

# valvescommunity

Information for customers and partners

## New testing lab

A paradise for research and development

## Products

Cryo shut-off valves for liquefied natural gas (LNG)

## International

Trade fair in Shanghai  
Customer visit in Russia

## HEROSE internal

Three iPods to be won



## Editorial



Dear reader,

A very warm welcome to our customer newspaper "valvescommunity". We want to use the paper both to regularly inform you about our new products and developments in this extremely fascinating branch of industry and enter into an even closer dialogue with you. You know just as much as we do: a good, open cooperation is the best basis for finding joint solutions to new challenges.

Take a critical look at this first issue and let us know your opinion.

Enjoy your read!

Dirk M. Zschalich, Wilfried W. Zschalich  
Managing partners

## New testing lab at HEROSE

# Investment in the future



## Turnover doubled, production area expanded: all lights are on green. And HEROSE GMBH is just as optimistic for the future

HEROSE GMBH on the road to success: over the last five years the company from Bad Oldesloe has been able to double its turnover to € 25.7 million. Expectations for the future are accordingly optimistic: "By 2012 we want to add another 100 percent", says senior boss Wilfried W. Zschalich, "turnover of € 50 million is most certainly realistic".

Capacity at the company's site are already geared towards expansion: Following upgrades in 1996 and 1999, two new halls which increased the shop floor to 8,400 square metres, were put into

operation in 2006. Two new testing labs (see special report in this magazine) were also procured as part of this move. Plans are being made to expand this area to 12,500 square metres by 2012.

HEROSE GMBH, with its 180 employees, is the market leader for shut-off valves and safety valves in the field of manufacturing, storage and transportation of air gasses and liquefied natural gas (LNG). The company is active in around 80 countries, with South America targeted as a region for further growth.

# A paradise for **research** and **development**

**More space, higher pressure levels, larger volumes: A new testing lab has been put into operation within the scope of expansion at HEROSE. A look around inside**

Helmut Göttsche is looking intently at the pressure gauge. The manager of the testing lab at HEROSE is testing a newly developed valve. Water is shooting out of a green-painted tank into the collection basin at high pressure, passing through the object of the test as it does so. The basin, at around 8 by 6 metres in size, could easily pass as a jacuzzi for stressed employees. 55 year old Helmut Göttsche then assesses the test results in various diagrams on a monitor. "We're going to have to have another look at that", he mumbles, unscrewing the part and departing for his office.

The office is just as new as both the rooms in the testing lab. They were all installed the previous year as part of expansion work which saw the addition of two halls. Both rooms contain various compressed air tanks. One room is used to carry out tests with compressed air, trials with liquids are performed in the other. Göttsche: "New valve developments can be tested under high pressure in both testing rooms". Managing Director Dirk M. Zschalich explains exactly what this will mean for the future of the company: "This is where we can perform the research and development work which will prepare us for new fields of business and thus put us in good stead for the future."

