

HFI GLOBAL

The magazine of Salzgitter Mannesmann Line Pipe for customers and partners



Issue 01 · April 2008

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Dear Reader,

You are looking at the latest issue of our magazine for customers and partners.

In view of the change of name from Mannesmann Fuchs Rohr to Salzgitter Mannesmann Line Pipe, we decided to redesign the layout of this publication. And together with the new design comes a new name: HFI Global. This is both a promise and a program, as in future we intend to continue to report on interesting projects and successful cooperation with customers and partners around the world.

The new issue takes us from Siegen to Strasbourg in France and the »Hintertuxer Gletscher« in the heights of the Alps. We then go somewhere very different, to Dubai in the United Arab Emirates, for an on-the-spot report on the local Sales Office of Salzgitter Mannesmann International.

A look back in history takes us to Austria again, and demonstrates impressively

that successful business relationships can come into being under the most difficult of circumstances, and can also be maintained over many decades.

On pages 4 to 9 we provide you with information and background facts and explain how our customers profit from the closer ties between the two strong brands »Salzgitter« and »Mannesmann«.

Last but not least, we report on further investment in new technologies. In the report on the new QT facility, we explain how we intend to break into additional market segments in the field of HFI-welded OCTG pipes.

As always, our aim is to continue to report on innovative and exciting products and projects from around the world.

Happy reading!

A handwritten signature in blue ink that reads "Rasquin". The signature is stylized and fluid.

Marc Rasquin,
Chief Executive Officer

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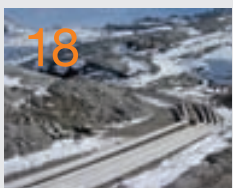
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Cover topic Change of name for Mannesmannröhren-Werke

Mannesmann Fuchs Rohr becomes Salzgitter Mannesmann Line Pipe

After seven highly successful years, the »Salzgitter« and »Mannesmann« brands are moving closer together. Therefore, like all fully consolidated subsidiaries in the Tubes division of Salzgitter AG, Mannesmann Fuchs Rohr will also change its name and will in future be known as Salzgitter Mannesmann Line Pipe.



Since Salzgitter AG acquired Mannesmannröhren-Werke in 2000, the Tubes division has become an important part of the group and is today responsible for a large proportion of its turnover.

Reason enough for this »marriage of steel«, as the merger was christened, which is now in its eighth year, to be made more visible to the outside world.

All fully consolidated subsidiaries in the Tubes division are therefore being renamed and will in future include both »Salzgitter« and »Mannesmann« in their names as a unifying feature. »The tube companies are outstandingly positioned in their fields of business«, emphasizes

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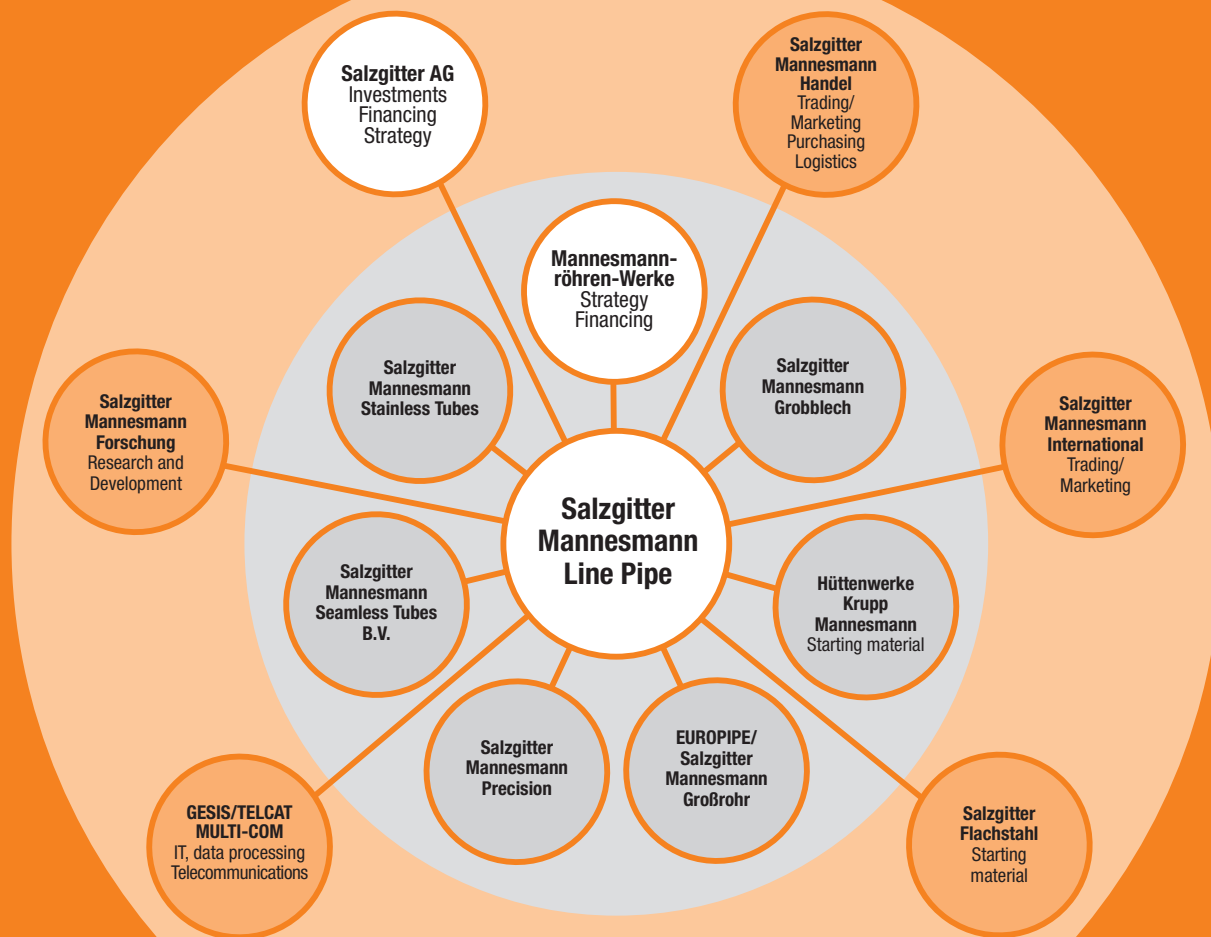
**Dr. Wolfgang Leese,
Chairman of the Executive Board of Salzgitter AG**

Dr. Wolfgang Leese, Chairman of the Executive Board of Salzgitter AG, referring to the decision.

