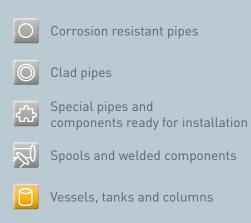


Vessels, tanks and columns



Assemblies







Vessel construction

BUTTING vessels have been used in a wide range of industries for decades. In so doing, they have proven their worth in a very wide variety of requirements. Countless projects have been implemented worldwide with BUTTING participation.

This has led to customers valuing our effective project completion, high quality products, flexibility and cost leadership. High-performance production facilities and competent staff offer you a large number of possibilities. We can produce and install the following for you:

- Vessels
- Equipment
- Large tanks
- Columns

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



Mario Kulow Managing Director BUTTING Anlagenbau in Schwedt



Ulrich Menter Managing Director BUTTING Anlagenbau in Schwedt



Our production

BUTTING manufactures vessels, equipment, large tanks and columns in multiple pieces or in one piece in line with customer specifications.

Vessels have already been manufactured in the dimensions of:

- 40 m length
- 6 m diameter
- 60 t individual weight

in one piece.

Segmented construction is on offer for specific local situations. We manufacture the vessel in our plant under ideal production conditions.

We dismantle it into as large modules as possible for transport and assembly. Thus we transfer workshop quality and the benefit of short installation times to the construction site.

If construction in one piece or segmented construction is not possible, for example in the construction of large tanks, we supply absolutely precisely cut and formed materials to the construction site. These are assembled and welded by our experienced installation teams.

Our proved and tested welding processes are:

- Plasma
- WIG
- MIG
- MAG
- SAW



Your quality guarantee

The individual production of the vessels is done as solid handicraft work, our welding processes are automated, as far as possible. We monitor the performance of our machines and staff on a permanent basis. The production results are evaluated immediately, taking quality requirements into account.

We continuously monitor the quality of our longitudinal and circumferential welds on video or in other ways while welding is taking place and we also carry out internal x-ray and dye-penetrant tests.

Another factor which is crucial for the quality of the welds and products is a metallic bright surface.

We ensure corrosion resistance of the stainless steels by subjecting them to a chemical full body pickling or alternatively, spray pickling, brushing, glass bead blasting or shot peening. Our pickling equipment is designed to ensure the complete surface treatment of vessels.

We have considerable experience and expertise in separating, forming and welding. This benefits customers from many sectors.



Extensive capacities for worldwide use

BUTTING Anlagenbau in Schwedt/Oder is our expert unit for vessel and pipeline construction as well as for installation work. We have taken responsibility for vessel construction and installation for a number of major projects in Germany and abroad in various sectors.

Extensive capacities are available in Schwedt:

- More than 6 000 t of stainless steel processed per year
- Approx. 350 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
- Outdoor areas of over 85 000 m² for storage and logistics



Diversity of materials

In Schwedt, more than 3 000 t of stainless steels and special steels are processed for the construction of vessels per year. There are also production capacities in our parent plant in Knesebeck/Germany and in China.

Our extensive stainless steel plate store with an inventory of more than 2 000 t ensures that we can supply you fast and flexibly.

The purpose of use and the process requirements determine the selection of the material in vessel construction.

BUTTING processes a wide range of materials to provide the customer with a cost-effective solution. These materials include:

- Titanium stabilized steels (V2A and V4A) like 1.4401 or 1.4301/1.4307
- Duplex steels, e.g. 1.4462
- Lean duplex steels, e.g. 1.4162
- Carbon steels, also weld-clad with liners made from titanium stabilised steels



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 material testing.

Your quality requirements set the standard. Customers place their trust in us based on our long-term experience and reliability. Our approvals include the following:

- DIN EN ISO 9001
- Health and safety at work SCC approval
- Manufacturer and welding company with AD 2000 HP0 approval acc. to DIN EN ISO 3834-3
- Certified specialist acc. to the German Federal Water Act (Wasserhaushaltsgesetz - WHG), § 19
- DIN EN 1090-2 EXC3
- System for transferring the marking of materials under Directive 97/23/EC



Your benefits

Do you need a vessel for a particularly special process? BUTTING manufactures vessels in line with customers' requirements. Each vessel is custom-made.

We offer our customers:

- An extensive raw material store
- Technical consultancy services, static calculations and detail drawings
- Extensive capacities
- Correct handling of materials
- Fast delivery times at short notice
- High degree of prefabrication
- Product quality through consistent quality

assurance

- High degree of transportation competence worldwide
- High level of flexibility
- Bundled responsibility and smooth project completion
- Long-term experience with international projects

In so doing, we can optimise our services to meet your needs.







Diverse use

BUTTING produces vessels individually for each and every customer. Your requirements and conditions of use are decisive. They determine the production and quality standards.

