

valvescommunity[®]

Information for customers and partners

Title

Test passed: Initial experiences with new globe valve

Exhibitions

Valve World Expo celebrates its premier in Germany

Internal

New test lab at HEROSE

International

Green light in South America



Editorial



Dear readers,

Every time we launch a new product we are naturally excited to see how it proves itself under the rigours of daily work. We are therefore especially pleased if our customers are satisfied - as has been the case with the 01541 valve with the new Flex Spindle. You can read about this in the leading article of this issue.

We will also be presenting new products at the Valve World Expo, which for the first time will be held in Düsseldorf at the end of November. We would be glad to welcome you to our stand.

The experts are unanimous: South America is a highly dynamic market. In this issue of vc you can read about how we plan to make use of this dynamism. Enjoy your read!



Wilfried W. Zschalich, Dirk M. Zschalich
Managing partners

Passed with flying colours

Globe valves have a great deal to do. For example the HEROSE Type 01541, whose service life is considerably extended by the use of an innovative Flex Spindle. This valve has been undergoing road tests since June, in a Schwingschlögel Cryo Trailer at basi in Rastatt. A vc visit to two towns

It is rare to find so many great HEROSE products in one place: On the one hand there is the 09340 manual gate valve, then there are several 06388 safety valves, as well as the brand new pneumatically activated 09343 gate valve and finally the 01541 globe valve with the innovative Flex Spindle. A total of 15 valves which are installed in the valve cabinet of the CryoGo trailer built by the Austrian vehicle manufacturer Schwingenschlögel.

Eugendorf near Salzburg: Here, Schwingenschlögel has been building vehicles since 1970. The family business, which was founded in 1900 in Salzburg, is now in the 5th generation and is Austria's largest producer of road tankers and silo vehicles with a staff of 120 employees. Kurt Schwingenschlögel spoke to vc: "Construction of the CryoGo accounts for about 50 % of our production.

While tankers and silo vehicles are mainly sold in Austria and Switzerland, all of the Cryo Trailers are exported."



Trailer production at Schwingenschlögel

HEROSE has been the Austrian company's supplier for four years. Kurt Schwingenschlögel: "During this time we have come to appreciate the excellent products and good service which HEROSE provides." ▶



Junior Manager Thomas Schwingenschlögel (left) and Hannes Rucker, who has advised the Austrian vehicle manufacturer for ten years, explain the CryoGo valve cabinet to Volker Maass, HEROSE Sales Manager (right)

And Hannes Rucker, a recognised European expert for the construction of cryogenic vehicles and consultant to Schwingenschlögel for ten years: "I am very arrogant about one thing: for me, only the best is good enough - and therefore, at the latest with the development of our new vehicle type CryoGo, only HEROSE came into question as the valve supplier."

The CryoGo is Schwingenschlögel's pride and joy: With a low centre of gravity, a short length and a high payload, this gas tanker offers a wide range of advantages. Hannes Rucker: "In the development of this vehicle, we concentrated on the ideas lower, lighter and shorter." The wedge shape of the tank reduces the overall height of the tanker trailer and the low centre of gravity increases the tilting stability and therefore road safety. On the subject of weight, Schwingenschlögel profits from its long years of experience with aluminium. According to the particular version, this lightweight material

makes the trailer about one ton lighter - a saving which enables a correspondingly higher payload. "In this field we are amongst the best in the world", says Kurt Schwingenschlögel, especially as single layer aluminium welding without seam preparation with thicknesses of up to 8 mm still remains a challenge." As early as the 1950s, Schwingenschlögel gained its first experience with aluminium, and has passed this knowledge on over the generations. "We cannot overestimate the experience of our employees."

A new feature of the CryoGo is the valve cabinet mentioned above, which contains the control units, valves and piping. Hannes Rucker: "With this design, we were entirely guided by the idea of making everything as simple as possible. On the one hand to make things easier for the driver, and on the other hand to avoid flow losses."

Schwingenschlögel uses about 300 tons of aluminium and 100 tons of stainless steel sheet per year, and at present

two Cryo Trailers are produced in Eugendorf every month.