The fusion of Salzgitter and Mannesmann reflected in the change of name will also have an effect on the HFI welded steel tubes specialists. »The name ›Salzgitter Mannesmann Line Pipe‹ will make clear within our company, too, that the tube producers of Mannesmannröhren-Werke have experienced a very successful integration into the Salzgitter group over the past seven years and more«,

says Jörg Hernando.

As a result of this development, Salzgitter Mannesmann Line Pipe GmbH, with its headquarters in Siegen, formerly known as Mannesmann Fuchs Rohr, has an excellent market position. »With two plants in the heart of Germany, we were able to position Salzgitter Mannesmann Line Pipe more strongly in the individual product sectors in recent years, to the benefit of our customers. The advantages resulting from the integration into the Salzgitter-Group have been and are a key factor in expanding the range of products and services of the Tubes group and Salzgitter Mannesmann Line Pipe itself«, declares Hernando.



Cover topic Name change at Mannesmannröhren-Werke

Optimal customer benefit

From supply chain management to know-how transfer and major investments. Not only Salzgitter Mannesmann Line Pipe benefits from integration into the Salzgitter AG group of companies – so do its customers.

Synergy effects result from many links to the Mannesmannröhren-Werke companies. To a large extent, these effects benefit the customers of Salzgitter Mannesmann Line Pipe. Moreover, there are direct and indirect relationships with companies of the Salzgitter AG group and the parent company itself.

Combining forces to benefit customers

Steel tubes from the Tubes division of Salzgitter AG satisfy demand from customers in the energy and water sectors, the automotive industry, the plant and mechanical engineering sectors and the construction and steel engineering industry.

The Tubes division includes top companies such as Salzgitter Mannesmann Precision,

»We are able to focus the combined strength and know-how of all the Salzgitter Group's plants, trading companies and research to achieve maximum benefit for our customers.«

Jörg Hernando, Sales Director of Salzgitter Mannesmann Line Pipe

the market leader in precision tubes; EuroPIPE, the world market leader in large-diameter pipes; and Salzgitter Mannesmann Line Pipe, the specialists for HFI-welded steel pipe.

It is not only the individual producers in the group that profit from the more than 100 years of combined experience and competence in the production of steel and seamless and welded steel pipes.

»We can improve and combine the strength and experience of all the group plants and successfully focus them to meet the needs of existing and future customers« says Jörg Hernando, Sales Director of Business Unit 2 for Water Pipe and Commercial Tubing at Salzgitter Mannesmann Line Pipe

Synergy effect of the Salzgitter Group

Within the group, customers and compa-



Salzgitter Mannesmann Line Pipe profits from its membership of the Mannesmannröhren-Werke group of companies and the Salzgitter AG Group.

nies profit from the parent company in terms of strategy, investment, IT, data processing and telecommunications. In addition, there are benefits in relation to quality management, certification, human resources development, environmental protection, occupational health and safety, and trade and sales structures.

The accumulated know-how and experience gained during many years of research and development in the fields of steel and steel pipes have been channelled into the Salzgitter Mannesmann Research Institute and are available to all group companies for product innovations and continued development.

The link between Salzgitter Mannesmann Line Pipe and Salzgitter Mannesmann Trading sets previously unsurpassed benchmarks for purchasers of pipes and accessories. »Commodity or special production – our motto is »Everything from a single source for optimal customer benefit«, says Jörg Hernando as he describes the many advantages accruing to customers as a result of the alliance between the Mannesmannröhren-Werke companies and the Salzgitter Group.

Changed sales structure

In addition to the name changes, the sales structure of Salzgitter Mannesmann Line Pipe has also been reorganised.

In late 2007 there was a change of management at Salzgitter Mannesmann Line Pipe. On 1 October 2007, Marc Rasquin took over as Chief Executive Officer. At the same time the management tasks within the company were reorganised:

Marc Rasquin

- Chief Executive Officer
- Sales and Strategy
- Quality and Controlling

Jörn Winkels

- Technology and Production
- General Administration and Data Processing
- Human Resources

Ulrich Kill

- Finance and accounting

Changes in the business units

In Sales, Jörg Hernando became Sales Director of the newly created Business Unit 2. The new Sales Director of Business Unit 1 since 1 January 2008 is

Michael Kosfeld, who was previously at Salzgitter Mannesmann International in Houston.

As a result of the changes in Business Unit 1, all three business units now market line pipes (on- and offshore) and OCTG casings independently, each within the framework of regionally organised structures. Business Unit 2 (Water Line Pipe and Commercial Tubing) is now divided into two sales areas. Both areas have worldwide product responsibility.

Continued customer proximity

»Basically we will continue to adhere to the successful principle of »one face to the customer«. Many milestones of technical progress are based on direct customer contact, which will continue to be at the heart of our future activities«, states Jörg Hernando.

You can find an up-to-date, clearly arranged list of direct contacts on the Internet at www.smlp.eu under »Contact/Who's who«.

The new sales structure at Salzgitter Mannesmann Line Pipe

Business Unit 1: M. Kosfeld

michael.kosfeld@smlp.eu
Tel. +49 271 691-203

- Line pipe (on- and offshore)
- OCTG

Sales Division 1.1: W. Pollaert

wiel.pollaert@smlp.eu
Tel. +49 271 691-250

Central Asia, Russia, Belarus, Ukraine, Ireland, South America, Eastern Europe, Southeast Europe, Spain, Portugal, England, Scandinavia

Sales Division 1.2: K. Thannbichler

konrad.thannbichler@smlp.eu
Tel. +49 271 691-282

Germany, Austria, Switzerland, Italy, France, Belgium, Netherlands

Sales Division 1.3: A. Neumann

alexander.neumann@smlp.eu
Tel. +49 2381 420-751

USA, Canada, Mexico, the Baltic countries, Africa, Middle East, Far East, Rest of World

Business Unit 2: J. Hernando

joerg.hernando@smlp.eu
Tel. +49 271 691-215

- Line Pipe, Water
- Commercial Pipe

Sales Division 2.1: F. Meyer

frank.meyer@smlp.eu
Tel. +49 271 691-259

- District Heating- and District Cooling
- Line Pipe water
- Surplus Pipe

Sales division 2.2: H. Dix

horst.dix@smlp.eu
Tel. +49 2381 420-745

- Commercial Tubing
- Structural Tubes
- MSH Section

An overview of the new sales structure. Detailed up-to-date information on areas of responsibility and contacts can be found on the Internet at www.smlp.eu



Cover topic Interview mit Marc Rasquin

»Two strong brands move closer together«

Marc Rasquin has been CEO of Salzgitter Mannesmann Line Pipe since October 2007. He knows the sector through and through, having decades of experience behind him in steel production and processing. In Siegen we talked about the key areas of his new job, and the new company name.

