

IN TRANZIT



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Preface

The summer and most of our holidays are over. According to trend watchers, the economic crisis is also behind us and we can look forward to the future with optimism. In many sectors, there is talk of a cautious recovery, although many activities are not showing sufficient improvement.

Research among bigger logistic companies in Europe has shown that after fuel costs, business operations are most affected by European Union regulations. The varying interpretations of these, sometimes already very complicated and rules lacking in transparency, by the different European countries make everything even more complicated and less manageable. Companies are investing heavily in new equipment to reduce emissions, while driver training is improving fuel-efficient driving.

The same research shows that the quality of the road surface also has a major impact on fuel consumption, wear and tear on tyres and equipment repairs. In many European countries, the quality of the infrastructure needs to be seriously improved. In some countries, trucks, and sometimes passenger cars, have to pay tolls on certain sections of the road. Appropriate allocation of this toll revenue by the relevant governments would create the funding required to renew the infrastructure!

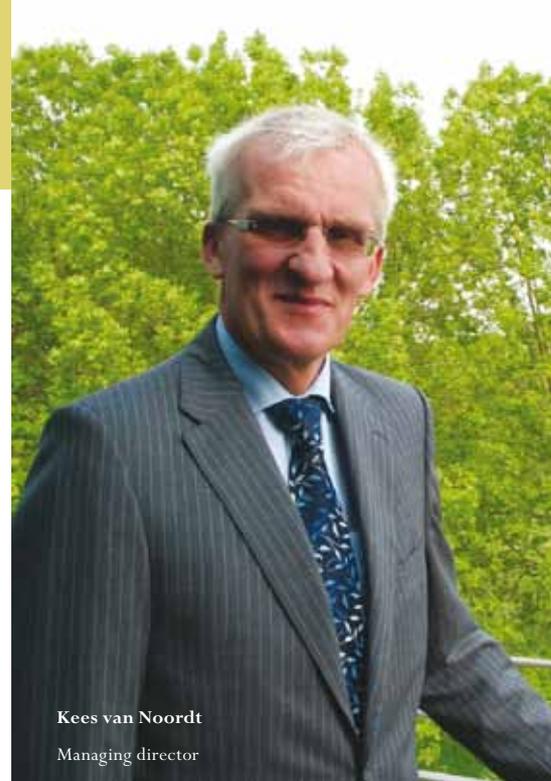
Nijman/Zeetank is trying to shrug off the crisis. Besides pursuing our existing activities, we are busy developing new activities and introducing new techniques.

For the transport of glass, new lightweight innenladers (special trailers for transporting glass) were introduced to increase our loading capacity. This will dramatically reduce the number of transports and thus emissions.

New LNG equipment has been delivered and the first LNG transports have already been completed. LNG can hugely benefit emission reduction – there is more about that in this edition of InTranzit.

In Spijkenisse, a great deal of site work has already been carried out for our chemical activities, such as steaming, warm water and electrical heating of products in tank containers, repackaging, drum off and handling of loaded tank containers and we are developing plans to expand these site activities. For our clients' internal logistic processes, we are developing systems to improve their efficiency.

With a great team of over 600 employees, we are focusing on shaping our services so that, as a highly valued client, we can offer you the best possible solutions. The Nijman/Zeetank team sees this as a continuous challenge and we hope to meet all your requirements. <<



Kees van Noordt
Managing director

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LNG, the future alternative to diesel?

LNG (Liquefied Natural Gas) has existed for over 50 years but due to the special properties of this product – particularly with regard to the environment - LNG is becoming increasingly important as an alternative fuel.

