

APPARATUS CONSTRUCTION

SCHRADER implements customized apparatus at the highest technical standard and in compliance with the most important standards and regulations in force worldwide.

SCHRADER – expertise for your competitive advantage

High tech, know-how and service orientation

Our experienced, dedicated staff are available to assist you with customized solutions that meet the highest quality standards. We combine a high level of technical capability with innovative product solutions that are tailored exactly to your requirements. On request, we can design completely new apparatus or optimise your existing installations. We are committed to providing you with maximum economy and mutually reliable business relations.

SCHRADER PLANT ENGINEERING

HOW THIS WILL BENEFIT YOU:

- ▶ From a single source – as a guarantee of first rate quality
- ▶ The latest expertise – state-of-the-art production facilities
- ▶ Specialists in processing stainless steels

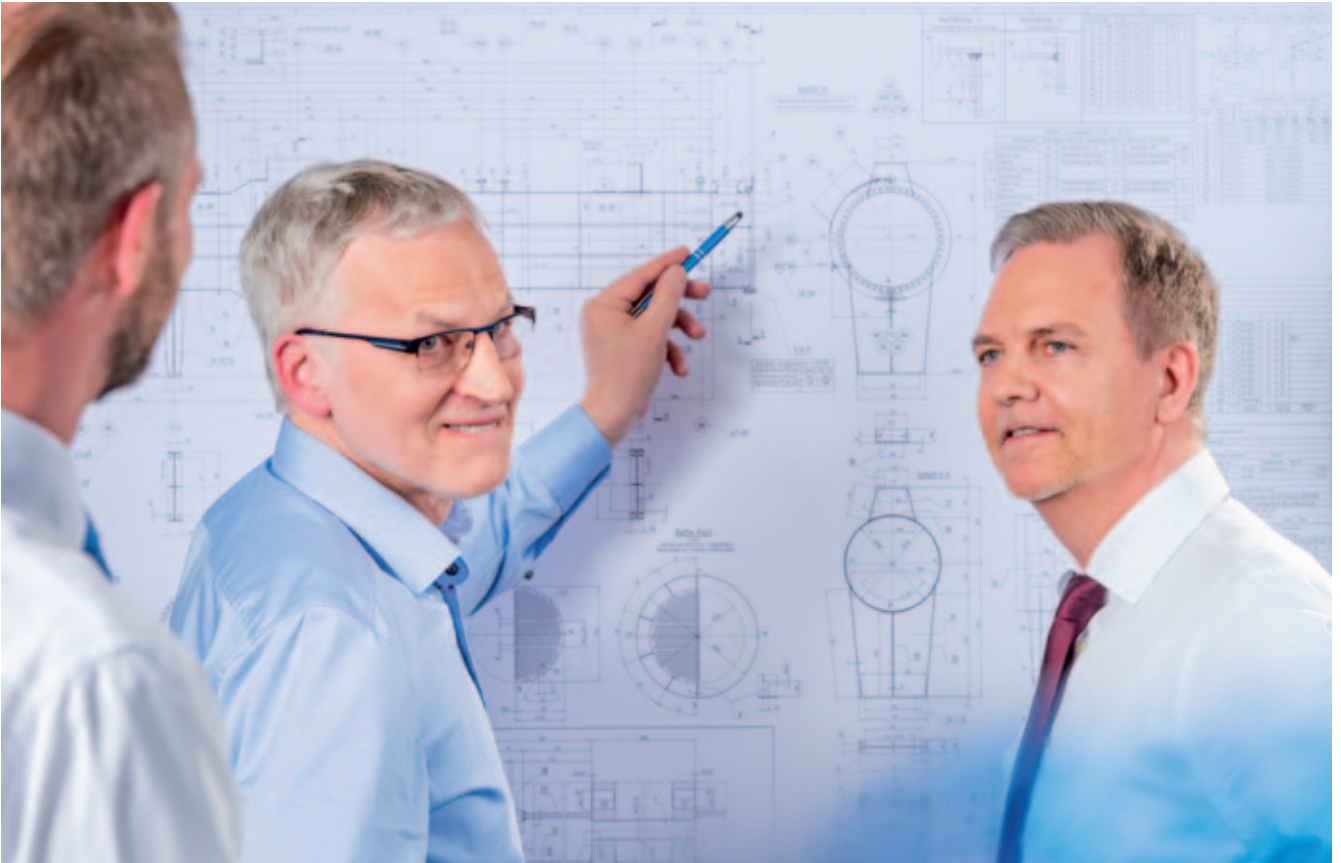
INNOVATIVE SOLUTIONS MADE TO MATCH YOUR SPECIFICATIONS

As a multinational operating company, SCHRADER apparatus construction has built up an excellent reputation for stainless steel constructions for customers around the world in the fifty years of its existence.