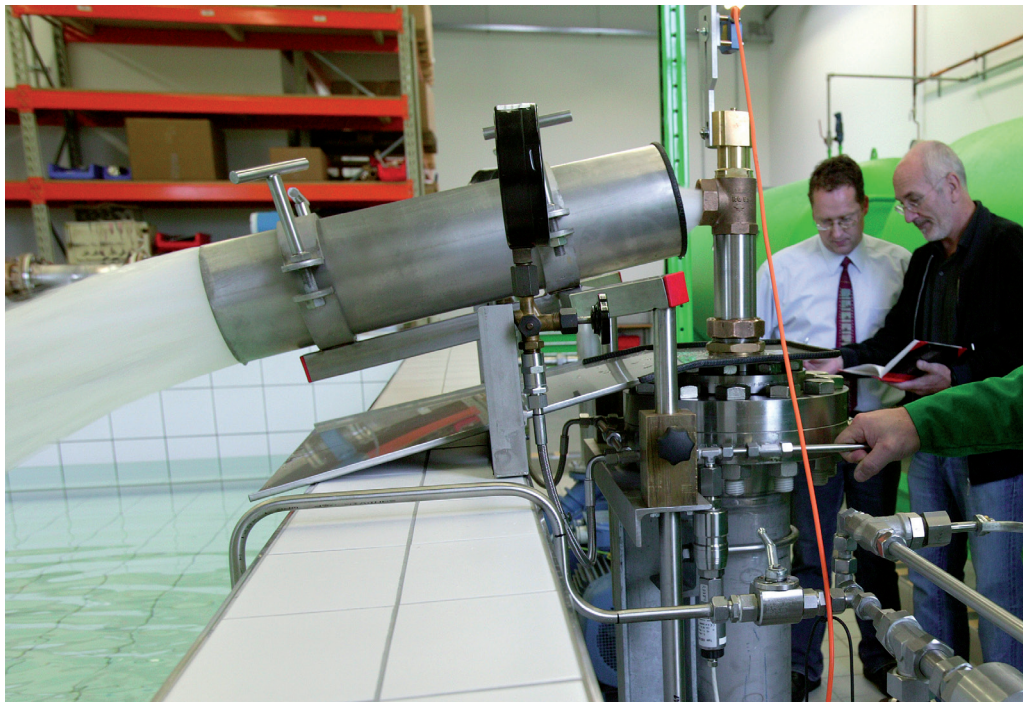
**What the market demands is that which will be developed**

It is not as if there was no research and development activity at HEROSE before. It just all took place in a much smaller area which made up only a third of the current area. It was also only suitable for low volume work at low pressure.

Helmut Göttsche and his three colleagues Heino Lüdke, Hans-Hermann Simonsen and Reinhardt Piotrowski receive their jobs from the marketing department at HEROSE. There they know exactly what the market demands

HEROSE employee Heino Lüdke testing a new prototype

## Headline topic



Water, water everywhere! Helmut Göttsche in the water testing area. In the background: Deputy Sales



The new air testing area – with high-pressure spherical accumulator and storage tank



Manager Volker Maaß (l.) with Editor Carsten Wurr



and the route it is taking. Göttsche: "Safety valve in a 3D CAD programme on the screen. The prototype is then produced by hand, and tested in one of the two testing labs depending on the requirements.

**"In most cases the prototype doesn't work straight away"**

This is a job for tinkerers. That's right up Helmut Göttsche's street. It is a long time since he last had to call in a handyman at home because he can repair just about everything himself, and the more difficult the task, the more he comes into his own.

Göttsche is often in top form. The targets set by the marketing department are usually very complex. "In most cases the prototype doesn't work straight away". Then further improvements are made, "it's a real piece of puzzle work". It can take up to one year before the valve meets with the requirements. Göttsche: "With new safety valves there are numerous regulations and standards which have to be taken into account - it's a real maze of red tape".

Back again in the testing lab, where the liquid trials are taking place. Helmut Göttsche explains the details: "Here you can see two tanks. One is filled with just compressed air and is used for both testing labs. The other contains 80 percent water and 20 percent compressed air. During the trials in this room water is conveyed at high pressure to the testing station where the valve which is being tested is attached to the test nozzles. Pressure and laser sensors check whether the requirements are being met. The results are displayed on the screen by software which we developed ourselves."

The testing programme in the other room, in which there are a further two compressed air tanks - one with 8 bar of pressure, the other with 320 bar, follows a similar course. That concludes our look around inside. We shake hands and Helmut Göttsche once again has that mischievous smile on his face. No doubt another technical challenge awaits him ...

## The new testing lab in figures

Capacity in HEROSE's development area was expended at a cost of around € 200,000 (not including constructional measures).