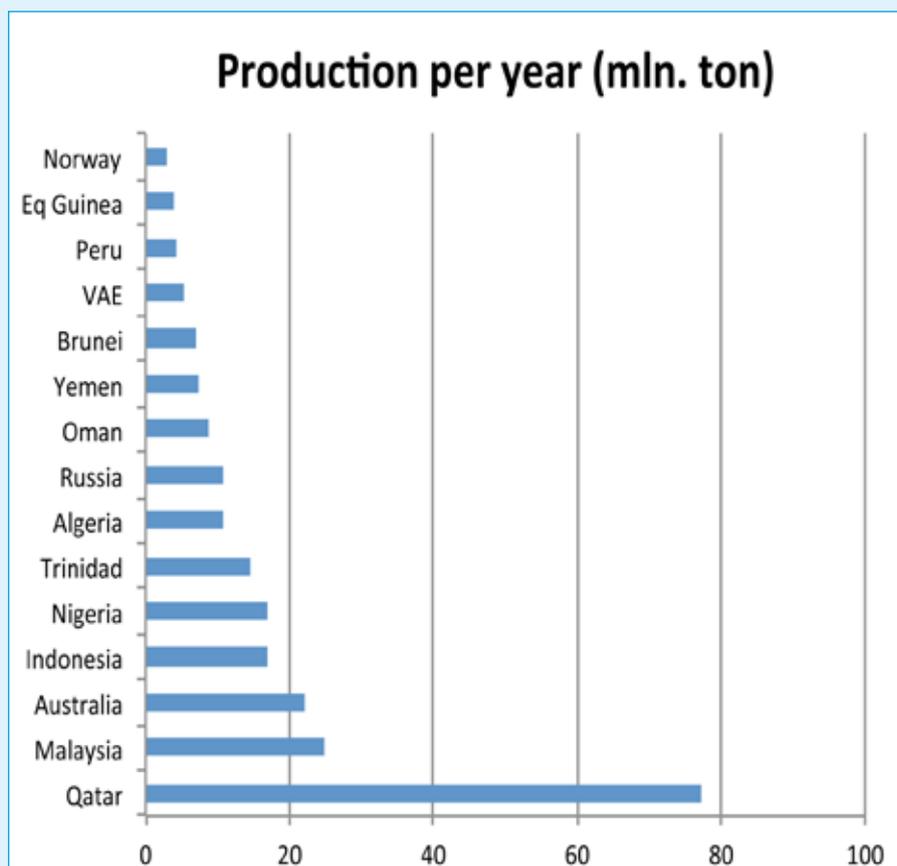
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>> Exploration

LNG is a natural gas which is cooled in a special freezer installation to a temperature of -162 degrees Celsius. At this temperature, 1 litre of LNG is equivalent to 600 litres of natural gas in its gaseous state and this makes it possible to transport large volumes of gas over long distances.

LNG is not only produced on land but also at sea. Natural gas is explored and extracted at sea at great depths. It is then transported to the mainland by pipeline where it is cooled. Floating LNG factories at sea are another way of extracting natural gas. After extraction, the gas is immediately cooled and then transported onwards by LNG sea-going ship.

LNG is explored and extracted in many countries. The main production countries in 2013 are shown in the following table.



>> Transport

All over the world, hundreds of LNG sea-going ships are used to transport LNG to buyers. These ships vary in size, but over the last ten years most sea ships have been able to transport between 150,000 and 160,000 m³ LNG (this is more than 96,000,000 m³ of natural gas).

The ship delivers LNG to an LNG

terminal and many European countries have LNG terminals, including Belgium, Netherlands, France, Italy, UK and Spain. At the terminal, most LNG is restored to gas form and then transported by pipeline to the end customer. End customers are usually countries which cannot provide for their own energy needs. LNG is mainly used to generate electricity. Big buyers of LNG include

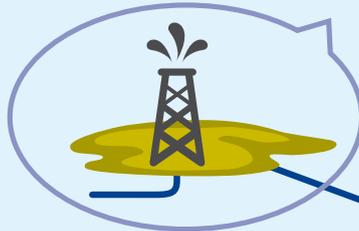
Asian countries, like Japan, China, India and South Korea.

From the LNG terminals, small ships transport the LNG to other countries. For this transport, LNG feeders are used with a capacity of around 10,000 m³ LNG. Special bunker ships are also used up to 5,000 m³ LNG.

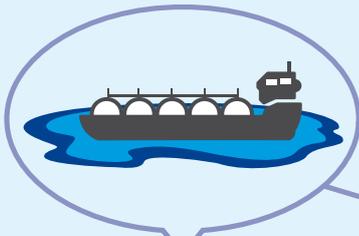
For transport of LNG by land from the

WHAT IS LNG?

