Large-diameter pipes for Optimising Pipelines

EUROPIPE

THINKING AHEAD

1804: The Dillinger Hütte steel mill rolls its first steel plate.

1845: A company which later became part of Mannesmannröhren-Werke produced continental Europe's first welded steel pipe.

1991: The two steel industry pioneers – AG der Dillinger Hüttenwerke and Mannesmannröhren-Werke AG – pool their expertise and technology to create EUROPIPE.

Today we are the world market leader in large-diameter pipe production for the oil and gas sector, supplying more than one million tonnes – or approximately 3,000 kilometres – of pipe.

EUROPIPE Group's expertise in large-diameter pipe manufacturing is in the production of welded steel pipes for the most demanding applications. Our pipes withstand the extreme heat of the desert, the lowest temperatures in arctic environments or the highest pressure of the deep sea.

EUROPIPE headquarters is based in Germany, in Mülheim an der Ruhr. We have a global presence for our customers, with manufacturing mills in Germany, France and the USA (Berg Steel Pipe Corp. and Berg Spiral Pipe Corp.).

Our success is based on a very simple principle: Contributing ideas and thinking ahead. With this in mind each of our staff is dedicated to even more efficient products, better manufacturing processes, excellent service and an even more successful cooperation with our customers.

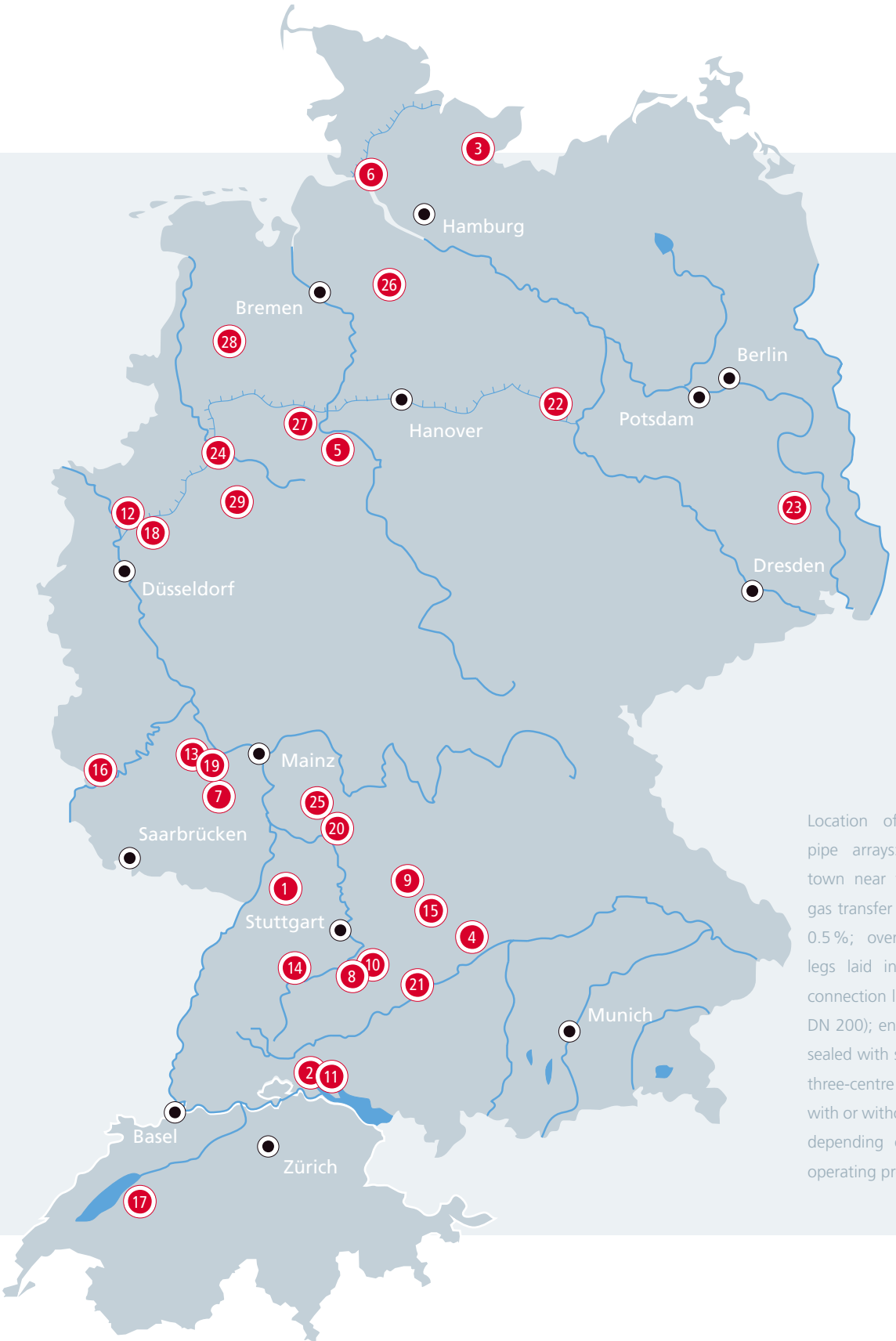
Standard execution: longitudinally submerged arc welded, cold-expanded pipes, material StE 480.7 TM / L485MB / L555MB, APZ 3.1 as per DIN EN 10204, inside bare, outside with PE-coating acc. to DIN 30670-N-n, manufactured in lengths of up to 18.3 m.

