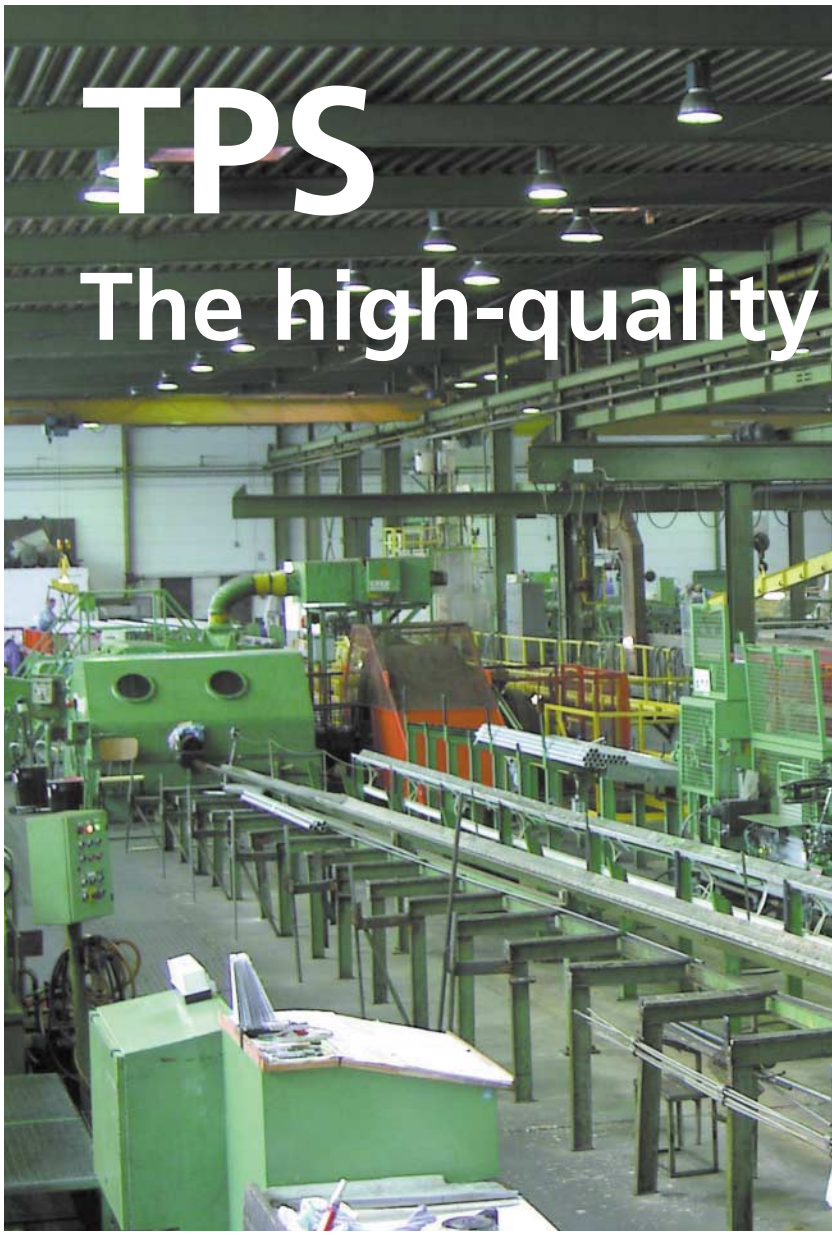
TPS
The high-quality



Almost ten years ago, Stainless Steel World first visited TPS. The company has remained a valued relation ever since, so we thought it was time to renew our acquaintance with TPS Technitube Röhrenwerke, as the company is called in full, and took a trip to Daun, Germany, to talk with the management in order to find out what is new.

