









Assemblies

-  Corrosion resistant pipes
-  Clad pipes
-  Special pipes and components ready for installation
-  Spools and welded components
-  Vessels, tanks and columns
-  Assemblies



BUTTING



Assemblies

Since BUTTING was founded in 1777, the assembly of pipes and vessels has been part of our range of products and services. Already in 1950 we performed the first installation of stainless steel products. In the past decades, the know-how, reliability and flexibility of BUTTING's fitters has become our trademark in the completion of more than 1 100 projects.

With its strong customer orientation, a team of experienced staff ensures that projects are completed smoothly in:

- Fabrication and assembly of vessels
- Pre-fabrication and installation of pipelines
- Monitoring and supervision of installation
- Industrial service on the German market
- Material sales for the paper and pulp-making industry

BUTTING offers you excellent value for money. Our name is a byword for on-time delivery, reliability and a product-related high level of quality.



Dirk Mitterhofer
Managing Director



Dr.-Ing. Ulrich Menter
Managing Director



Bundled responsibility

The assembly of high-quality investment goods is a task which carries a great deal of responsibility. Particularly when using stainless steel, expert handling of vessels, pipe parts and their further processing and installation is crucial for the quality of a technical system. BUTTING is well aware of this fact.

One cornerstone of our successful commitment is all-round service. BUTTING supports its customers throughout every phase of the project:

from the manufacture of vessels and pipelines through high-quality prefabrication and secure transportation to site supervision and completing the installation.

Here we apply our core skills mainly in the paper and pulp-making industry and in bio-energy technology. We also support selected projects for other industrial sectors, such as food technology.



Your benefit

We offer our customers:

- Correct handling of materials
- Extensive capacities
- Use of a high degree of prefabrication
- Assurance of product quality through consistent quality assurance
- Project-specific product packaging
- High degree of transportation competence
- Bundled responsibility and smooth project completion
- Know-how and flexibility of our employees
- Years of experience in international projects

In that way we can optimise our services to meet your requirements.





Inside and outside surface conditions according to the customer's special requirements can be offered

Extensive capacities for worldwide service

BUTTING Anlagenbau in Schwedt on the Oder is our expert unit for the construction of vessels and pipelines and for assemblies and installation work.

For a number of major projects in Germany and abroad in various sectors, we have taken responsibility for the entire pipe-work and for vessel construction.

In Schwedt, extensive capacities for the assembly of pipelines and vessels are available:

- Overall this was worth EUR 100 million, more than two-thirds of which was made outside Germany
- More than 6 000 t of stainless steel processed per year
- More than 1 500 000 production hours worked per year
- Approximately 370 employees and an additional figure of more than 400 on service contracts
- More than 14 000 m² of hall space for vessel construction and prefabrication of pipelines
- Halls for vessel construction are up to 21 m high and are equipped with cranes for piece weights of up to 50 t
- An average 300 containers are commissioned every year
- An extensive stock of plates, pipes and fittings totalling 3 000 t in several material grades, such as 304/304L and 316/316L



Prefabrication and installation of vessels

BUTTING produces, prefabricates and assembles:

- Pressureless vessels
- Pressure vessels
- Columns

The focus is on processing stainless steel. For flexible requirements at short notice we access our extensive steel plate store with more than 2000 t.

In Schwedt we produce vessels in one piece with piece weights of up to 50 t, outer diameters up to 6000 mm and heights up to 16 m. We also manufacture vessels of up to 10000 m³ in several sections to customer requirements. We use all the current welding processes in Schwedt, and the major ones are:

- TIG process
- Plasma process
- MIG process
- MAG process



Recognised skills

For worldwide projects in the paper and pulp-making industry and in bio-energy technology, BUTTING takes on

- Consultancy services
 - Static calculations
 - Development of detailed drawings
 - A high degree of prefabrication of vessels
 - Packaging as required
 - Final installation right across Europe
 - Worldwide delivery and assemblies with monitoring and site supervision
- Thus we were given responsibility for the prefabrication and installation of vessels, e.g., for:
- **Alfa Laval, Germany:** a variety of separators and piping components; bio-energy industry
 - **Valmet, Finland:** Main supplier for pulpers; pulp and paper industry
 - **Kemira, Germany:** Vessels for a project in Brazil and a project in England; bio-energy industry
 - **Valmet, Sweden:** Paperboard, O₂-Reactor and standpipes; pulp and paper industry
 - **Didier Säurebau, Germany:** Titanium fitted components for an autoclave; chemical industry
 - **Südzucker, Germany:** Vessels; pulp and paper industry
 - **GEA, Germany:** Columns and exhaust vapour pipes for evaporation technology; pulp and paper industry
 - **BDI, Germany:** Columns und storage casks; bio-energy industry



Installation of prefabricated pipelines

The prefabrication of pipes is a form of assembly moved forward into the production plant. BUTTING offers its customers very far-reaching and efficient prefabrication of stainless steel pipelines according to isometric drawings, pipe plans and 3D models.

BUTTING produces ready-to-fit pipes of up to PN 40 in stainless steels such as 304/304L and 316/316L and completes them according to customer requirements.