As we departed, Thomas Schwingenschlögel, along with his cousin Kurt the second junior manager of the business, pointed out a further reason for the good cooperation with HEROSE: "We suit each other so well, because we are a family business of about the same size and both have a similar philosophy: remaining aware of our traditions while still being innovative."

You can find out more about the vehicles in internet under www.cryogo.com

basi: A regional gas producer with a good reputation

One day later, almost 400 kilometres further west: One of the first customers to use the Schwingenschlögel CryoGo with the HEROSE 01541 globe valve with innovative Flex Spindle is the company



The star of the show in the basi yard in Rastatt: the Schwingenschlängel CryoGo



From left to right: Manuel Widuckel, Technical Services Manager, Gero Meßmann, Production Manager at basi with HEROSE representatives Volker Maass and Holger Hörth from the HEROSE agent Sulzer GmbH

basi in Rastatt - the "Badische Acetylen- und Sauerstoff Industrie Schöberl & Co". Heinz Penski, a driver for basi for over eleven years is just about to leave the company premises. He is delighted with the vehicle: "It is great to drive - and the new HEROSE globe valve is easy to use." Volker Maass, sales manager at HEROSE knows of a further advantage of the valve, which is also intended for fixed applications in tanks and filling systems: "The Flex Spindle gives the product a longer service life in an area where it is heavily used." Gero Meßmann, Production and Logistics Manager for basi: "The vehicle has been in operation since

1st of June. It is on the road for about 200 kilometres every day and the valve is opened and closed up to 20 times per day."

The firm basi, which was founded in 1923 is a regional gas supplier, whose sales area ranges from Rastatt to Basel, Frankfurt and Stuttgart and includes the Rhineland Palatinate. basi's particular strength is the field of special gases. 112 employees ensure that customers remain satisfied, and basi has a total of 7 cryogenic trailers. Gero Meßmann: "We have had a business relationship with HEROSE for over 20 years."

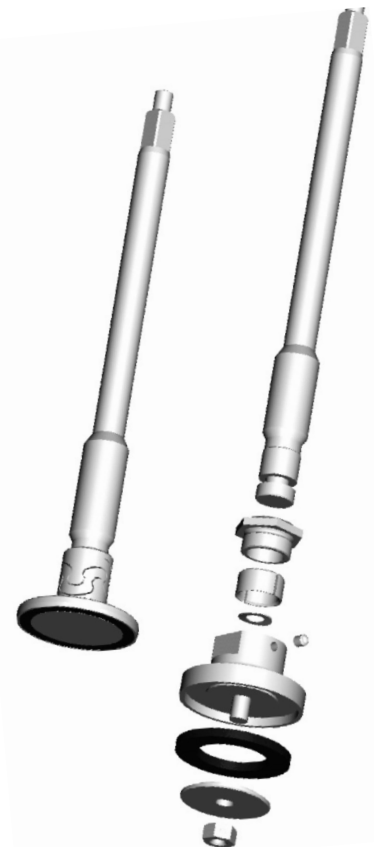
The new Flex shaft

With its novel disc-spindle connection, the new 01541 globe valve combines a flexible coupling element with a rigid coupling and therefore ensures that the disc and the spindle cannot be lost.

This innovative feature is made possible by the new HEROSE Flex shaft. This is a tubular element to which a shaft profile is applied under water by means of a HD water jet (at approx. 43.500 PSI).

The new component, the disc-Flex shaft-spindle replaces 9 components in the globe valve and provides the following benefits to users:

- No individual parts to get lost, thanks to the rigid coupling of the spindle, Flex shaft and disc
- Lower noise level due to flow through the rigid disc
- Extended valve service life
- Improved valve sealing due to flexible tubular element
- Extended maintenance intervals due to single part construction



basi has its own air gas production (oxygen, nitrogen and argon), which is operated in Strasbourg, France together with the company Prodair. Other basic components, e.g. propane, carbonic acid, hydrogen and helium are purchased externally. Filling of air gases and the production of gas mixtures is carried out at the Rastatt plant. In the neighbouring basi factory in Niederbühl the fuel gas acetylene is produced and filled into bottles.