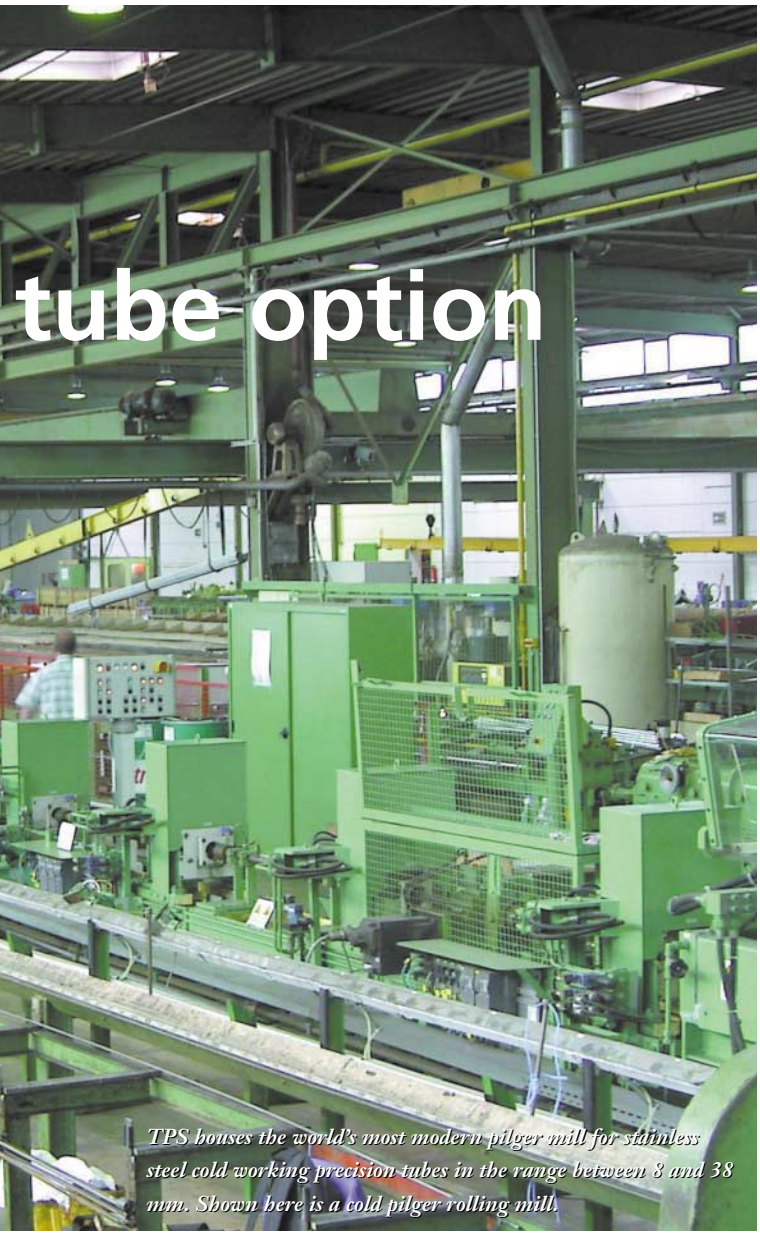
By Michael van Wijngaarden

When driving along one of the secondary roads towards TPS one cannot prevent being struck by the beauty of the area. Instead of the somewhat gloomy, industrial appearance of the German Ruhr area, you can here, in the Eifel region, find vineyards on rolling hills, small villages offering local delicacies and pleasant camping areas from where the surroundings can be explored. However, this is not where TPS got started. That was in 1975, when Mr Peter Lepper founded the company and started to trade and export tubular products and accessories in Ratingen, a town near Düsseldorf. However, the decision in 1977 to relocate to Daun had nothing to do with vineyards and local delicacies. Mr Lepper wanted to expand his business activities into the production of tubular products, and at that time the local authorities wanted to boost the economy by granting companies favourable investment conditions. Combined with the low land prices the decision to move was easily made, so three years after the beginning of TPS the first offices and modest production facilities were established in Daun, where 15 employees extended the export activities and made a beginning with the further processing of tubular products. This included special threading, bending, machining and tube drawing. The decision to move has turned out well: TPS has stayed put, and its industrial site now extends fore more than 660,000 square feet, housing 140 employees. Through the years, TPS has developed into a highly appreciated business partner for the oil and gas, chemical, fertilizer and energy industry world-wide, and we address some of the features that make TPS what it is right now.

OCTG

Michael Krämer, Sales Director: "In 1981 we started producing OCTG equipment that is used by the oil and gas industry for down-hole applications such as tubing, drill pipe and casings. From the beginning we understood that our position as a relatively small player on this market would have to be that of a specialist and that, besides producing pipes with the standard API connection, we would have to focus on applications that demand special types of premium or non-standards threads. These applications are found in high pressure, ultra-deep oil and gas wells. In order to achieve this we carried out an extensive research and development programme in order to improve our product portfolio. Consequently we were able to harvest the fruits of our efforts in 1984 because in that year we were able to start producing premium two-step integral joint tubing connections under the TPS brand names TPS Multiseal TS6, TPS Multiseal TS8, TPS Techniseal and TPS OPTIFLOW. We were the first independent European producer to do this."