Global reference projects demonstrate our recognised skills in the paper and pulp-making industry and other industrial sectors:

- **GIG Karasek, Germany:** Delivery and installation of exhaust vapour pipes for evaporation; plant construction industry
- **UPM Kymi, Finland:** Pipe installation for pulp drying; pulp and paper industry
- **Stora Enso Karlstad, Sweden:** Refurbishment of the pulp pipe line in a pulp plant; pulp and paper industry
- **Hamburger Dunaujvaros, Hungary:** Pipe installation for power plant – carbon steel proportion 30%; pulp and paper industry
- **Phospholipid GmbH, Germany:** Pipe installation to manufacture pharmaceuticals; chemical industry
- **Südzucker Zeitz, Germany:** Pipe installation for a wheat starch plant; food industry
- **BDI, Germany:** Main fitting company for installing process pipes all over Europe; bio-energy industry
- **Valmet, Finland/Voith, GERMANY/Andritz, Austria:** Main supplier for delivery and prefabrication of head boxes worldwide; Pulp and paper industry



Economic and qualitative benefits

There are clear arguments in favour of prefabrication of ready-to-fit pipelines:

- Safety of materials, since differences are recognised in good time
- Possibility of fitting piping systems by R + I method
- Avoidance of mistakes and incorrect materials
- Improved product quality
- Reduction in space requirement at the construction site
- Reduction in construction site staffing
- Reduction of on-site installation time, because up to 70 % of the circumferential welds and up to 100 % of the branch welds can be performed in the workshop
- Definition of installation welds by experienced construction managers
- Optimised product quality through pickling of the entire, ready-to-fit pipe parts
- Increased planning security regarding the scheduled installation through timely and reliable prefabrication in our plant
- Comprehensive know-how in packaging and transportation direct to your construction site



Ask for our special leaflet,
"Spools and welded components"!



Project golden Sugar, Nigeria: prefabrication and supervising of the stainless steel pipeline for a sugar mill

Prefabrication of vessels in lean duplex for Australia. Installation was supported by us

Expert support for construction sites

For decades, BUTTING has been demonstrating its quality as a competent partner in monitoring installation work and supervising projects all over the world. In addition to cultural differences and linguistic barriers, the different technical skills of the workers in the guest countries is the principal factor which makes work more difficult there. We therefore represent the interests of our customers on a number of construction sites of the paper and pulp-making industry. We provide you with experienced specialists for construction site support, for example for:

- Delection of appropriate installation companies
- Induction of employees in the processing of stainless steel
- Performance of welding training sessions
- Expert construction site supervision for pipeline and vessel installation work
- Deadline monitoring for installation work
- Control of the qualitative execution

In addition to a competitive price, we persuade people through our experience in technical completion work, our flexibility and professionalism, as was shown in the following projects, for example:

- **Voith, Hainan/China:** Monitoring of the fitting of 16 pulper machines weighing a total of around 450 tons
- **Mondi, Syktyvkar/Russia:** 7 outward-facing vessels/reactors for a pulp plant
- **Glatz, Vietnam:** Supervising pipework fitting
- **Bellmer, Bai Beng/Vietnam:** Supervising pipe-work fitting
- **Metso Paper, Amcor/ Australia:** Supervising vessel fitting
- **Wenrui, Indonesia:** Supervising pipework fitting



Your on-site workshop

After the plant has started operation successfully, BUTTING is your reliable provider of industrial service. We take on work for you across all of Germany:

- Technical consultancy
- Adaptation of the plants to current requirements
- Constant improvement of the plant parts and system components

Our soundly-based specialist knowledge and years of experience allow us to commit ourselves to the success of your plant by:

- Minimising the standstill periods during maintenance
- Short response periods through extensive store and comprehensive capacities
- Guaranteed reliability and competence
- Large number of qualified staff



Rapid availability

BUTTING has an extensive store with pipe materials for the paper and pulp-making industry. Our capabilities are demonstrated in a wide selection of products. Thus we constantly have in stock for you in several material grades, such as 304/304L and 316/316L:

- More than 800 t of pipes in accordance with EN 10217-7 TC 1 or EN 10296-2 in sizes from NB 15 to 600
- Elbows Type 3 and NB + 100 acc. to EN 10256
- Reducers acc. to EN 10253
- Tees acc. to EN 10253-3
- Loose flanges and welding-neck flanges acc. to EN 1092-1
- Collars and welding neck collars acc. to EN 1092-1
- Plain bearings and clamps up to BUTTING-standard



In addition, we constantly store more than 2 000 t of plates in the familiar grades such as 304/304L and 316/316L, with wall thicknesses areas from 2 to 20 mm.



Quality to a standard

The quality management system at BUTTING is certified under DIN EN ISO 9001 by the internationally known DEKRA company. We hold many other approvals. In order to ensure that we meet project-specific demands, a wide range of internal and external testing equipment is available for non-destructive tests.