Mr Rasquin, where is the Salzgitter Mannesmann Line Pipe company in the spring of 2008?

Our products are of a high technical quality and are in great demand, as they can be used for a wide range of applications. Thanks to the incorporation of 24-inch pipes into our product range and the coordination of production in Hamm and Siegen, we are now well prepared to face the challenges of the future. Nevertheless, we are of course aware that we are in a very competitive market. However, the consid-

erable increase in starting material costs will soon force us to adjust our sales prices.

»We are of course aware that we are in a very competitive market.«

What are your priority targets and the areas on which you are primarily focused?

I see a need to act in several areas. The main priorities are the establishment of a new sales structure and the alignment of this structure and the associated organisa-

tion process to the market and customer structures, and the introduction of SAP.

What does the change of name mean for the company and its customers?

Under our new name we present ourselves on the market in a uniform manner, together with all fully integrated pipe companies and the main trading companies. For our customers, in particular, there is more transparency with regard to the products and services offered by the works and the trading companies.

Are you not caught between the Group on the one hand and the Mannesmannröhren-Werke companies on the other?

On the contrary. The new names make everything clear. Two strong brands are moving closer together. Our customers benefit from the synergy effects generated by the intensive exchanges with MRW as a shareholder and the various pipe mills. Take research and development, for example, or quality management and know-how transfer. Within the Group we profit from the fact that we can make flexible use of all its resources. We can obtain starting material, for example, from HKM or from Salzgitter Flachstahl. The complete value chain from steel production through processing to marketing is under the same umbrella. This gives assurance to our customers, together with major benefits in terms of quality and short delivery times.

»This gives assurance to our customers, together with major benefits in terms of quality and short delivery times.«

Keyword quality: Will excellent product quality be the decisive competitive advantage in future?

Yes, most definitely. We see our market positioning, also in the future, in the mix of commodities and technically superior pipes. In addition, however, we want to specialise and establish ourselves in niche markets. We are working above all to satisfy high and very high product requirements,

which is why, for example, we have invested again in a quenching and tempering system for HFI-welded OCTG pipes at the Hamm plant. Furthermore, we want to develop the described synergy effects more strongly so that our customers can benefit from product solutions offering cutting-edge quality at competitive prices.

What advantages does the new sales structure offer to the customers?

In reorganising our sales structure, we have consciously responded to the results the customer satisfaction analysis of 2007. In Business Unit 1, under Sales Director Mr. Kosfeld, all three sales divisions are now responsible for the marketing of all line pipes for onshore and offshore gas and oil activities. The same applies to OCTG pipes. The three regionally separate sales divisions, managed by Mr. Pollaert, Mr. Thannbichler and Mr. Neumann, are therefore totally responsible for these products.

»In reorganising our sales structure, we have consciously responded to the results the customer satisfaction analysis«

In Business Unit 2, »Water Line Pipe and Commercial Tubing«, under Sales Director Mr. Hernando, we have embedded a global responsibility for all products. Mr. Dix manages commercial tubes, structural tubes and MSH sections. Mr. Meyer is in charge of water and district heat line pipe and surplus pipe.



Marc Rasquin

Born 31.12.1955 in Luxemburg, married, 3 children

Career

Marc Rasquin has 25 years of professional experience as an engineer and manager at various companies in the steel industry.

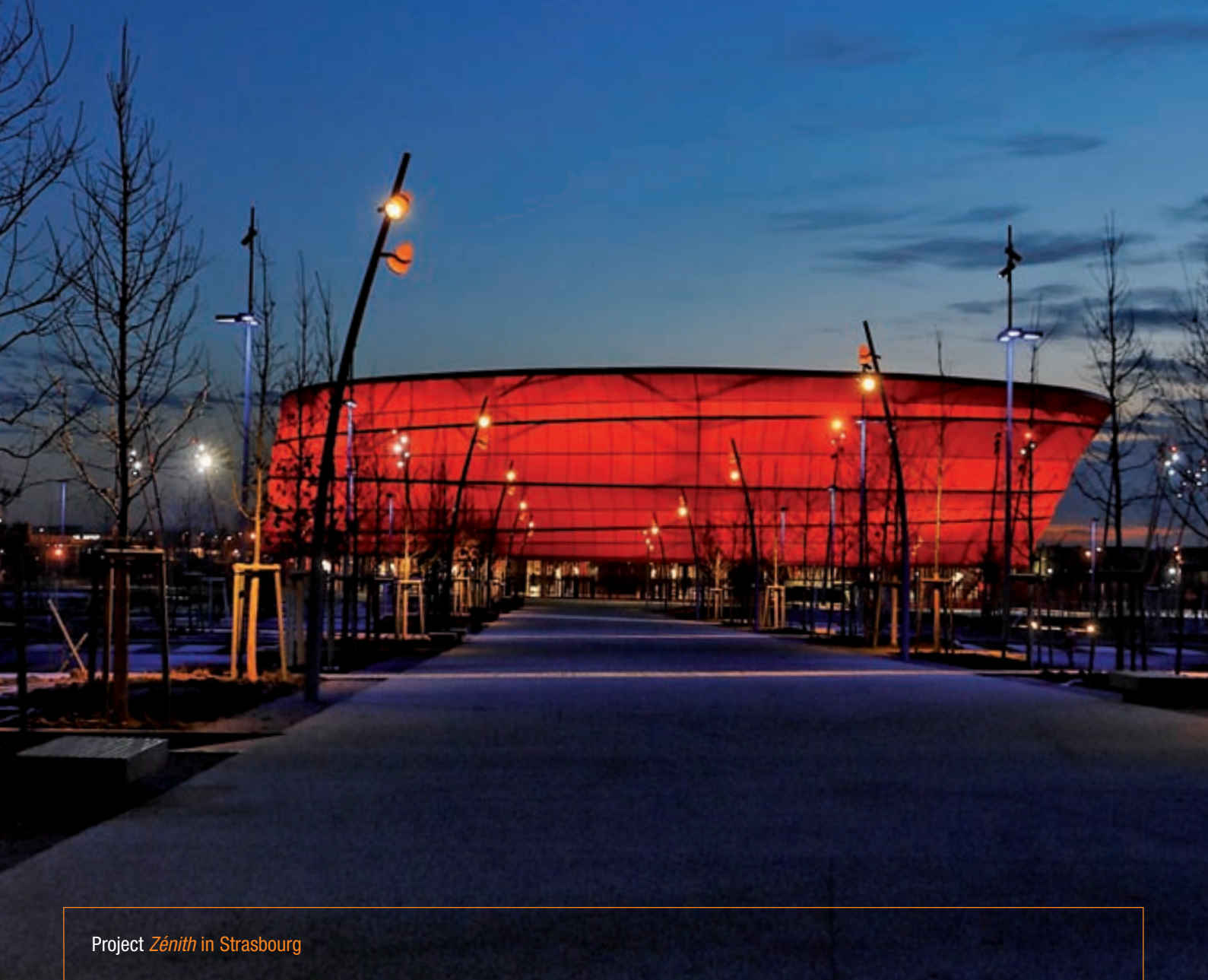
After studying the metallurgy of ferrous metals at RWTH Aachen University, he worked from 1980 to 2004 as a rolling mill engineer and a quality control unit manager, in product research in companies in Luxemburg, and as a production manager and subsequently managing director at STUL (Société du Train Universel de Longwy), a girder rolling mill in France, where he spent 7 years. In the early 1990s he followed a masters course in his spare time, which he completed in 1995, when he was awarded his MBA from the Sacred Heart University, Fairfield, Connecticut.