One of the advantages of these tubes, Mr Krämer explained, is the fact that they are fully compatible with other products from other manufacturers. And besides being available in the common carbon low-alloy grades they can also be made in higher grades such as 13Cr, duplex, super-duplex and Ni-base alloys, allowing clients to deal with highly corrosive environments. A compre-



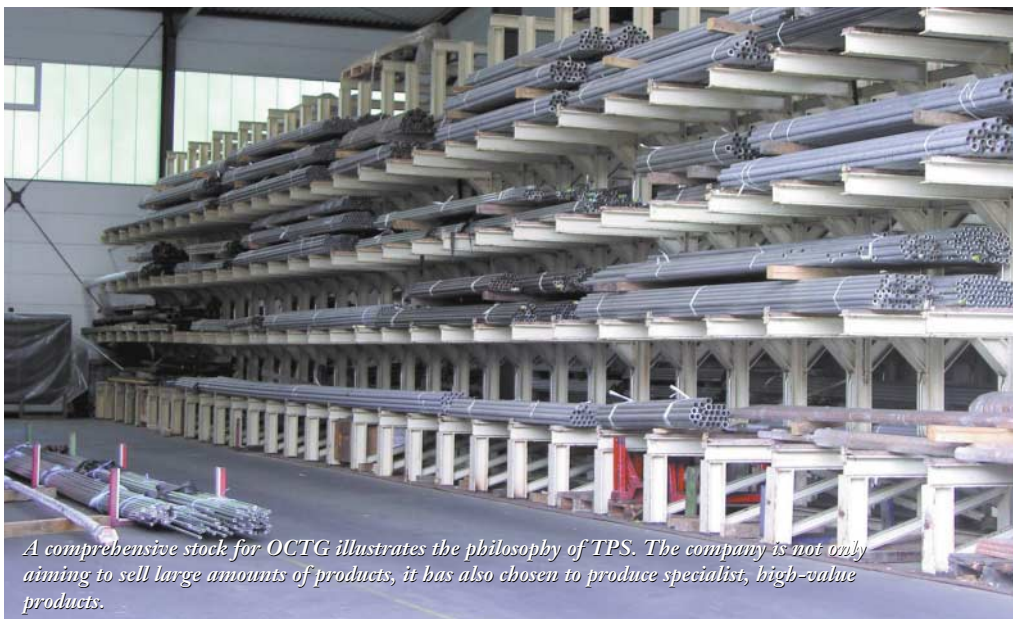
TPS houses the world's most modern pilger mill for stainless steel cold working precision tubes in the range between 8 and 38 mm. Shown here is a cold pilger rolling mill.

Seamless Heat Exchanger Tubes & Instrumentation Tubing

Another major part of TPS is formed by the production of seamless cold-finished heat exchanger tubes in stainless steels and nickel-based alloys. Sales Director Günter Vosskämper: "The production of stainless steel tubes started in 1983, when we bought a complete production line from a company in the UK. At that time we started with two cold-pilger mills and seven drawing benches, as well as a bending facility enabling us to produce tubes in the range of 6 – 60.3 mm OD. In the heat exchanger tube mill the tubes are cold-formed to the required dimension by cold pilgering and cold-drawing processes, and the facilities include heat treatment and stress relieving annealing equipment, EC and US testing as well. Thanks to the special bending facility, orders for U-tubes can be realised flexibly and in very short terms, in all kinds of material. In addition to the typical ferritic and austenitic stainless steels, TPS also manufactures tubes in titanium, nickel alloys, duplex, super duplex , non-ferrous and other special alloys. All in all, the production range now covers over 50 grades."