1. EXTRACTING NATURAL GAS FROM THE LAND/SEA



2. LIQUIFY NATURAL GAS >>> LNG



3. TRANSPORT PER SHIP LNG



4. TERMINAL STORAGE LNG



- 5A. TRANSPORT PER SHIP LNG
- B. TRANSPORT PER TRUCK LNG
- C. VAPORIZATION LNG >>> NATURAL GAS



terminal to an LNG fuel station or industrial consumer (energy generator), LNG trailers of around 58 m³ LNG (= 34.8 million litres of natural gas) are used.

In the Benelux, there is an LNG terminal in Zeebrugge (Fluxys) and on the Maasvlakte (Gate) near Rotterdam. A consortium of GDF SUEZ, Gasunie, Vopak, stichting Energy Valley and Groningen Seaport has signed a cooperative agreement for the development of storage and bunker facilities for LNG in Eemshaven (North Netherlands). With a mobile installation, they expect the first ships to be able to refuel up with

LNG in Eemshaven in early 2015. The following diagram (source: GDF SUEZ LNG Solutions) shows how the LNG flows can move. It clearly presents the various options and future developments of LNG transport, storage and distribution.

>> Alternative fuel

In Europe, there is a strong focus on reducing CO₂ emissions by both road and sea transport. In 2015, emissions of CO₂ should have been reduced by 60%. On 1 January 2014, only new trucks with a Euro 6 engine can be registered. Requirements have also been imposed on shipping. In the IMO (International

Maritime Organisation), it has been agreed that the percentage of sulphur emissions (SO) in fuel must be reduced to 0.1% by 1 January 2015. This is a reduction of 90%. Emission control will be implemented per region in the SECA (Sulphur Emission Control Area). This emission control applies from 1 January 2015 to all ships on the North Sea, the Baltic, the English Channel and the waters around North America. For the other European sea areas, such as the Irish Sea, the Mediterranean and the Black Sea, the IMO applies the global limit of 3.5%. Furthermore, emissions of NO_x (nitric oxide) and CO₂ must also be dramatically reduced.



For ships, there are various ways of reducing sulphur emissions. Heavy Fuel Oil (HFO) and Intermediate Fuel Oil (IFO) can be replaced by Marine Gas Oil (MGO) for example. Another way is to fit ships with scrubbers. A scrubber is a desulphurisation installation which washes the sulphur out of exhaust gases. Another alternative is to choose LNG as a fuel. To do this the ship's engines must be modified or replaced. Usually dual fuel engines are chosen, which are engines which can run on both LNG and conventional bunker oil.

Various studies have shown that using LNG as a fuel reduces emissions of CO₂, nitric oxide (NOx) and fine particles by 20, 85 and 99% respectively. In the SECA area, several ships are already fitted with dual fuel engines. These include container ships as well as barges. The barges have sufficient LNG storage capacity to be commercially able to sail from Rotterdam to Basel and back.

For road transport, LNG is also an attractive alternative. The engines are quieter and produce lower emissions, so at first sight it is very attractive for (night) distribution. In order to make LNG available in more places in the Benelux, lots of work is being done to improve the infrastructure for LNG. In the Netherlands and Belgium, various LNG stations are already available for trucks. This year and next, more LNG stations will follow for road transport. In Poland, LNG stations are present for local public transport and several European countries are working on extending their infrastructure to make LNG widely available.