From 2004 to 2007 he was managing director of Stahlwerk Thüringen, an electric steel-making plant with a connected rolling mill.

Hobbies

Marc Rasquin enjoys spending his sparse leisure time with his family. He plays tennis, reads and is an enthusiastic pilot.





Project *Zénith* in Strasbourg

UFO, sculpture, Chinese lantern

France's largest concert hall, the »Zénith« in Strasbourg, opened in early 2008. The most striking feature of the ellipsoid structure designed by top Italian architect Massimiliano Fuksas is the orange-coloured textile membrane that encloses the core of the building and makes the hall glow in the dark. The special tubes for this spectacular effect were supplied by Salzgitter Mannesmann Line Pipe.

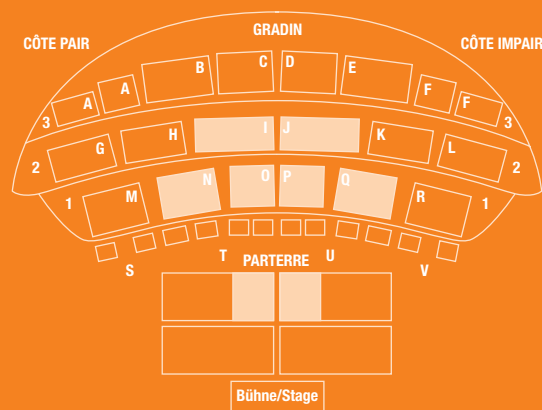


Left: As it comes to life, the sculpture starts to glow in the dark.

Top: Between the external membrane and the core of the building is a generous pedestrian area. The structure, incorporating tubes from Salzgitter Mannesmann Line Pipe, is both exciting and decorative.

Right: The seating can be flexibly arranged to accommodate up to 10,000 spectators. The stage can be extended to a size of 600 square metres.

ZENITH EUROPE – STRASBOURG



Tokyo Hotel, James Blunt, Mark Knopfler and the Chinese State Circus have already performed at the *Zénith*, and many other international stars will follow.

After 6 years of planning and building, France's biggest and most modern concert hall is now up and running on the outskirts of Strasbourg. During the day, it exudes the calmness of a sculpture. At night, when it comes to life, it glows like the structural tubes of its exoskeleton during their production in the steel mill. Without these tubes, the total load-bearing structure could not have been realised.

The tubes supplied by Salzgitter Mannesmann Line Pipe were produced at the Hamm mill in exact lengths of 1780 mm with 30-degree weld bevels and delivered to the Sturm company in Daaden. They were erected outside a central concrete

core – the actual concert hall – with a wall thickness of 36 cm, leaving a generous space between the outer and inner shells. These S355 J2H grade tubes were prefabricated in the diameter 406.4/20 mm on 3-roller bending machines using the cold bending method. As the architectural design did not require simple circular segments, the tubes had to be bent to individual specifications involving radii of between 50 and 90 metres. The tubes were then transported to Aigle, in Switzerland, where they were provided with attachment fittings for the membrane, and then painted, before they were delivered to the building site in Strasbourg.

Total investment of 78 million euros

The building alone is estimated to have cost about 48 million euros, and another



The *Zénith* during the build phase. In the foreground are the tubes supplied by Salzgitter Mannesmann Line Pipe. They were supplied in exact lengths 1780 mm with 30-degree weld bevels at both ends.

Right: Attaching the special membrane over the exoskeleton of structural tubes.

Below: The building site from the start of the work through to completion in January 2008.

The new TGV station, which was completed in 2007 and offers 50 rapid national and international rail connections every day, came at just the right time for the Zénith's opening.



30 million euros were invested in new infrastructure facilities and outdoor installations. Whether as a symbolic gesture or just by chance, a new tree was planted for each of the 3000 parking spots. Besides sporting and cultural events, trade fairs and conferences can also be staged, thanks to the generous indoor area, where up to 10,000 seats can be flexibly accom-

modated, and the multifunctional stage, which can be extended to a size of 600 square metres.