Production Manager Meßmann: "Some of the products produced in Strasbourg are transported to the gas filling facility in Rastatt, where they are filled into bottles or further processed into gas mixtures. Via pipes and heat exchangers, the cryogenic gases, which are delivered as liquids, are converted to a gaseous state, passed on to the automatic filling stations and filled into gas bottles with a filling pressure of between 2900 and 4350 PSI."

As well as gases for classical applications (welding, heating and inertion - the conversion or processing of poorly reactive materials - applications in the fields of medicines and laboratories) the Rastatt company also supplies gases for new fields and applications. The following are just a few examples:

- Shock freezing and packaging of foods, ripening fruit
- Steel production, heat treatment
- Recycling of reclaimed materials, treatment of waste
- Fuel cells
- Calibration gases

Gero Meßmann: "basi is also active in the field of plant construction. In order to install systems and piping for gases you need special know-how to cater for the gaseous products and the high pressures which occur. The basi construction group has all of this special knowledge."

A third production area is swimming pool hygiene. Gero Meßmann: "basi supplies specially tailored packages with water treatment products for open air and indoor swimming pools. These include products for purifying the water, disinfection, pH regulation, winterizing and the prevention of algae and have already been used by a large number of public swimming baths between the Rhineland Palatinate and Lake Constance.

basi in internet: www.basigas.de

High pressure for the Valve World EXPO

In future, one of the most important specialist exhibitions for valve technology will be held in Düsseldorf. HEROSE will exhibit its valves under the key areas **INDUSTRY**, **CRYOGENIC** and **ENERGY**

At the Valve World Expo, which will be held from November 30th to December 2nd in Düsseldorf, HEROSE will be represented with its own stand. At the focus of the **INDUSTRY** section, the company will be presenting its new high pressure safety valve, which can be used for set pressures up to 3626 PSI. Through the use of the stainless steel material 1.4408 CF8M, applications with both corrosive and abrasive materials, as well as high purity media are possible. HEROSE's aim is to win further customers for this valve from the compressor manufacturing sector and from the chemical industry.

The eyecatcher on the stand will certainly be the cryogenic storage tank with a complete set of valves (Subject

area **CRYOGENIC**). With the 01541 globe valve, HEROSE will be presenting a further highlight.

Within the key area **ENERGY**, HEROSE will be presenting its complete range of valves for oil-cooled transformers.

The HEROSE management, and the heads of Technology and Sales will be continuously available for discussions.

We look forward to your visit!



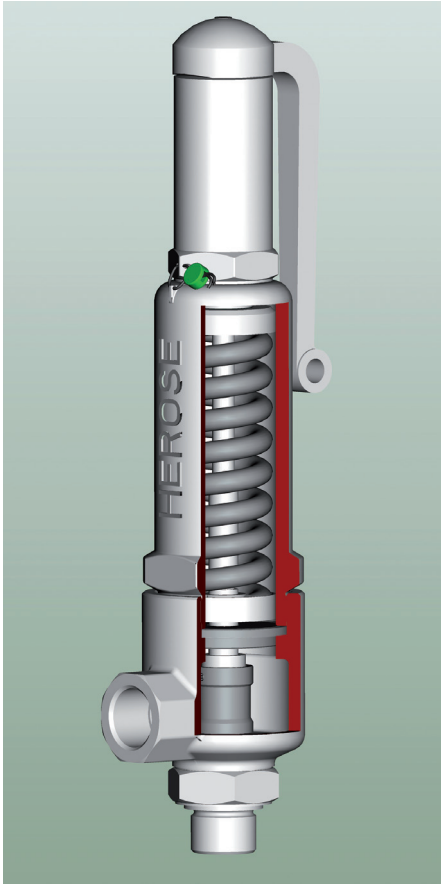
30.11 - 02.12.2010
Hall 3,
Stand H20



The HEROSE exhibition stand - specially designed for the Valve World EXPO

We proudly present

HEROSE presents the new 06850/06855 safety valve



The new HEROSE stainless steel high pressure safety valve which will be presented in Düsseldorf is characterised by its excellent performance data for applications with vapours, gases and liquids. Through the use of the stainless steel material 1.4408 CF8M for the housing, applications with both corrosive and abrasive materials, as well as high purity media are possible. The 06850/06855 series will provide flow diameters of 7 mm to 21 mm and realize nominal diameters of 3/8" to 2". The initially presented versions with flow diameter d_0 10 mm can be used for pressures from 0.5 to 250 bar 7,3 to 3625 PSI) with temperature limits from -270 to $+400$ °C (-454 to 752 °F).