	Operator	Population	Quantity m	Weight t	Dimension O.D. mm	Dimension W.T. mm	PN bar	Volume geom. m^3	Volume capacity. m^3	Supply year
1	Stadtwerke Karlsruhe	275,000	4,350	1,218	1,219.2	17.5	84	4,789	402,312	1990
2	Gas- und Elektrizitätswerke Singen (1. part)	43,000	1,200	808	1,422.4	19.5	80	1,797	143,797	1994
3	Stadtwerke Eutin	19,000	162	109	1,422.4	19.5	80	243	19,413	1994
4	MÜAG Giengen (Hausen)	20,000	369	267	1,422.4	19.5	80	593	47,453	1995
5	Stadtwerke Lemgo	42,000	438	332	1,422.4	22.0	90	651	58,553	1996
6	Stadtwerke Glückstadt	12,500	350	242	1,422.4	20.0	80	524	41,880	1996
7	Energie- und Wasserversorgung Alzey	18,000	198	123	1,422.4	18.0	74	298	22,042	1996
8	Gemeindewerke Eningen	10,000	490	193	1,422.4	16.0	65	373	24,221	1997
9	Stadtwerke Schwäbisch Hall	35,500	620	470	1,422.4	22.0	90	922	82,978	1997
10	Stadtwerke Metzingen	21,000	427	266	1,422.4	18.0	74	642	47,215	1997
11	Gas- und Elektrizitätswerke Singen (2. part)	43,000	600	404	1,422.4	19.5	80	899	71,898	1998
12	EVO AG Oberhausen	225,000	2,350	1,957	1,422.4	24.2	100	3,472	347,227	1998
13	Stadtwerke Bad Kreuznach (1. part)	45,000	740	574	1,422.4	22.5	92	1,099	101,092	1998
14	Stadtwerke Sindelfingen	60,000	600	496	1,422.4	24.0	99	887	87,818	1999
15	Stadtwerke Aalen	67,000	960	647	1,422.4	19.5	80	1,438	115,038	1999
16	Stadtwerke Trier	100,000	1,080	727	1,422.4	19.5	80	1,618	129,417	1999
17	Gasverbund Mittelland AG Arlesheim (Eymatt)	300,000	2,688	1,935	1,524.0	19.4	64	4,657	298,037	2000
18	Stadtwerke Essen	600,000	3,360	2,799	1,422.4	24.2	100	4,965	496,461	2000
19	Stadtwerke Bad Kreuznach (2. part)	45,000	302	237	1,422.4	22.8	92	448	41,256	2001
20	Stadtwerke Heidelberg	130,000	1,512	1,018	1,422.4	19.5	80	2,265	181,184	2001
21	SWU Energie Ulm (2. part)	96,000	2,772	1,869	1,422.4	19.5	80	4,164	333,134	2001
22	Stadtwerke Blankenburg	17,000	312	185	1,422.4	17.1	70	471	32,942	2001
23	Stadtwerke Senftenberg	30,000	270	158	1,422.4	17.1	70	407	28,507	2003
24	Stadtwerke Münster	281,000	1,568	1,136	1,422.4	20.5	100	2,342	234,188	2004
25	Stadtwerke Weinheim	43,000	1,176	980	1,422.4	23.7	100	1,740	174,015	2004
26	Stadtwerke Rotenburg	23,000	480	335	1,422.4	19.7	84	719	60,360	2005
27	Energie- und Wasserversorgung Bünde	46,000	514	425	1,422.4	23.5	100	761	76,102	2005
28	RWE Power AG KEM Lingen, Ems	52,000	15,250	12,960	1,422.4	23.5	100	22,645	2,264,468	2008
29	RWE Power AG KGW Gersteinwerk, Hamm	184,000	8,950	7,600	1,422.4	23.5	100	13,290	1,328,983	2008

STORAGE GAINS

Optimisation pipelines guarantee local distributors of natural gas and power station operators the ability and security to be able to deliver or use natural gas whenever it is needed. In addition they can ensure consistent pressure conditions in the municipal gas distribution system. The subterranean storage provides independence: it creates a buffer between gas supply and gas usage, thus enabling cost-efficient gas purchasing on the spot market.

In the final analysis this means: attractive gas prices for gas customers, and a reduction of CO_2 emissions, as Optimising Pipelines make the utilisation of gas as the primary energy source more appealing. All of this increases customer satisfaction considerably.



Location of natural gas pipe arrays: outskirts of town near to the natural gas transfer station; incline 0.5 %; over several pipe legs laid in parallel with connection lines (DN 100 – DN 200); ends of pipe legs sealed with semi-circular or three-centre arch plates; with or without compressor depending on thrust and operating pressures.

In early 2008 EUROPIPE delivered large-diameter pipes for two optimising pipelines with a total length of 24 km in the dimensions 1,422 x 23.5 mm, material L485MB, to RWE Power AG, Essen. At volumes of 2.2 million m^3 and 1.3 million m^3, these two optimisation lines are destined to supply two gas power plants, and constitute the largest facilities in Europe.

IN GOOD HANDS

We have succeeded in making Optimising Pipelines based on large-diameter pipes one of the most economical systems for the short-term storage of natural gas.

Based on the required capacity, the design pressure and the available site area we are able to optimise diameter, wall thickness and material properties of our pipes. High-strength steels reduce material usage.

Through our improved pipe forming process, we achieve optimum roundness, straightness and uniform diameters. Pipe lengths of up to 18.3 metres reduce the amount of girth welds by more than 30 %. All these factors reduce the investment costs significantly.

There is no upper limit for the capacity of Optimising Pipelines. So far we have supplied projects ranging from 20,000 to 2,000,000 m^3 storage capacity with operating pressure fluctuations between 30 to 100 bar. Our competent commercial and technical experts accompany you from the design stage right through to the successful implementation.

Our processes are subject to a strictly quality management system without exception. Since 1993 all our manufacturing mills are certified according to ISO 9001. Complete control of the production chain from molten metal to finished pipe ensures consistently EUROPIPE's high quality. This system is unique anywhere in the world.

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