We hold the following approvals:

- DIN EN ISO 9001
- Manufacturer and welding company with AD-W0/HP0 approval, under DIN EN ISO 3834-3; DGRL 97/23/EG
- German Water Board Act (Wasserhaushaltsgesetz, WHG), § 19I
- Health and safety at work SCC licence
- Production plant according to the Pressure Vessel Directive 97/23, Module G
- Welding certificate under DIN EN 1090-2 EXC3
- System for the transfer of material marking under Directive 97/23/EC

You too can rely on our products.



Montes des Plata project in Uruguay

Pulp and paper mill in Punta Pereira, Uruguay	
Customer	Andritz
Sector	Pulp and paper industry
Object	Pulp and paper-making plant
Scope of delivery	60 interior vessels, 15 exterior vessels, 90 km of pipelines and spools, prefabrication, delivery and installation, 366 containers with prefabricated spools, 1 800 tons of piping material and 600 tons of brackets
Order value	EUR 40 million



Wheat starch plant project in Germany

Wheat starch plant in Zeitz, Germany	
Customer	Südzucker
Sector	Food industry
Object	Enlargement to include a wheat starch plant
Scope of delivery	Manufacture and assembly of more than 100 vessels; sizes range from 300 mm to 11 m; 27 km of pipelines components including mounting brackets; prefabrication, provision and assembly
Tonnage	More than 460 tons of pipelines More than 550 tons of vessels



Production site in China

BUTTING China has established itself in the market with the prefabrication of high-quality pipe parts and the manufacture of vessels and ready-to-install components. Numerous projects and package projects have been produced jointly by BUTTING in Germany and in China, taking advantage of the synergy effects.

A production workshop of more than 6 000 m² was built at our Tieling site, for vessels and plant construction and the prefabrication of pipe systems, especially for the Chinese pulp and paper industry.

In May 2015, BUTTING China received the largest order in its history so far – the OKI project in Indonesia. The overall plan comprises supplying materials, prefabricating more than 20 000 piping components, transportation, local assembly and site supervision.

By the beginning of 2016, the project had used a total of 150 kilometres of pipes, 2 500 tons of which were in

stainless steel, 2 000 tons of carbon steel brackets and 1 000 tons of pipelines in carbon steel, SMO, titanium and GFK. In addition, 60 000 fittings have been produced, consisting of elbows, tees and reducers.

BUTTING in China persuades people with these quality products:

- Prefabricated pipelines
- Pressureless vessels
- Pressure vessels
- Columns
- Flotation cells
- Cleaner banks
- Exhaust pipes

Diversity of materials

BUTTING produces a variety of stainless steels and clad materials.

We have considerable experience and expertise in forming, welding and heat treatment.

This benefits our customers from many sectors.

Tab. 1: Chemical composition of selected stainless steels

EN	ASTM	Other common names	Typical chemical compositions (%)					
			C	N	Cr	Ni	Mo	Other Elements
1.4301	304	V2A	0.04		18.1	8.3		
1.4307	304L	V2A	0.02		18.1	8.3		
1.4541	321	V2A	0.04		17.3	9.1		Ti
1.4401	316	V4A	0.04		17.2	10.2	2.1	
1.4404	316L	V4A	0.02		17.2	10.2	2.1	
1.4432	316L	V4A	0.02		16.9	10.7	2.6	
1.4436	316	V4A	0.04		16.9	10.7	2.6	
1.4571	316Ti	V4A	0.04		16.8	10.9	2.1	Ti
1.4539	904L		0.01		20	25	4.3	1.5 Cu
1.4162	S32101	LDX	0.03	0.22	21.5	1.5	0.3	5 Mn
1.4362	S32304	Lean Duplex	0.02	0.10	23.0	4.0	0.3	
1.4462	S32205 S31803	Duplex	0.02	0.17	22.0	5.0	3.1	
1.4410	S32750	Super-duplex	0.02	0.27	25.0	7.0	4.0	
1.4501	S32760	Zeron 100. Superduplex	0.02	0.24	25.0	7.0	3.5	0.7 W

No guarantee for correctness

Tab. 2: Mechanical properties of selected stainless steels

EN	ASTM	Other common names	Mechanical and physical properties			
			0.2%-yield strength (MPa)	1%-yield strength (MPa)	Tensile strength (MPa)	Density (g/cm ³)
1.4301	304	V2A	≥195	≥235	520 750	7.9
1.4307	304L	V2A	≥185	≥225	500 670	7.9
1.4541	321	V2A	≥185	≥225	500 720	7.9
1.4401	316	V4A	≥205	≥245	520 680	8.0
1.4404	316L	V4A	≥205	≥245	520 680	8.0
1.4432	316L	V4A	≥205	≥245	520 700	8.0
1.4436	316	V4A	≥205	≥245	530 730	8.0
1.4571	316Ti	V4A	≥205	≥245	520 690	8.0
1.4539	904L		≥205	≥245	520 730	8.0
1.4162	S32101	LDX	≥450		≥650	7.7
1.4362	S32304	Lean Duplex	≥385		600 850	7.8
1.4462	S32205 S31803	Duplex	≥445		640 950	7.8
1.4410	S32750	Super-duplex	≥515		730 1000	7.8
1.4501	S32760	Zeron 100. Superduplex	≥515		730 930	7.8

No guarantee for correctness