Varied program of events for 5 million inhabitants

The versatility of the *Zénith* and its varied programme of cultural, sporting and business events make it a major attraction for



the five million inhabitants of Northern France and the neighbouring regions of Switzerland and Baden-Württemberg in Germany. The new TGV station, which was completed in 2007 and offers 50 rapid national and international rail connections every day, came at just the right time for the Zénith's opening. Like the Zénith itself, the station is part of »Viaropa«,

an imaginary axis from the western edge of Strasbourg to the Europa Bridge in Kehl. A number of flagship projects have already been completed along this axis. Further large-scale building projects involving millions of euros of investment, such as the Rivétoile shopping centre, will follow, changing the face of the city as it moves into the 21st century. ■



Sales office Salzgitter Mannesmann International Dubai

Welcome to Dubai

When it comes to ambitious construction projects and rapid growth, scarcely any other city has made the headlines as often in recent years as Dubai. Reason enough for Salzgitter Mannesmann International to have its own local sales office there.



Head of the sales office in Dubai since mid 2007:
Rainer Terlinden, Salzgitter Mannesmann International

If my mother, almost 40 years ago, had not said ›Son, do your training at Mannesmann – that is a sound German steel company‹, then I probably wouldn't be where I am today.«

The speaker is Rainer Terlinden. He goes on to sum up his career succinctly as »More than 35 years of gaining experience in the steel and steel pipe trade«.

He is now responsible for the operative business of Salzgitter Mannesmann International in the Middle East. The sales area covers almost the whole Arabian Peninsula. From Kuwait through Bahrain and Qatar to Saudi Arabia, and from Yemen through Oman to the United Arab Emirates.

It is soon clear that the 58-year-old still enjoys his work enormously and regards Dubai as both a personal challenge and a home from home. »I know the region from my first travels in my early years at Mannesmann. At that time the Dubai Trade Center skyscraper stood almost alone in the middle of the desert. Today you have to look carefully to find it between all the new high-rise buildings.« The things that impress him most in Dubai are its rapid growth and polite manners, and the peaceful way in which widely different nationalities live and work together.

»In principle, we are still establishing ourselves here« says Terlinden. And we are doing this very successfully. Although the Dubai sales office has only existed since 2006, and Rainer Terlinden has only been in Dubai as sales office manager since June 2007, two large orders have already been acquired. They concern an

oil and natural gas pipeline across the United Arab Emirates. Europipe will supply about 220,000 tonnes of 48-inch pipes for the Dolphin and IPIC projects. The material will all be delivered by the start of 2009.

Terlinden also sees excellent opportunities for Salzgitter Mannesmann Line Pipe, especially with the new 24-inch heavy-wall pipes. »The potential is there. The price advantage relative to the lower large-diameter pipe dimensions will inevitably make itself felt in the medium term, although the competition in the region should not be underestimated«, says Terlinden. He has great faith in the good contacts to his sales agents in the individual regions. There are contacts with almost all large oil and natural gas companies in the Middle East, including Aramco in Saudi Arabia, Petroleum Development Oman, ADNOC in the United Arab Emirates, Qatar Petroleum, Calvalley Petroleum in the Yemen, and the Kuwait Oil Company, as well as the major internationally operating pipe-laying companies.

Terlinden's view of the region's future potential is shared by the Salzgitter Group. This is why staff numbers at the Dubai office were recently boosted. Since February 2008, Björn Steffes has come from Salzgitter Mannesmann Handel, and two new female staff members have been recruited. Steffes is responsible mainly for steel, sheet and plate, and sections. With this, Salzgitter Mannesmann International now sells all Salzgitter Group products. The only thing left to say is »Welcome to Dubai«.

Background Dubai – city of superlatives

From the desert into the sea

Faster, higher, ever more utopian – Dubai stands for high-tech, skyscrapers, rapid growth and huge construction projects. The background to this is the Emirate's transition from an oil-based economy to become the global finance, trade and tourism metropolis of the 21st century.





Background information

Dubai City is the dominant centre of the Emirate of Dubai, in the UAE, and lies directly on the Persian Gulf. Under the provisional constitution of 1971, the UAE is a federation of seven autonomous emirates. Each emirate has a hereditary ruler, who also occupies the highest office in the emirate.

Dubai – City of superlatives

More than 200 skyscrapers with a height of over 100 metres – 20 of them over 300 metres – are now under construction. The Emir personally awards construction permits for major projects that meet his approval.

Dubai in figures

- 85% of the population of the Emirate of Dubai live in Dubai City
- About 10 % of the citizens are nomads
- Only 20 % of the population are UAE citizens
- According to the World Wealth Report, there are 68,000 US dollar millionaires in Dubai
- By 2012, Dubai will have more than 300 five-star hotels
- The »ADIA« is the world's biggest state fund, with a volume of 875 billion dollars



The seven-star »Burj al Arab« hotel symbolises Dubai to the world.

Nevertheless, it will soon be overshadowed by the world's tallest building, the »Burj Dubai«. The name translates as Tower of Dubai, and its construction will be completed in 2009. At 818 metres, it will easily be the world's highest building, and will be about twice as high as the Empire State Building in New York.

Even more ambitious projects are in the pipeline, however. There have long been plans to exceed the magical 1000 metre mark, and the »Al Burj« (»The Tower«) will probably do so in 2010. It will have 228 floors and stand 1050 metres tall.

There may be those who regard these dimensions as unrealisable – a crazy dream of over-ambitious investors – but they will almost certainly be proven wrong. The small Emirate on the Persian Gulf regularly succeeds in astonishing the rest of the world.

Finance, trade and tourism metropolis

Realising that Dubai's oil reserves, estimated at about 10% of the world total, would continue to yield billions in income for just a few more decades, the ruling family Al Maktoum took steps to establish the economy on a different basis. By creating free-trade zones, they succeeded in attracting almost all internationally significant financial and trading institutions to Dubai. Together with a skilful policy of investment in »faster, higher, ever more

utopian«, the Emirate consistently succeeds in attracting the attention of the world.

No project is too ambitious. For instance, the plans for restructuring the tourism sector include an extension of the coastline to ten times its current length of about 80 km. The first project, the »Palm Island« will probably be completed this year. At record speed, a seemingly impossible vision has become reality. Within seven years an artificial island has been planned, created, protected, opened up and developed while, almost unnoticed, the population has grown from 60,000 to about 150,000. From the very beginning, international stars and sportsmen have been among the affluent clientele attracted by the highly successful marketing.