Various threaded, flange and clamp connections are available for this valve series. The safety valve is initially equipped with a metal sealing disc - an optionally available lifting lever can be activated from any direction. Of course, HEROSE also provides an oil and grease-free version for use with oxygen.

Becoming independent of oil

No other country is promoting conversion to liquid bio gas as much as Sweden; HEROSE is helping

The aim is ambitious: Sweden wishes to become independent of oil. A means to this end will be Liquid BioGas (LBG) - liquid biogas for cars. The driving force behind the expansion of the necessary infrastructure for this is the gas company AGA, which has been a member of the Linde Group since 2006. When AGA took over production and distribution of LBG from the Stockholm Waterworks in 2005, 200,000 standard cubic metres of LBG were produced and there were just three filling stations. In 2008, AGA produced 5.1 million standard cubic metres and by September 2009 the number of public filling stations in Stockholm had increased to 14.

The great advantage of liquid biogas compared with compressed natural gas (CNG): it takes up much less space. LBG can also be transported for a five times greater distance. This was one of the decisive factors for AGA's recent opening of a further biogas filling station in Sundsvall, about 350 kilometres north of Stockholm. HEROSE products are used in Sundsvall. Both the trailers and the fixed tank and piping to the filling pumps are equipped with valves from Bad Oldesloe.



The biogas filling station in Sundsvall

AGA also has great plans for the present year and will open special filling stations for trucks.

By 2020, five percent of all vehicles are to be fuelled with biogas - ten times more than at present. A current study by the University of Lund has shown that in comparison with petrol or diesel fuel, biogas releases 65 percent less greenhouse gases.



Sundsvall: HEROSE valves on the biogas tank

The new HEROSE test lab

New HEROSE test lab for testing safety valves as per DIN EN 13648-1

Due to the special conditions in cryogenic operations, the application standard DIN EN 13648-1:2009 Safety valves for cryogenic Operations was issued for storage tanks for cryogenic liquid gases. This standard is essentially based on the experience of the CGA (Compressed Gas Association, USA) and provides manufacturers with the opportunity to take the special requirements of both safety valves into account in the context of their development work.

Additional prototype tests are required, which are carried out at the lowest operating temperature (usually liquid nitrogen at 1.0 bar/14,5 PSI, approx. $-196\text{ }^{\circ}\text{C}$ / $-321\text{ }^{\circ}\text{F}$) with simultaneous wetting of the valve with water. The performance of the test and the acceptance criteria are described in detail in the standard.

However, it is interesting that neither users nor other valve manufacturers have a test lab of this type. As a leading manufacturer of valves and safety valves for cryogenic operation, HEROSE has met the challenge and developed a test lab which fulfills these requirements.

Essentially, two tests must be carried out:



The new HEROSE valve test bed fulfills many requirements

- Influence of rain water prior to cryogenic operation
- Influence of rain water during cryogenic operation

The background to these tests is that due to the low temperature safety valves can completely freeze up and may no longer be able to safely release the required mass flow. The safety valves

should function as in the general component test and after opening and closing five times must not exceed a leakage rate of $3.0\text{ Nmm}^3/\text{s} \times \text{DN}$ (at 90 % set pressure).

For the design of the test lab, the thermodynamic consideration of the entire system was essential for the dimensioning of the tank. With the support of Dr. Ingo Wirth, proprietor of the Engineering Office for Energy Management and Energy Technology in Köthen, this was achieved at the first attempt and the test lab was able to be built as planned. The advantage is that now, users do not need to develop their own test procedures for qualifying their safety valves and are only able to use these procedures after they have ordered valves which they consider suitable, but rather they can immediately order evidence of suitability as per DIN EN 13648-1.

With this special test lab, HEROSE GMBH is the first European manufacturer to be in a position to test safety valves according to the requirements of DIN EN 13648-1 up to a rated pressure of 50 bar/725 PSI and a maximum flow cross section of 25 mm.