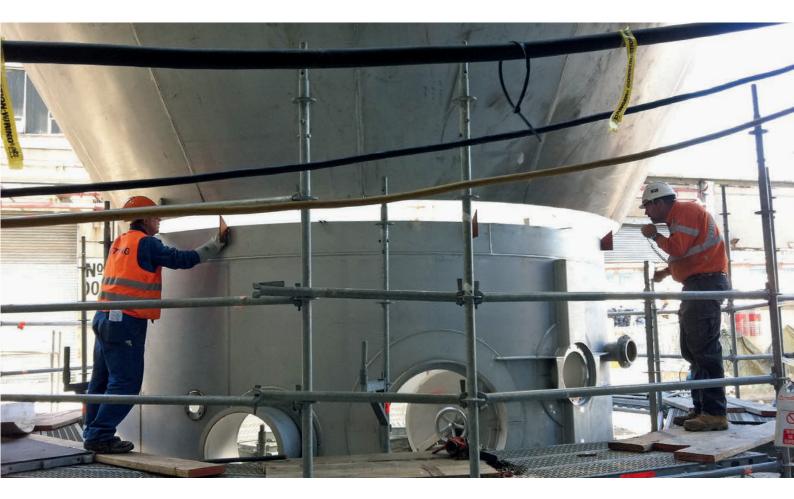
This results in diverse product variations such as:

- Tanks for the paper mill
- Pressure vessels
- Special water separators
- Equipment with complex fittings for cooling or heating systems
- Reaction columns with customised add-ons
- Large tanks with internal and external heating coils
- Converting vessel

Our vessels are used for example in

- Paper and pulp industry
- Bio-energy technology
- Chemical industry
- Water and waste water treatment
- Food industry





Experience and competence

In the past decades, the expertise, reliability and flexibility of BUTTING's staff has become our trademark in the implementation of countless projects. With its strong customer orientation, a team of experienced staff ensures that projects are completed smoothly. This has resulted in us being given responsibility for the prefabrication and installation of vessels, e.g. for:

- Metso Paper Karlstad project, SCA Mexico PM1: Prefabrication and installation supervision for all containers and towers
- Rhein Papier (Rhine Paper) project,
 - Plattling PM1, Germany:

Delivery and installation of 12 towers with volumes of up to 4 000 m³

• Botnia S.A. project, Uruguay:

- Metso Paper Jyväskylä project, Amcor Australia: Prefabrication and installation supervision for containers and towers
- Palm project, King's Lynn, UK:
 Delivery and installation of 10 towers and
 100 vessels for the paper factory
- Bioethanol Premnitz project, Germany:
 Delivery and installation of all stainless steel vessels, including fermenters
- Södra Cell Värö project, Sweden: Delivery and installation of a liquor pressure vessel made from LDX 2101, measuring 5 600 m³ in size
- Metso Power project, Skärblacka evaporation plant, Sweden:

Delivery and installation of a black liquor pressure

vessel made from LDX 2101, measuring 700 m³



Paper and pulp mill project in Austria

Austrian paper and pulp factory		
Customer	Zellstoff Pöls, Pöls/Austria	
Sector	Paper and pulp industry	
Object	Construction of a new paper machine	
Scope of delivery	1 storage tower with a volume of 5 000 m³, diameter of 15 m and height of 34 m More than 40 vessels – including stacking towers, pulpers and internal process vessels	
Special features	The stacking tower, weighing 220 t, was mainly prefabricated and assembled using duplex 1.4462 in a mere four months	



Biodiesel plants in Europe and South America

Biodiesel plants in Europe and South America		
Customer	Lurgi, Frankfurt am Main/Germany	
Sector	Bio-energy technology	
Object	9 different biodiesel plants worldwide	
Scope of delivery	The projects were delivered in packages, consisting for example of storage vessels, various pressure vessels, process columns for methanol and methylester made from 1.4404 or 1.4462 and vessels made from carbon steel	



Whiskey distillery in Ireland

Whiskey distillery in Ireland		
Customer	GEA Wiegand, Ettlingen/Germany	
Sector	Food and beverage industry	
Object	Whiskey distillery	
Scope of delivery	3 columns, 2 of which were pressure vessels with diameters of 1.20 and 2.00 m and a height of more than 30 m With built-in customised features in each case made from materials 1.4404 and 1.4301	
Special features	Realisation of short delivery times Pressure test when laying flat	



Production site in China

BUTTING manufactures products for the Chinese market at two production sites in China: in Shanghai and in Tieling. A number of projects and package projects have been produced jointly by BUTTING in Germany and in China, taking advantage of the synergy effects.

There are clear economic arguments in favour of BUTTING China: on the one hand our customers receive tried and tested BUTTING quality as a result of the good technical performance of our Chinese employees. They are trained, inducted and monitored by BUTTING staff from Schwedt who are always onsite. On the other hand, the moderate price level is an argument in favour of carrying out the work directly in China.

In Shanghai we have manufacturing possibilities for piping systems and components ready for installation.

All the necessary machinery and facilities are available for professional processing, along with qualified staff.

In Tieling, we use a production hall of more than 6 000 m² which is equipped with comprehensive production facilities for vessel and plant construction. For the production of thin-walled vessels in standing positions, the hall has a crane height of 18 m.

BUTTING in China is able to impress with these high quality products:

- Spools
- Pressureless vessels
- Pressure vessels
- Columns
- Flotation cells
- Cleaner banks