The EU aims to have LNG stations in 139



harbours and on every 400 kilometres of the main corridors for road transport in Europe by 2020. <<

Nijman/Zeetank team comes out top in BP Safety Leadership final

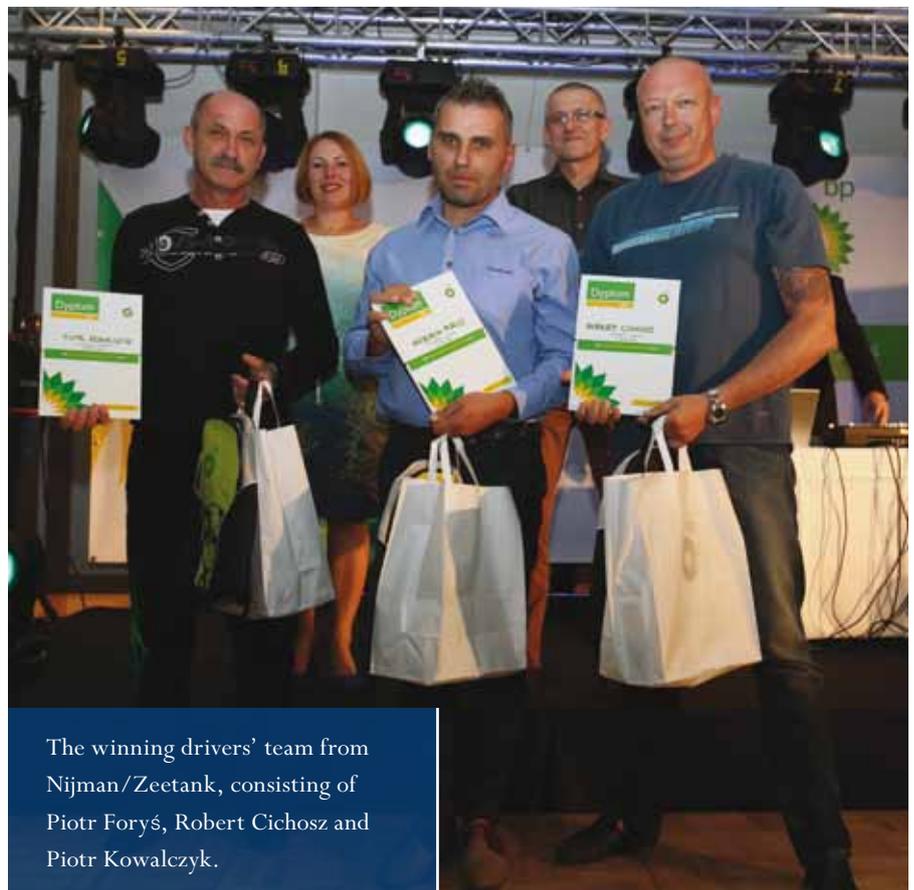
On 23 and 24 June 2014, the eighth final of “BP Safety Leadership” took place in the picturesque surroundings of Zakopane, Poland. The aim of this competition is to promote safety and environmental awareness among BP employees and their shipping partners.

On the first day, the drivers (senior drivers from companies fulfilling BP contracts) took part in a series of training sessions relating to the safe transport of ADR products, communication and the assessment of the drivers' work. The activities were led by BP staff, transport companies and specialists in safety and psychology. On the second day, there were day-filling competitions at specially designed locations. 22 teams took part, each consisting of three members representing BP stations from the various regions in Poland and employees from BP head office. Three teams represented the shipping partners.

The competitions involved tasks like offering first aid, using a fire extinguisher, protecting the environment, knowledge of the products available at the stations and safety procedures as well as general physical skills and the ability to work in a team.

The PR department had also set up a media stand where participants were given a difficult situation: visiting journalists at the station. Competition was fierce and all the teams fought hard for every point.

This year, the best team were the drivers from Nijman/Zeetank, consisting of Piotr Foryś, Piotr Kowalczyk and



The winning drivers' team from Nijman/Zeetank, consisting of Piotr Foryś, Robert Cichosz and Piotr Kowalczyk.

Robert Cichosz. The drivers' knowledge as well as their specific knowledge of the products and applicable procedures at BP made a huge impression on the organisers and the other participants in the competition. The day ended with a festive meal during which the winners were presented with their prizes in the form of a souvenir coin. The partnership

between Nijman/Zeetank and BP started in 1997 with the delivery of fuel and LPG. Since the start of its current contract in 2010, Nijman/Zeetank has been delivering fuel to the fuel stations under the BP logo. This year the contract was extended by another two years, reflecting BP's satisfaction in this excellent partnership. <<

Clear and transparent

Knowledge, experience and caution are vitally important at each step during the production of car windscreens. Pilkington Automotive Poland, in Chmielów near Tarnobrzeg, is one of the most modern companies in the NSG Group, supplying windscreens with special properties.