One of us:

Karl-Heinz Evers: he loves driving the fork lift truck



Karl-Heinz Evers at his favourite workplace: his fork lift truck

Karl-Heinz Evers, 59, can see the daily progress of the economy from the number of pink slips. The pink ones which come out of the HEROSE Dispatch Manager's printer are dispatch or-

ders. Over the past months, these have come rattling out of the printer like in the good old days. "It's great that sales are so good again" says Evers, who has worked for the company since 1966. "In those days I trained as a machine fitter", he says, "at HERO in the Ratzeburger Strasse." In 1993 he almost decided to leave. Not because he no longer liked it at HEROSE, "but because I wanted to do something different". It was a good thing that Wilfried W. Zschalich spontaneously offered him the newly created post of Dispatch Manager. "I have never regretted accepting it."

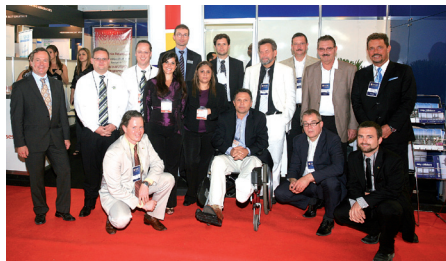
In total there are six people in the department, who ensure that the "packed goods get to the customers as quickly as possible". This is done both by carriers and by post. Large quantities of up

to two tons are collected daily from Bad Oldesloe by our "main carrier" IGS from Hamburg. Evers dispatches packages of up to 70 kg via UPS. "Although this is quite expensive, it is much better than by post." In addition he helps with shipments throughout the world, which are otherwise coordinated by his colleague Mareike Jack. However, his favourite workplace is not his desk - but rather the yellow fork lift truck in the warehouse, which he personally loads the trucks whenever possible.

Karl-Heinz Evers lives with his wife in Schadehorn, a suburb of Bad Oldesloe. His favourite hobby is keeping animals - hens, ducks and his dog Carco, a Jack Russell terrier, which he often takes for walks.

Green light in South America

HEROSE management at the Rio Oil & Gas exhibition in Rio de Janeiro



The participants on the joint stand

South America has been at the focus of HEROSE export efforts for some time now. Just how far these efforts have progressed is shown by the presence of Dirk and Wilfried Zschalich at the Rio Oil & Gas in Rio de Janeiro. This is the largest oil and natural gas exhibition in South America and is held every two years as the platform for the entire equipment supply industry. With 30 other companies, HEROSE was represented on the joint stand of the German Chamber of Foreign Trade. Dirk Zschalich: "With our presence we wanted to demonstrate how important this market is for HEROSE - and at the same time we used the opportunity to support our representatives there." HEROSE interests in Brazil are represented by Qualitec in Rio Janeiro, while Jorge Nussbaumer and his company DEBENELUX with headquarters in Buenos Aires is responsible for the markets in Argentina and Uruguay. HEROSE Sales Manager Volker Maass, who has been mainly responsible for the development of business in South America was also present and used the week before the exhibition for negotiations with large scale customers such as Praxair and Air Liquide. The summary of the visit: Business is also improving in South America.

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Ludwig Sulzer GmbH, Freiburg

Since the beginning of the 1970s Ludwig Sulzer GmbH in Freiburg has been the agent for HEROSE products in Baden-Württemberg. Markus Kühn: "We like working for HEROSE, because we appreciate the innovative products and the family atmosphere."

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The three from Freiburg: Joachim Birkle, Markus Kühn and Holger Hörth (from left to right) work for the Ludwig Sulzer GmbH sales force