The future: Living and working on the waterfront

Further projects are already in progress. Two more, even bigger, palm islands are being created, and the Dubai Waterfront, where between 450,000 and 750,000 people will be able to live and work, is under construction. The latest project is the creation of islands that will together form a map of the world when viewed from the sky. The concept of marketing countries rather than islands has been so effective that most countries were sold even before work started. The desert state is therefore well on the way to becoming a high-tech water state.



Project The Hintertux glacier lift

Snow assured, even when it doesn't snow

Arrival at the 3250 m high glacier hut by the »frozen wall«. Step out of the lift and look around. An unforgettable view of the Grossglockner and over the Dolomites to the Zugspitze, 100 kilometres away – welcome to the Hintertux glacier.



Due to the topographical conditions, most of the materials had to be transported by helicopter.



The Hintertux glacier in the heart of the Zillertal valley in Tyrol is Austria's only all-year skiing area with guaranteed snow. All wishes are catered for – skiing, snowboarding, cross-country skiing and tobogganing are all available.

The area has 86 km of downhill ski runs in a wide variety of categories and has often been singled out by skiing magazines as the top glacier skiing area.

It is embedded in the »Zillertal 3000 Ski and Glacier World«, where there are more than 225 km of piste in total.

In view of the excellent outdoor conditions, in the autumn many top skiers and national teams come to the glacier skiing area to train and prepare for the winter season.

Even in Hintertux, however, the effects of climate change are being felt. Winters

are shorter and, above all, there is less snow, so that artificial snow is needed if the area is to uphold its reputation for all-year skiing. The operators of the Hintertux glacier lift lines faced up to this challenge some years ago. Sections of piste are being continuously equipped with artificial snow systems, so that even in summer, 18 km of piste are still available for use. In view of the exacting demands on the



The snow system sections are supplied via several compressor stations. This makes the installation of separate supply lines necessary.



Extremely difficult installation conditions at a height of up to 3100 metres

line pipes for snow systems, the *Hintertuxer Gletscherbahn* company decided to use steel pipes. The following factors were decisive:

- High resistance to mechanical stresses
- High quality long-term corrosion protection
- High resistance to pressure
- Flexible connection techniques
- Low dead weight

The greatest challenge encountered so far was that the artificial snow system had reached a height of approximately 3100 m, where installation conditions were extremely difficult, as the pipes had to be laid on steep slopes and rough, rocky terrain.

Since the materials could usually only be transported by helicopter, the weight of the pipes also played a major role. After due consideration, DN 150 (steel grade St.37.0) and DN 200 (steel grade St.52) pipes from Salzgitter Mannesmann Line Pipe were used.

To protect the 12 to 14 metre long pipes against the rocky substrate they were coated with fibrous cement, to prevent mechanical damage and corrosion attack. As the »snow pond« that supplies the artificial snow system with water is at a height of about 2000 m, the necessary water has to be pumped to a height of 3100 metres at pressures of up to 130 bar. This high internal pressure prevents the water from freezing inside the pipe,

even at temperatures below minus ten degrees. When the artificial snow system is not in operation, the water in the pipes is simply allowed to drain away.

The pipes were installed in the late summer and autumn of 2007. No difficulties were encountered, despite the tough conditions, so that the most of the new section could be operated during the winter season of 2007/2008. Snow lances were used, consisting of a pole and a

spray nozzle at a height of 5 to 6 metres. The pressure of about 30 bar that is needed to operate the spray nozzle is generated in a separate compressor station.

Another extension, using pipes from Salzgitter Mannesmann Line Pipe, is planned for the late summer and autumn of 2008.





Artificial snow system

An artificial snow system is a technical system with a number of components, the purpose of which is to generate snow artificially. The components include water reservoirs, pumps, compressors, supply lines for water, air and electricity, and a snow generator.

Technical method

Snow cannon:

The key element is a fan, which is supplied with water and electricity, and generates a powerful flow of air. Around the outlet of the housing are several nozzles, which inject water into the fan air stream, where it forms small droplets, and small compressed air nozzles, which are fed with a mix of water and compressed air, producing nucleation points around which ice crystals can form.

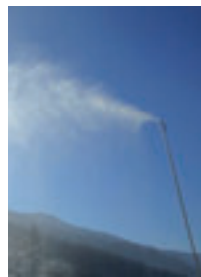
The size of the water droplets must be adjusted to the external temperature and humidity and the spraying distance so that the artificial snow has ideal properties. At 30% humidity, this method works at 1 °C above zero, whereas the temperature has to be below -4 °C when the humidity is 80%. This method is widely used, but consumes large amounts of energy. Moreover, the fan is very noisy.

Snow lance:

Water and nucleator nozzles are located



Snow cannon



Snow lance

at the tip of an aluminium tube. Compressed air is blown into the water as it is sprayed out of the water nozzle. This causes it to expand suddenly and cool down. Ice seeds therefore form and act as nuclei around which the atomised water can crystallise. The lance consumes far less energy and is quieter than the snow cannon.

Discovery

The basic principle was discovered by accident in Canada in the late 1940s, when a research team under the leadership of Canadian Raymond T. Ringer sprayed water into a wind tunnel at low temperatures in order to study the icing of jet engines – and observed that snow formed. The first commercial compressed air snow cannon was developed in 1950 by Art Hunt, Dave Richey and Wayne Pierce – partners in an American ski manufacturing company – in response to a winter without snow.

The skiing area



Height of valley station:	1500 m
Height of middle station:	2660 m
High mountain station:	3250 m
Piste km (total):	86 km
Longest downhill ski-run:	Frozen wall, 12 km

Hintertux glacier area

The glacier

The Hintertux glacier has a length of about 4 km. At its deepest point, the ice is 120 metres thick. In total it consists of 190 million cubic metres of ice. It travels up to 40 metres each year.

The ski area

The Hintertux glacier is Austria's only all-year skiing area. Leading skiing magazines have often singled it out as the top glacier skiing area.



History Erne Fittings and Salzgitter Mannesmann Line Pipe

More than 80 years of good connections

Otto Erne took his well deserved retirement several years ago. He had managed Erne Fittings for many years, and remained active in the family business until the 1990s. He enjoys reminiscing about his experiences and has a fund of anecdotes from the company's history.

In 1948, for example, the small family company of Josef Erne in the Vorarlberg village of Schlins had just started to produce small pipe bends. Founded by Otto Erne's father in 1920 as a coppersmith shop, it was looking for new sources of starting materials.