### Air testing area

High-pressure spherical accumulator:  
 Maximum pressure: 320 bar  
 Storage volume: 3,150 litres  
 Connection port size: 1"

Storage tank:  
 Maximum pressure: 80 bar  
 Storage volume: 16,000 litres  
 Maximum connection size: 2 1/2"

Example of a function test for a flow diameter of 25 mm:  
 Maximum mass flow rate: 45.6 t/h at a set pressure of 120 bar

### Water testing area

Maximum accumulator pressure: 80 bar  
 Storage volume: 16,000 litres  
 Maximum connection size: 2 1/2"

Example of a function test for a flow diameter of 32 mm:  
 Maximum mass flow rate 208 t/h with a set pressure of 65 bar

## Successful trade fair in Shanghai



Junior boss Dirk M. Zschalich (right) was also there to meet customers in Shanghai

At the beginning of September HEROSE exhibited at IG China 2007. The "9th China International Exhibition on Gases Technology, Equipment and Application" in Shanghai this proved once again to be the defining event for the Chinese industry. HEROSE was attending for IG China for the fourth time as an exhibitor.

The trade fair has grown considerably over the past few years. The number of foreign visitors has been the subject of particular growth from year to year.

Our trade fair team was once more able to welcome a great number of customers and interested parties to the stand this year. Our stainless steel valves range

generated particular interest. HEROSE is currently working with high-pressure towards gaining certification for safety valves for the Chinese market.

Over the past few years IG China has helped HEROSE build a reputation as a manufacturer of quality valves and make a name for itself. Within a market in which trade fairs enjoy a more important status than in Western Europe, IG China provides a good overview of the development of the market for industrial gasses in China as a whole.

HEROSE is expecting strong growth on the Chinese market over the next five years, for both industrial gasses and LNG. HEROSE has been represented locally for the last two years with its agency in Hangzhou. This office has been a considerable factor in the doubling of turnover in China since 2006.

### HEROSE Agency Hangzhou

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## Russia: Great cuisine, great customer

### Joachim Ehmke, HEROSE Sales Manager, on his 12th trip to Russia – the market of the future

He enjoys travelling to Russia. The reasons are first and foremost of a business nature - but Joachim Ehmke likes the area between Moscow and Siberia in a private capacity too. At the beginning of September, HEROSE's Sales Manager was travelling in Russia for what was already his twelfth visit. He met 14 customers all in the space of eleven days. His starting point, just like in previous years, was the "Cryogenic" trade fair in Odessa. Joachim Ehmke: "That's the best place to make contacts in this huge country".

HEROSE has had Russia in its sights for three years now: "It's the market of the future and, interestingly enough, is around five years behind China as far as development is concerned", says Ehmke. Linde and Air Liquide are currently behind the major activity in Russia, as well as various Russian gas companies. This is good for HEROSE: "There isn't a single manufacturer in the country which can produce valves in the quality we produce".

Together with Dr. Nikolay W. Pawlow of HEROSE's representatives MONITORING Valves and Fittings Cryo in Moscow, Joachim Ehmke visited new customers in the capital and in Omsk after the trade fair. They demonstrated the HEROSE range with a presentation on the laptop and various sample parts.

Ehmke enjoys working with Russian customers - even when it comes to payment habits: "You hear all kinds of stories - but our invoices are always paid promptly. A few other countries could take a leaf out of their book". A promising initiatory business meeting in Russia always involves a substantial meal and one or two glasses of vodka. Ehmke: "I really like Russian cuisine - and long gone are the days of going over the top with the vodka".

Ehmke und Dr. Pawlow take advantage of the last customer visit to go on an excursion to the European/Asian border near Yekaterinburg - also a popular destination for Russian bridal couples.

### Monitoring Valves and Fittings CRYO

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## The trade fair philosophy

HEROSE follows a dual strategy. One part of the strategy is attending trade fairs and congresses in growth regions and countries, such as Russia and China, in order to both build direct contacts to globally active customers, such as Linde/BOC and Air Liquide, and win over interested parties from the local area. Another part is HEROSE's attendance at specialist trade fairs for the industries of the user, e.g. Bauma, MEDICA, POWERTECH or IG CHINA in order to pick up on current market trends and customer requirements. HEROSE generally exhibits at between six and eight trade fairs each year and attends a further 10 to 15 to evaluate the market. The definitive trade fair for HEROSE and for the European valves industry is ACHEMA (takes place next in May 2009) in Frankfurt.