In the meantime, TPS has divested six drawing benches and has installed another three pilger mills, the last one in 2002. We learned that this particular mill is the world's most modern pilger mill for stainless steel cold working precision tubes in the range between 8 and 38 mm and that it is part of a EUR 3.5 million investment in new facilities at the works. Because the throughput speed of the new mill is up to four times faster than conventional equipment, the tube output by weight is about 3000 tons per year. With this investment, according to Mr Vosskämper, TPS is now the biggest manufacturer of cold-finished stainless steel heat exchanger and instrumentation tubing in Germany. And perhaps more important, it enables TPS to respond quickly to market demand and to project specific requirements. And TPS has been successful in achieving this, as he illustrated

hensive stock for OCTG illustrates the philosophy of TPS. The company is not only aiming to sell large amounts of products, it has also chosen to produce specialist, high-value products. Mr Krämer added that this also means the TPS product range does not stop at pipes alone, the accessories such as pup joints, cross-overs and flow couplings are supplied as well. They are available in all grades and can be combined with any of the tubes that are in the delivery programme. But the drive with TPS for customer satisfaction goes beyond simply supplying the goods, for the company can also supply complete down-hole equipment and do the respective handling.


A comprehensive stock for OCTG illustrates the philosophy of TPS. The company is not only aiming to sell large amounts of products, it has also chosen to produce specialist, high-value products.

with an example: "There was one case where we got a phone call on a Saturday afternoon from a refinery, who were facing a shut-down. They requested 10 tons of heat exchanger tubes by the beginning of the week, so we mobilised all our resources to achieve this. We produced through the weekend and were able to ship the tubes on Tuesday."

The majority of the heat exchanger tube sales takes place in Europe. The European market, including Germany, is the most important as 70 per cent of total sales is achieved here. The remaining 30 per cent go to countries around the world, predominantly to North America. There are no clear growth opportunities at the moment, added Managing Director Dietmar Weides, although China seems to offer good business prospects. Mr Weides: "At the moment we see that many European based heat exchanger manufacturers are increasing their business in that region but there are no significant production sites yet. We will, however, probably shift our business when heat exchanger production facilities have been established there, which I think will eventually happen."

During a tour of the production area, Mr Vosskämper explained that for continuous quality assurance TPS houses an independent testing department, which is equipped with the most modern testing facilities. These facilities cover areas such as tensile test machinery, hardness measuring apparatus, ultrasonic and eddy-current testing line, cold water pressure test equipment and a number of other modern destructive and non-destructive test instruments focussing on three major categories: mechanical tests, non-destructive tests and corrosion tests. Obviously quality is an important element for TPS in order to survive in such a competitive market. The company strongly believes that in the end, clients will opt for the high-quality option and that they are prepared to go the extra mile by paying a little bit extra for their piping equipment. "Our OCTG production facilities are API Q1 and ISO 9002 approved and the seamless tube production line is PED and ISO 9002 approved. Already in the middle of the 1980s we started taking measures to meet the requirements for these systems and as early as 1989 we achieved certification for our seamless tube mill. Besides that, we have our own quality control department that safeguards the quality system. We believe that our products can save clients money in the long run because they will outlast a lot of cheaper products. Unfortunately we see that a number of our clients are under so much pressure to reduce costs that they are forced to buy cheaper material, often of a somewhat dubious quality. We know that there have been quite some failure cases in the past with these products, so we expect that end users will in the end see the advantages of higher-quality tubes", he said.

Shutdown Service

The third pillar that TPS is founded on is its stockholding activities. The stockholding activities date back to 1992 and have become increasingly important to the company in its strive towards customer satisfaction by supplying a full range of tubing products at short lead times. Mr