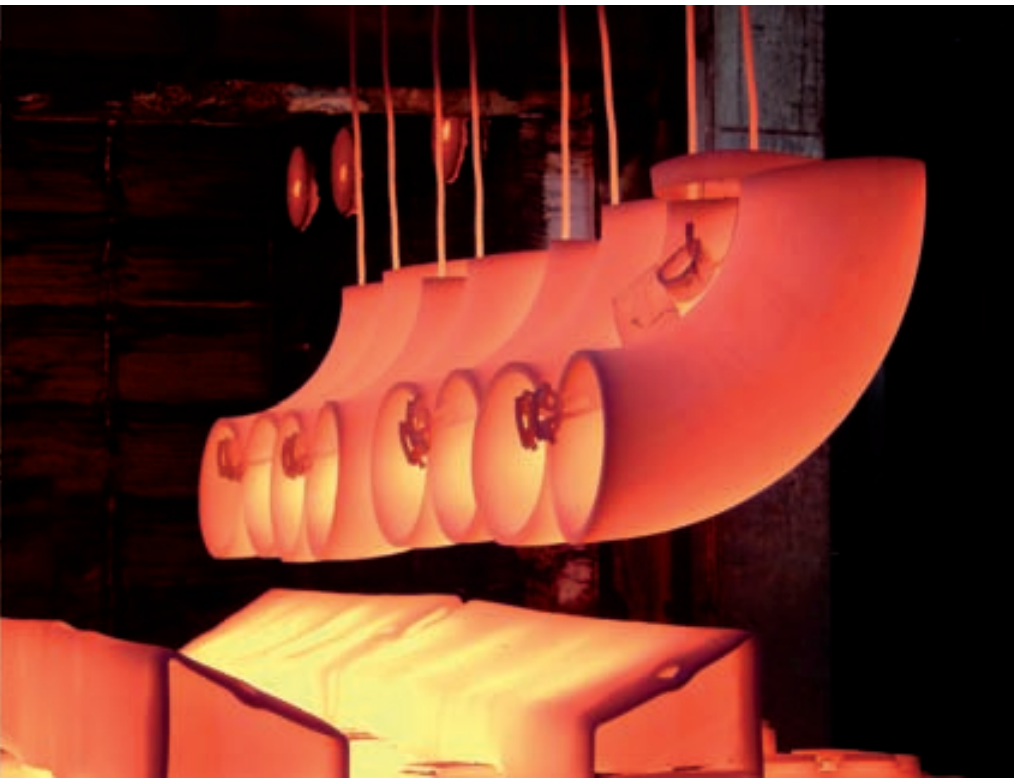
After processing scrap pipes from Vienna and then steel pipes from Hungary into pipe bends for plumbing purposes in the first two years after the war, the company started to do business across the »green border« in nearby Lindau on Lake Constance with the company whose name

was taken from the inventor of the seamless steel tube process: Mannesmann.

In great demand after the war

»High-quality pipes from Mannesmann were already in great demand at that time. Trade was basically difficult, as more or less all heavy industrial goods were scarce«, remembers Otto Erne. »Neither a new state nor a new, stable currency were yet in existence. It may be utterly unimaginable nowadays, but a large part of the trade in those years was done on a barter base.«

But what did the small Vorarlberg family company have to offer? Initially there were stocks of round and sawn timber. In addition, local agriculture could also be harnessed to enable the sought-after Mannesmann pipes to be obtained. Fatstock and breeding stock changed owners, and there were even takers for products derived from the reeds of the Neusiedler Lake. Both companies therefore exchanged goods under the terms of an agreement between the new Austrian province of Vorarlberg and the German town of Lindau.



Excellent business relationship since 1948

What started under the most difficult of circumstances is today more than a successful business relationship. Three grandchildren of company founder Josef Erne still work for the one-hundred-percent family company. »They were difficult times«, remembers Otto Erne. »But our efforts then to build up the company were worth it«.

World market leader Erne Fittings

Erne Fittings is now a group of companies with some 750 employees, which manufactures pipe connections for power stations, pipelines, refineries, tankers, offshore platforms and other industrial applications, as well as fittings for the automotive industry. The companies in the group include the parent company in Schlins, the plant in

Mürzzuschlag, the German company Siekmann Fittings in Lohne, and ELB-Form in Vandans. In the field of weld-on steel pipe connections, the group has an annual turnover of more than 100 million euros making it the world market leader.

Pipe connections a speciality

Pipe connections are the most stressed components in piping systems and pipelines. Alongside technological competence, therefore, high-quality starting materials are crucial to obtaining first-class results. Salzgitter Mannesmann Line Pipe supplies Erne Fittings with pipes in all available outside diameters in both standard and special grades and with customer-specific geometries. The first processing trials with the new 24-inch pipes from Hamm have also been carried out successfully.

To be able to supply the widest possible range of products, Erne can carry out and

»We believe in internationality and growth. The strong demand in the energy sector and a brand name that stands for excellent quality and reliability are the engine that drives our expansion.«

Dr. Ernst Bitsche,
Managing Director of Erne Fittings

has full mastery of all important production technologies in the fittings industry. Depending on the type of product and material, cold or hot forming methods are used.

Intensive research and efficient production and logistics processes, supported by a modern logistics centre with a fully automatic high-bay warehouse, are crucial to Erne's efforts to maintain its position of market leadership in the long term.

Given that only the best quality materials, processing and service are good enough for Erne, excellent connections will certainly endure for the next 80 years too.

»The friendly contacts to Hermine and Otto Erne have not only ensured successful cooperation but have given a human dimension to the long relationship between the two companies.«

Michael Bick, Head of Technical Customer Advisory Services, Salzgitter Mannesmann Line Pipe



Technology New quench and temper (QT) facility at Hamm

Major leap in OCTG pipe quality

With the start-up of the Q&T facility at Hamm, Salzgitter Mannesmann Line Pipe is now able to produce high-quality steel grades for HFI welded oilfield pipes. At the heart of the plant are 5 ring inductor rings, which heat the pipes to up to 1000 °C before they are quenched and tempered.



The full-annealed pipes are cooled to 900 °C at high water pressure. Top: Temperature control at the interface to the water cooling.