### Upcoming trade fair dates:

- Cryogen Expo in Moscow 13.-16.11.2007
- SEPEM Industries in Douai 22. - 24.1.2008
- WIN in Istanbul 7. - 10.2.2008

Here's Europe, there's Asia: Joachim Ehmke (right) and Dr. Nikolay W. Pawlow



# New seal as an "anti-freeze agent"

Safe silo transport, even in Siberia, thanks to modified fluorine rubber (FPM).

Made from brass but most definitely worth their weight in gold for the user. In those situations where the name of the game is preventing the permitted pressure levels being exceeded with absolute certainty - and that at temperatures as low as 40 degrees Celsius below. The valves - approved for liquid, granular and powdered media - achieve their excellent performance at these cold temperatures thanks to the selected material: "The use of modified fluorine rubber (FPM) for cup gaskets means we can ensure the valves have the highest level of stability", explains HEROSE Engineering Manager Matthias Reinhardt.

But where in the world are silo transporters confronted by the climatic challenge of temperatures of as low as 40 degrees below zero? Almost on our own doorstep: In Eastern Europe and in Russia the Winters are icy cold. These are exactly the demands for which the valves are officially approved, and so far they have always proven themselves with aplomb.

06505 series valves even work at temperatures as low as minus 40 degrees Celsius



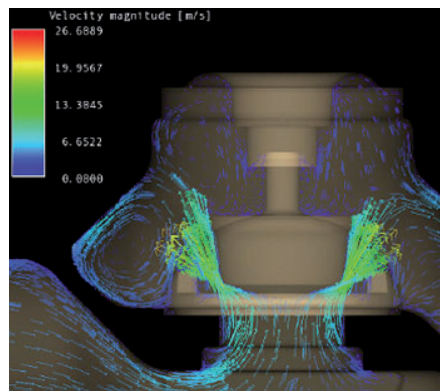
## Research

### Joint venture with TU Darmstadt and VDMA

Saves time and money: In order to make available findings on valve characteristics, cone force values and noise generation made during the early development stage (before actual production of the prototype), computational fluid dynamics (CFD) programmes should be used. Another important characteristic is the option of visually recording any cavitations which may occur.

Through the VDMA's trade association for valve manufacturers HEROSE, together with other manufacturers of industrial valves, has taken part in a research project to investigate the suitability of CFD as a development tool for industrial valves. The aim of the research project is to make new findings regarding the accuracy of simulations

compared to experimental test bench testing (more on this subject in the next issue).