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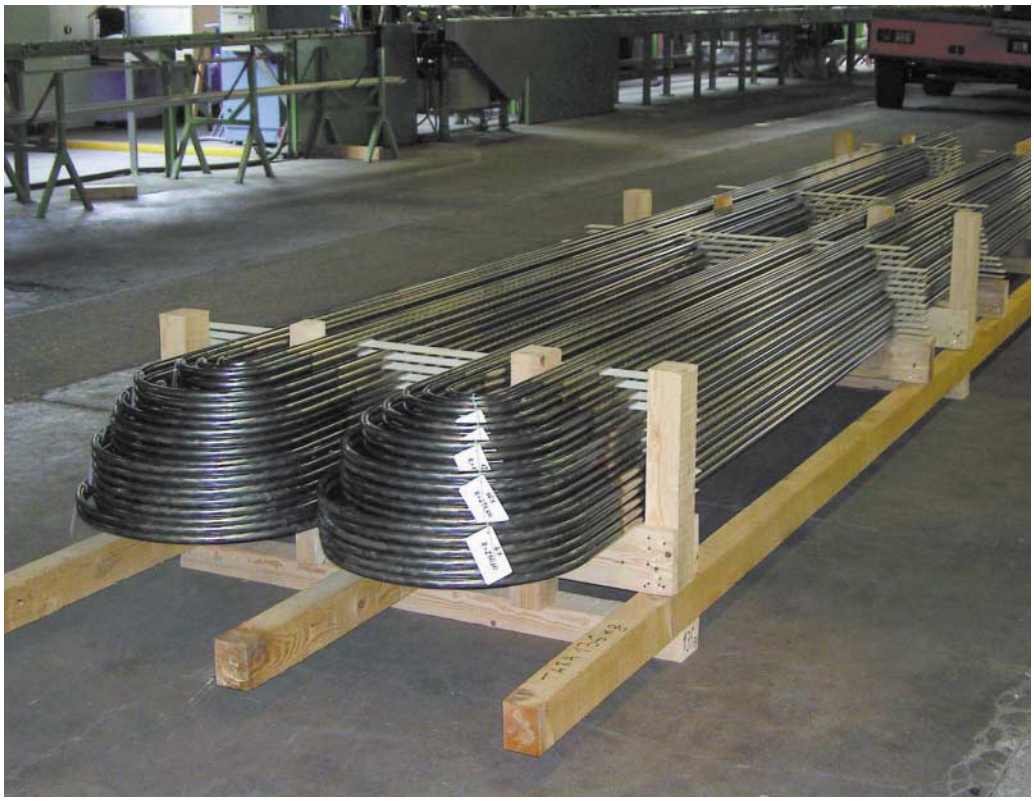

TPS stocks more than 300.000 metres of heat exchanger tubes in carbon, low-alloy, stainless steel, brass and copper nickel.

Vosskämper: "TPS stocks more than 300.000 metres of heat exchanger tubes in carbon, low-alloy, stainless steel, brass and copper nickel. More precisely, we stock about 1000 tons of mother tubes and hollow bars. As a speciality TPS stocks seamless longitudinal fin tubes for fabrication of boiler walls. The stock services include testing, cutting, bending, packing and shipping. The tubes are stocked in all standard grades and sizes. Non-standard tubes and sizes can be manufactured with very short deliveries based on the huge stocks of raw material available. And because we always have some production capacity in hold we remain flexible and can produce in very short lead times. Based on our combined production and stock capabilities we have developed a unique shutdown system especially for refineries and petrochemical plants with just-in-time deliveries within 24 hours, saving the plant stocks and giving a full service around the mill shut downs. That has always been and will be the strength of our company; flexibility and a comprehensive product range for our target markets."

For the future, the company expects that the stockholding activities will be increasingly important, as it forms the backbone of a relatively new service, the shutdown service. Horst Nelles, Managing Director: "In the past few years we have negotiated contracts with a number of oil companies, refineries, petrochemical plants and power stations to supply their heat exchanger tubes in case of an emergency or for their shutdown. This means that we commit ourselves to having all the necessary equipment readily available in case something brakes down. These contracts work to the benefit of both parties. For us, obviously, it is beneficial because it creates business opportunities that strengthen our company. Our clients benefit because we take away the work and worries of having to maintain their own stock. Owning and maintaining a stock requires far more effort than people sometimes think. It already starts with the fact that you simply need the space to stock all items, which costs money. Also, it requires, for example, full-time attention from more employees for administration, quality control, etc. Another thing is that items may become obsolete after a while because they are simply not used or they are no longer compatible with specification and warranty. Such items simply lose their value. With our shutdown service we take all these worries out of the hands of our clients. As I said, we commit ourselves to having all possible items that a plant may need in stock and keep it up to date with the latest developments." ◄

FACTS & FIGURES

TPS Technitube Röhrenwerke is a manufacturer of:

- seamless heat exchanger & condenser tubes
- nickel-alloy tubes
- titanium & titanium alloy tubes
- carbon steel & low alloy steel tubes
- aluminium brass, admiralty brass, Cu-Ni tubes
- U-bent tubes
- OCTG products, tubings, casings, drill pipe, pup joints, threaded line pipe

Certifications:	ISO 9002; API Q1; PED 97/23/EC Annex. I,4.3; Framatome KTA 1401;
Markets:	oil & gas; chemical, petrochemical, fertiliser and desalination plants; shipbuilding; hydraulic; power industries and cement mills
Location:	Daun, Germany
Employees:	140