This investment was made against the background of the current situation on the energy market. Demand for OCTG pipes is expected to increase worldwide and the USA, which is the biggest market in the world, taking a volume of 3.5 million tonnes per year, will play a key role. Welded OCTG pipes have been an accepted product in the US for many decades, and have a 50% share of the market. In recent years, Salzgitter Mannesmann Line Pipe has sold an average of 20,000 tonnes per

year in grades J55 and K55 in the USA through the Houston sales office of Salzgitter Mannesmann International.

Strengthened market position

These group 1 grades in accordance with API 5CT are increasingly being replaced by cheap imports of seamless pipes, especially from China. To strengthen and expand the market position, therefore, Salzgitter Mannesmann Line Pipe decided it would have to acquire the capability to supply the higher quality grades N80, P110 and L80, whose sales are increasing at a disproportionately rapid rate. To do this, it upgraded the existing 4.4 Megawatt induction annealing system by adding a 9 MW unit with downstream quenching in order to create a quench and temper facility for HFI-welded steel pipes.

Quench and temper process

The five ring inductors heat the pipes to temperatures of 900 °C to 1000 °C by the full annealing method. Immediately after

heating, the pipes are quenched with water to about 100 °C. In the downstream second annealing section, the pipes are again tempered to 600 °C and are then cooled slowly in air. The quench and temper process imparts better mechanical and technological properties and ductility to the materials used.

Subsequent quality testing

After completion of the QT process, the pipes are transferred to the finishing shop, where they are finished and tested. The dimensional accuracy of the pipes is important with regard to thread cutting. Narrow wall thickness tolerances and excellent ovality also enable high-collapse grades such as N80 Q HC to be produced.

The new grades will enable Salzgitter Mannesmann Handel and the international sales offices to penetrate additional market segments. The first orders for the N80 Q and N80 Q-weldable grades have already been completed and delivered.



Cooperation Logstor and Salzgitter Mannesmann Line Pipe

Leading manufacturers are to work together

Logstor, the world's largest manufacturer of pre-insulated pipes, and Salzgitter Mannesmann Line Pipe, Germany's leading producer of longitudinally HFI-welded steel pipes, intend to work together on selected projects for the oil and gas industry. The first steps have already been taken.

The two companies have worked together on joint projects in the past, gaining a good impression of each other's competence and professionalism. The first time was in the year 2000, on Texaco's Erskine project. Their cooperation in supplying pipes for a 16/20-inch pipe-in-pipe system was so efficient that an intensive dialogue resulted, and further projects and activities followed.

The two companies intend to utilise their high synergy potential to optimise their production and logistics in the field of pre-insulated pipes for the oil and gas industry. This common approach will be focused mainly on the consultancy-intensive oil and gas sector for onshore and offshore pipelines. The first step, therefore, will be the development and implementation of a joint marketing programme, oriented towards the oil and gas industry.

»Logstor and Salzgitter Mannesmann Line Pipe have worked closely together on joint project planning in the past, jointly solving demanding challenges and thus benefiting our clients. We therefore welcome the prospect of implementing a shared marketing programme.«

Marc Rasquin, CEO of Salzgitter Mannesmann Line Pipe

»Our agreement with Salzgitter Mannesmann Line Pipe is a great opportunity for LOGSTOR to offer its customers increased supply and service capacity. For us, this decision is the next step towards becoming the world's number one supplier of pre-insulated pipes to the oil and gas industry.«

Jakob Jespersen, Managing Director of Logstor Oil & Gas



Logstor

Until just a few years ago the Danish company »Logstor« was mainly active on the district heating market. The situation now is very different. Today, Logstor's core competences are the field of pre-insulated pipes for oil and gas pipelines, including conventional pipelines, pipe-in-pipe systems, onshore applications and the transport of liquefied natural gas (LNG) anywhere in the world.

>>> www.logstor.com

Trade fairs and customer conventions

This year, too, Salzgitter Mannesmann Line Pipe will be present at numerous trade fairs throughout the world. We will also organise two customer conventions of our own. Further information and details of these events can be found on the Internet at www.smlp.eu under »News«.

April 2008

23. – 25.04.2008
Salon de l'Aménagement
en Montage 2008
Grenoble, France
Stand: Fontalp



May 2008

07./08.05.2008
118. ÖVGW-Jahrestagung
Innsbruck/Austria
Joint stand with ALPE Kom-
munal- & Umwelttechnik



May 2008

05. – 09.05.2008
IFAT
Munich, Germany
Hall B6
Stand no.: 526



May 2008

13. – 15.05.2008
Oil & Gas Uzbekistan
Taschkent, Uzbekistan



May 2008

21. – 23.05.2008
H₂O
Ferrara, Italy



June 2008

08. – 12.06.2008
AWWA Annual Conference
& Exposition (American
Water Works Association)
Atlanta, Georgia (USA)



September 2008

08. – 12.09.2008
World Water Congress and
Exhibition
Vienna, Austria



September 2008

25./26.09.2008
Customer convention, water
Salzgitter Mannesmann
Line Pipe, Siegen



October 2008

07. – 10.10.2008
KIOGE
Almaty, Kazakhstan



October 2008

16./17.10.2008
Customer convention, gas
Salzgitter Mannesmann
Line Pipe, Siegen



October 2008

19. – 22.10.2008
WETEC 2008
Chicago, Illinois/USA



November 2008

03. – 06.11.2008
ADIPEC, Abu Dhabi, UAE
Joint stand with Salzgitter
Mannesmann
International



November 2008

November 2008
OGT
Ashgabat, Turkmenistan

November 2008

11./12.11.2008
gat 2008
Dortmund, Germany
Stand: FIGAWA
(joint stand)



November 2008

09. – 12.09.2008
Saudi Water Technology '08
Riyadh, Saudi Arabia



The next issue of HFI Global will appear in late 2008

HFI GLOBAL

The magazine of Salzgitter Mannesmann Line Pipe for customers and partner

Salzgitter Mannesmann Line Pipe supplies 20,000 pipes for a 370 km ethylene pipeline across Southern Germany. Find out all about the EPS project /// New method ready for series production in record time – Salzgitter Mannesmann Line Pipe supplies tubes for a new and unique method of producing supporting roller tubes for the Gurtec company /// Project management at Salzgitter Mannesmann Line Pipe in theory and practice

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