Computer-generated flow simulations

## Customer service

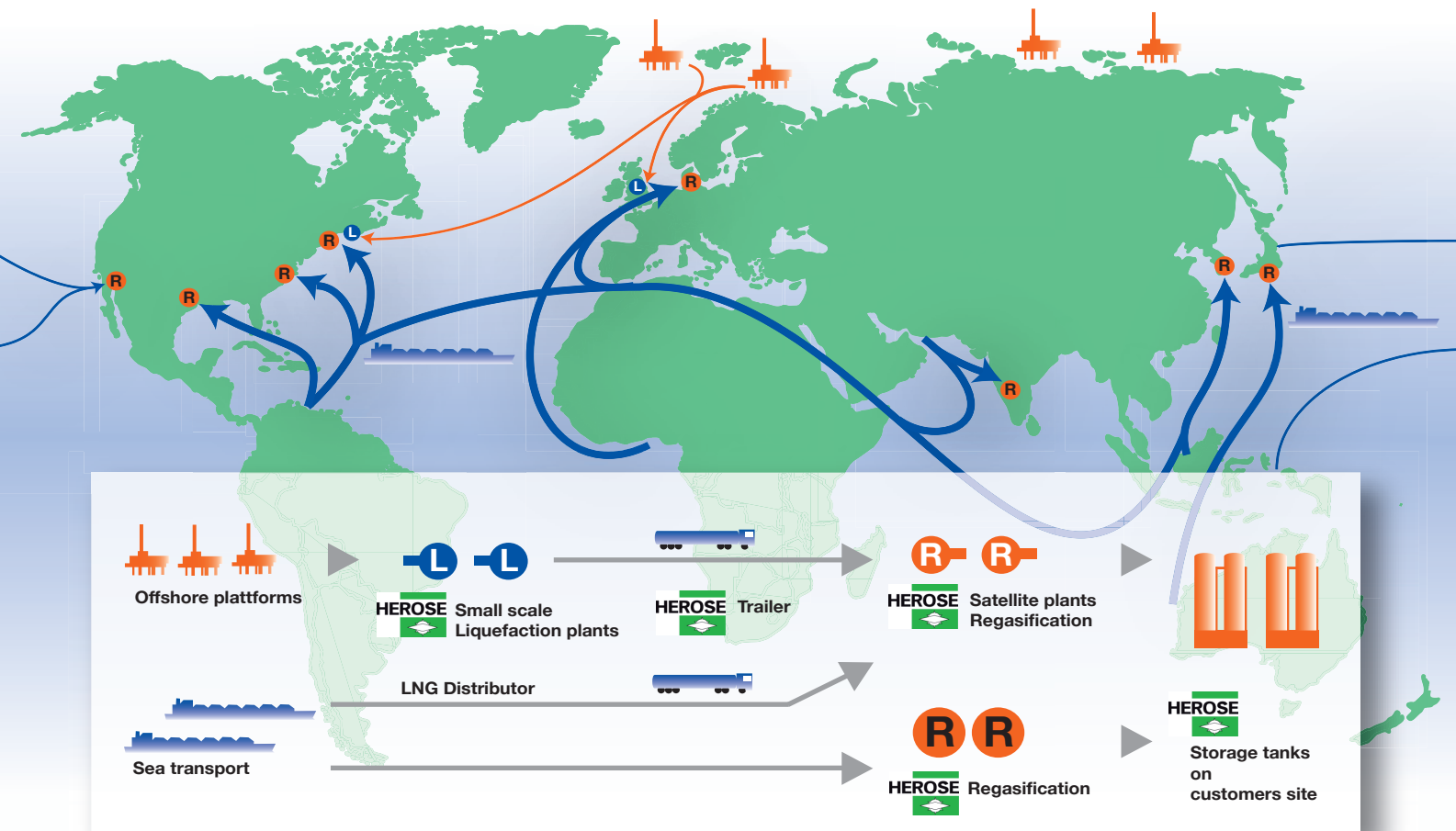
### Settings test desk secures standard

Employees of HEROSE's tool shop and the company's own valve technicians have developed and built the prototype for a settings test table (STT) which partners, such as HEROSE Ltd. or US agency Raterman, will be using in future.

The STT was developed by practitioners for practitioners so that HEROSE's partners can provide the same effective high-grade technical service as the company in Bad Oldesloe. The test table is equivalent in size to common workshop furniture and thus fits in well.

# Liquefied natural gas is becoming more and more important

The highest demands for shut-off valves



LNG storage tanks in China



Cold shock testing as per DIN EN 12567 on an LNG trailer (tank truck)



HEROSE LNG cryo valves remain tight even in the event of a fire, in line with the stipulations of EN ISO 10497

**HEROSE products ensure you can handle liquefied gases at minus 162 degrees Celsius - for manufacturing, storage and transportation.**

Liquefied natural gas is becoming more and more important as an alternative to natural gas in a gas state: Cooling natural gas to minus 162 degrees Celsius produces liquefied natural gas (LNG), which has a volume of around only six hundredths of the volume of natural gas in its gas state. It can be transported in this state by road or - similar to mineral oil - in tankers across the world's seas. Thus an increasing number of countries can take a share of the gas market: In the import country the LNG is put into intermediate storage in an LNG terminal in order to be re-converted to gas and supplied to the system of natural gas lines.

### **The first German LNG terminal to be built in Wilhelmshaven**

The EU currently has more than ten LNG import lines, with five more planned. The Germany energy company E.ON is currently building the first LNG terminal in Germany. Currently two thirds of the LNG shipped is bound for Asia (Japan, South Korea, Taiwan), eight percent for the USA and a quarter for Europe (9% of which is for Spain, 6% for France and 6% for Italy).