The factory is not very old as the foundations were laid in 2011. The company is already in production and still expanding. It is part of Pilkington Automotive Poland. This is the second site, after Sandomierz, which produces windscreens for the auto industry. Every year, both factories deliver four million front windscreens and four million side windows and rear windscreens. In six million of these windscreens, extra features are incorporated such as rain sensors or special seals. By the end of 2015, more new production halls are being constructed in Chmielów, increasing the capacity by another four million windscreens per year. 70% of the products are intended for export.

>> Responsive market

Since the 1970s windscreens have been produced in the former glass factory in Sandomierz. Pilkington, which has been part of the NSG Group since 2006, started to invest in Poland in 1993. Two years later, a production line was set up in Sandomierz for float glass production, a process which was developed in 1952 by Alistair Pilkington. The primary part of this process involves pouring molten glass in a float-bath. The glass flows out over the surface of the liquid metal (tin)

forming an almost perfectly smooth film of glass – the most important requirement for windscreens.

Production for the auto industry in Central and Eastern Europe was further increased by the new factories.

“There have been three investment waves”, says Ryszard Jania, chairman of

the board and general manager of Pilkington Automotive Poland. “In 1998/99 and 2004/06, we started up the new lines and production processes in Sandomierz. For 2011-15, we planned the construction and expansion of the company in Chmielów. The full amount invested in both factories will involve 250

Ryszard Jania: “There is mutual trust between Nijman/Zetank and Pilkington Automotive Poland.”



million Euros by the end of next year.”

At the end of the twentieth and beginning of the twenty-first century, Poland and its neighbouring countries were regarded as attractive sales markets. Mainly because of the low production costs, they were also considered good bases for factories and this produced many customers for windscreens in the region. In order to stay as close to its customers as possible, Pilkington Automotive Poland decided to expand its production facilities.

“A need emerged for sophisticated technological glass. Bigger dimensions, and with more complicated forms and in combination with heating, but also laminated roof and side windows”, says the Chairman.

The company currently supplies, amongst others, the Polish factories for Fiat, General Motors (Opel) and Volkswagen. International customers include Ford, Peugeot and Citroën, Renault, BMW, Mercedes-Benz as well as Land Rover and Maserati.

Another aspect that makes Sandomierz and the surroundings an ideal location is the tradition of glass production and the highly qualified craftsmen there as well as an extensive infrastructure being present with a road network and access to water, gas and electricity.

>> **Green as white**

“Most drivers don’t know that their windscreens are not made of white glass but green glass. Green glass reflects and absorbs part of the sun’s rays”, Ryszard Jania explains. “In the auto industry, various types of windscreen are used with special properties. Pilkington Automotive Poland produces front windscreens, fixed side windows and door windows, rear windscreens and panoramic sunroofs with a large surface area. We not only offer laminated and



tempered glass, but also glass with additional specifications; for example, mounting plates for mirrors, cameras or driver-support systems like rain sensors. Windscreens on trucks impose huge demands on the production process due to the large surface area and curvatures on the sides. We supply windscreens for trucks owned by DAF, MAN, Scania, Volvo, Renault and Daimler AG.”

In the new passenger car designs, the windscreens are bent by an increasingly small angle. They must therefore have perfect optical characteristics. Furthermore, a windscreen must be able to work well with other modern facilities in a car, such as ‘head-up display’ technology. This facility gives certain information about the car, such as speed data, directly in the windscreen in front of the driver. The latest Pilkington products include a heated front windscreen, whereby the entire surface and side windows are covered with a hydrophobic coating. The coating ensures that the water collects as beads on the surface of the glass. These are then blown away by the air along the side of the car, allowing an optimal view through the glass in rainy conditions.

Most drivers don’t know that their windscreens are not made of white glass but green glass.

