposes an extra tax (50 Euros per ton carbon dioxide emission) in consideration of the Kyoto-protocol, Statoil has developed a process to press the greenhouse gas in cooled, liquid state back into the natural gas storage area avoiding any danger to the atmosphere (CO<sub>2</sub> re-injection).

Of course this is not possible without pressure – and this is provided by the high pressure process diaphragm pumps from LEWA. There are several reasons why this type of pumps is used. Easy maintenance and low maintenance requirements are of extreme importance – not only at the arctic circle, but in oil and gas exploration generally. After all it is usually carried out far away from well organised infrastructures.

Moreover these pumps are very safe and above all environment-friendly due to their design with a diaphragm that separates the fluid to be conveyed from the actual pump hydraulics hermetically: Nothing can get out, leakages are prevented due to the hermetic diaphragm sealing. Personnel as well as environment are not endangered by harmful emissions.

The diaphragm is designed as so-called „sandwich diaphragm“, as implied by the name already several different layers of diaphragm material are used. Together with the diaphragm monitoring system damage of the diaphragm, e.g. due to wear, is reliably indicated. Nevertheless the pump remains leakage-tight and operation can be continued for a limited period of time.



Photo: Statoil

Statoil.eps



LNG\_Fabrik\_Grafik.eps

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