The shut-off valves underlie the highest demands when it comes to manufacturing, storing and transporting LNG. HEROSE fulfils the safety standards with its stainless steel cryo valves. These valves for cryogenic technology and pressure tank engineering fulfil both the requirements for liquid natural gas of DIN EN 12567 and the requirements for the highest possible resistance to fire of DIN EN ISO 10497. For HEROSE this quality is another investment in the future: Worldwide trade of LNG is constantly growing and, according to the estimates of the IEA (International Energy Agency of the OECD, Paris), will increase five-fold by 2030. Liquefying plants, vaporising plants, filling systems for trailers and small, stationary storage tanks.

## **How to contact us**

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www.valves-community.com



**Representative's Office North**  
Manfred Kadner, 56, is responsible for the Northern part of Germany and Scandinavian countries. He has been working for HEROSE since 1st January 2007. He had formerly worked for 27 years for LESER as a specialist for safety valves and fittings for cryogenic applications. The father of three lists his family and sport as his hobbies. Kadner regularly runs marathons, has ridden the Cycloclassics in Hamburg and taken part in various triathlon competitions.

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**Representative's Office South**  
Rainer Leistriz, 61, is responsible for the south of Germany as well as Austria and Switzerland. After almost 30 years at AFARO working as an independent sales representative for HEROSE, father of four, Leistriz, has held a permanent post with the company for a good year now. He dedicates his free time to music. He plays keyboard and has a collection of records which is known and loved by his circle of friends and acquaintances.

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## News

● The ASME certification in the USA for safety valve types 06216/06217, 06260/ 06265 and 06388/06418 has been extended ● All HEROSE products have received certification from Ukrainian classification society GOST for the first time ● Lars Thomsen joined HEROSE as an authorised signatory on 1st October ● HEROSE is now working together with a sales and marketing partner in Norway: VALNOR AS in Stavanger. Tel.: +47 51 82 74 20, www.valnor.no.

## Congratulations to

celebrating 25 years of service:



**Manfred Neels**  
01.08.07



**Tuncer Elmas**  
9.08.2007



**Hans-Jürgen Schacht**  
01.10.07



**Beate Christiansen**  
01.12.07

celebrating 10 years of service:

**Thorsten Timm** 24.02.2007

**Guido Schulz** 1.05.2007

**Claudia Harz** 25.06.2007

**Jan Drewes** 1.08.2007

**Hans-Jörn Stein** 8.09.2007

**Andrea Neding** 1.12.2007

## Masthead

**Published by:**  
HEROSE GMBH, Bad Oldesloe  
**Responsible for content:**  
Volker Maaß  
**Editing, implementation:**  
webhouse gmbh, Hamburg  
**Photos:**  
HEROSE GMBH, Studio Piezug

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The next issue will be available in January 2008

## Full quota of apprentices taken on for 30 years running

At HEROSE great value has always been placed on training young people. On the one hand, in order to secure up-and-coming talent internally, but also because of a conscious social responsibility. There are currently seven young people learning their trade at HEROSE (in both industrial and commercial occupations). Managing Director Wilfried Zschalich proudly declares: "We have been taking on a full quota of apprentices for more than 30 years" Photo (from left to right): Julienne Reinhardt, Kim Jana Gerken, Oke Rusch, Kai Berger, Andreas Oestreich, Henrik Goldenbaum and Julia Lindau"



## Cycl classics: HEROSE team success



All the best! HEROSE took part at the Vattenfall Cycl classics in Hamburg with its own cycling team for the first time - and with great success. All five cyclists were amongst the first third of the field in the 100km race, four of the cyclists completed the course in less than three hours. The participants and their times: M. Staller (3:04:20.49 h), S. Arndt (2:50:58.81 h), V. Maaß (2:45:30.12 h), H. Lüdtkke (2:45:30.61 h), D. Sander

## Take part: Win one of 3 iPods

Natural gas changes in volume when liquefied ...

- A to 1/ 600
- B to 1 / 150
- C not at all



Send the correct solution by fax or by mail

[win@valves-community.com](mailto:win@valves-community.com) Fax: +49 4531 / 509 120

Deadline for answers is 31st December 2007. No right of appeal.