“A few years ago, there was a huge demand for panoramic sunroofs. This laminated glass has to meet the same strict safety standards as a front windscreen. Thanks to the tinted glass, the interior is protected from overheating in the sun”, says Ryszard.

>> **Warning! Glass**

Due to the forced bending process, large windscreens are made in two-part shapes. This guarantees the high recyclability of the glass. In smaller series, gravity is used to bend the glass. This enables the company to offer great flexibility in its assortment.

“Glass is a rather fragile product and caution is required at all times”, says Ryszard. “We’ve worked with Nijman/Zetank for many years. Among other things, the company guarantees the internal transport in the factory in Chmielów and organises the transport of the products from the NSG Group to the customers. Nijman/Zetank optimises the entire transport system. The company is flexible, which is often typical of family-run firms. The communication lines are short and decisions are taken fast. There is mutual trust.” <<

Linked by Rail: Netherlands-Poland

In 2013, the project group, “Linked by Rail”, was set up through the Partners for International Business (PIB). This initiative is supported by the Ministry of Foreign Affairs and aims to further expand the intermodal corridor between the Netherlands and Poland. Nijman/Zeetank was involved in this project group from the start as business and knowledge partner.

There were various meetings to further improve and develop intermodal transport.



Over the past year, there have been several meetings and discussions at government and business level and various activities have been developed in the field of knowledge transfer, infrastructure and business opportunities aimed at further improving and developing intermodal traffic between the Netherlands and Poland.

During the state visit to Poland in June 2014, His Royal Highness King Willem-Alexander and Her Royal Highness Queen Máxima, joined Minister for Foreign Trade, Lilianne Ploumen, and various trade delegations to visit the CLIP terminal in Poznan. This visit marked the first anniversary of the

foundation of the Linked by Rail project and the second anniversary of the rail shuttle of the Linked by Rail partner, ERS Railways, between Rotterdam and Poznan. Commercial Manager Kees in 't Veld told the Royal couple about the contribution and the goal for Nijman/Zeetank relating to the Linked by Rail project.

In September 2014, the project group organised a three-day training course in Warsaw, Poznan and Katowice. Polish logistic managers from shippers and managers of logistic service providers were extensively instructed about intermodal transport. At the same time, they were given the tools to help them

decide on the most appropriate transport modalities. For some of the candidates, this was followed up in October 2014 in the form of a week's training in the Netherlands during which they visited several companies.

In 2013, the first logistic exhibition Transpoland was organised in Warsaw. Linked by Rail was represented by all the partners at its own stands. Visitors were introduced to all the intermodal transport options between Poland and the Netherlands. Due to the success of the business in 2013, Linked by Rail had its own stand again this year at Transpoland 2014 which was held from 5 to 7 November in Warsaw. <<

New customised refrigerated wagon for Pilkington Automotive Poland

In accordance with its contractual agreements with Pilkington Automotive Poland, the Nijman/Zeetank site in Sandomierz has delivered a refrigerated wagon with an engine which complies with all the requirements of the Euro 6 norm. The refrigerated wagon is built on the base of a Scania P250. The comfortable cabin, with bed and air conditioning, guarantees pleasant working conditions for the driver.

The truck is intended for the transport of products at a constant temperature. With a hold measuring seven metres in length, it can transport up to eight tons of freight. Because the freight involved is very delicate and expensive, it is vital to be able to monitor and maintain the temperature at the same level during the entire journey. In view of the specific requirements, the refrigerated wagon is

equipped with a Carrier refrigeration aggregate. The aggregate is able to chill the hold in several seconds to the desired temperature.

The installed Datacold system registers the temperature in the wagon throughout the journey. Once the freight has been delivered, a temperature report can be printed out.

During the winter, the refrigerated wagon

also guarantees additional heating of the hold which is kept up to the required constant temperature. In addition, a sensor has been installed in the rear doors which informs the driver when a door is open. This prevents unexpected temperature fluctuations during transport. While loading or unloading, the interior of the hold is lit by modern LED lights installed in the ceiling. <<

The engine of the new refrigerated wagon for Pilkington Automotive Poland complies with all the requirements of the Euro 6 norm.



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