Miessner OHG, Düsseldorf

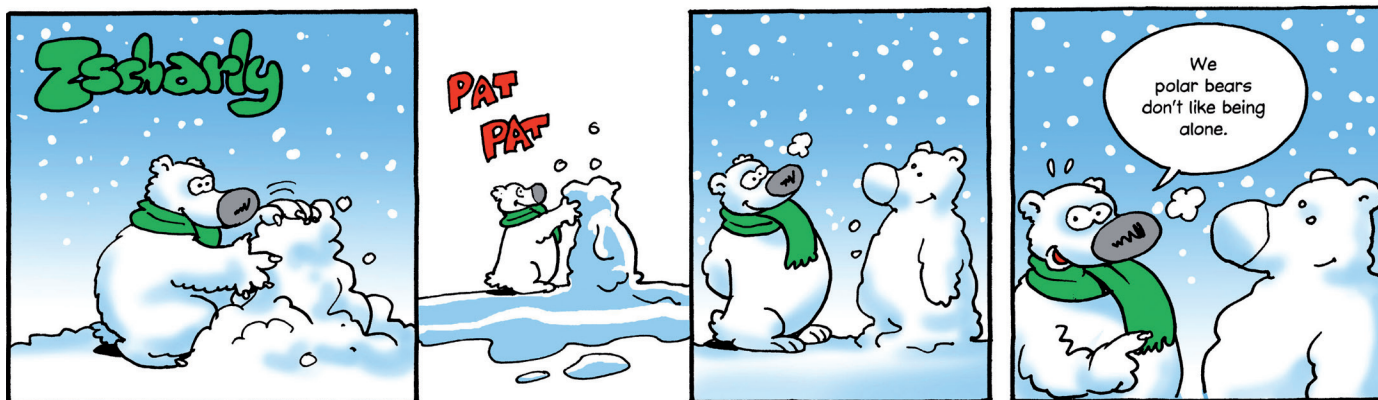
"HEROSE always has a headstart with new developments." This praise comes from Ulrich Geisen, the managing partner of Miessner OHG in Düsseldorf which has represented HEROSE in North-Rhine Westfalia for more than 40 years. "We also like to work with Bad Oldesloe, because there is the right atmosphere."

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The Düsseldorf team from left to right: Christian Hortscht, Ursula Bey and Ulrich Geisen represent HEROSE products in North-Rhine Westfalia



News

- You can access FAQ's and an approval overview for HEROSE products on our internet site www.herose.com.
- The HEROSE cycle team successfully represented the company with seven participants at the Velothon in Berlin (30.05.10) and at the Cyclastics in Hamburg (15.08.10).

Fairs calendar

Cryogen-EXPO

Moscow, Russia
09.11.10 to 11.11.2010

GasShow 2011

Warsaw, Poland
11.03. to 12.03.2011

GAS TURKEY

Istanbul, Turkey
17. to 20.03.2011

Congratulations to...

... on 40 years of service

Mr. Wilfried Zschalich
on 01.01.2011

... on 25 years of service



Friedhelm Papke-Piotrowski

on 01.03.2011

Birgit Schulz on 03.02.2011

Jürgen Spiess on 03.02.2011
(from left to right)

... on 10 years of service

Ms. Dilek Yalcinkaya-Uelkue

on 27.11.10

Ms. Sylvia Meyer on 02.01.2011

Mr. Ergin Boz on 05.02.2011

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Linde visit to HEROSE

Once a year, the members of Linde Custom Engineering Service (CES) meet somewhere in the world in order to discuss current developments and exchange ideas. On 22 June, this meeting was held in Hamburg. The Engineers about Gary Thompson and Quentin Minns used the

opportunity to take a good look around HEROSE in Bad Oldesloe. They were particularly interested in the new test lab for cryogenic safety valves. Manager Dirk Zschalich: "We are very pleased that we were able to welcome the Linde technicians."



Demonstration of the new test lab for cryogenic safety valves by Helmut Göttsche and Olaf Schulenberg

Nine hours for 94 kilometres

More than 400 teams took part in the "Run Between the Seas" a relay race over 94.2 kilometres between Husum and Damp. The "Cryo Runners Team" from HEROSE with its nine runners took 9:07:39 hours and took a place in the mid-field.

The following started for the HEROSE team: From left to right: Timo Warncke, Manfred Kadner, Reinhardt Piotrowski, Olaf Schulenberg, Michael Bentz – in front, from left to right: Gunnar Dabelstein, Heino Lüdke and Maikel Malki. Sören Thele is not on the photograph



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Mr. Gerhard Bauer, Riegler & Co. KG, Germany
Mr. Carsten Jödicke, MBG-SH, Germany
Ms. Alexandra Struck, Doden Armaturen KG, Germany