Our highly qualified employees will create solutions to meet your special requirements. Whether you are looking to have your existing installations optimised and increase their output or have a completely new apparatus designed – we will accompany you from the first concept through to finished and standard-compliant construction in line with your specifications.

Our in-house construction department has state-of-the-art technical facilities and will create the design documentations and strength calculations for your project on the basis of domestic and international standards such as AD 2000 and ASME regulatory instruments.





SCHRADER - holistic thinking and customer-driven action

Our state-of-the-art facilities combined with the consolidated knowledge of our teams in construction and manufacture guarantee that all welding work is carried out to the highest possible standards. All assemblies are pickled in our own pickling baths and passivated.

Our large production halls enable us to preassemble and test complete installations, which reduces assembly and commissioning times at your site.



With unlimited commitment at your disposal – worldwide

SCHRADER – your specialist for high-grade apparatus construction and special-purpose apparatus

Our experts pool their detailed knowledge, expertise and operational readiness to implement your requirements at the highest quality level. With the wealth of experience we have gained over the last five decades we are in a position to build apparatuses, vessels and heat exchangers for many different applications and industries – with diameters of up to 6.5 metres and lengths of up to 45 metres.



OUR RANGE OF PRODUCTS:

- ▶ Pressure vessels
- ▶ Falling film evaporators
- ▶ Tube bundle heat exchangers
- ▶ Flat tube heat exchangers
- ▶ Agitator vessels
- ▶ Reactors
- ▶ Columns
- ▶ Fermenters
- ▶ Extractors
- ▶ Special-purpose constructions

OUR PRODUCTS ARE USED IN A DIVERSE RANGE OF INDUSTRIES:

- ▶ Chemicals
- ▶ Food and beverages
- ▶ Pharmaceuticals
- ▶ Pulp and paper
- ▶ Automotive
- ▶ Power generation and distribution
- ▶ Power stations
- ▶ Biotechnology



MATERIALS

We specialise in processing stainless steels and higher-grade alloys, such as:

- ▶ Austenitic, fully austenitic, ferritic and martensitic stainless steels, e. g. 1.4000, 1.4301, 1.4541, 1.4571, 1.4404, 1.4529, 1.4539 etc.
- ▶ Heat-resisting steel e. g. 1.4828, 1.4878 etc.
- ▶ Nickel-based alloys e. g. 2.4602, 2.4605, 2.4610, 2.4816 etc.

Brandnames:

- Hastelloy®, Inconel®, Monel®, Incolloy®, Nicrofer®
- ▶ Pure nickel 2.4060
- ▶ Duplex and super duplex steels e. g. 1.4462, 1.4410, etc.

PRODUCTION

On our premises covering four hectares, we have a production area of 13,000 square metres. This is where we manufacture equipment with a diameter of up to 6.5 metres and a unit weight of up to 100 tonnes. With our rolling machinery we can form sheet metal with thicknesses of up to 35 millimetres.

The maximum crane hook height is 23 metres.

APPROVALS

Thanks to our domestic and international certificates and approvals, we are able to meet requirements worldwide. We can work efficiently to EU standards and in conjunction with ASME Code Section VIII Div.1.

We are, as you would expect, also audited and certified under the German Water Resources Act (Sec. 19 WHG) as a specialist manufacturer. We have welding authorisations to AD 2000, EN 13445 and ASME.

In detail, these are the approvals we have received:

- ▶ DIN EN ISO 9001:2015
- ▶ DGRL 2014/68/EU Modul G, A2
- ▶ AD2000-HP0
- ▶ EN3834-2
- ▶ German Water Resources Act (WHG)
- ▶ ASME Section IX

We perform our calculations and manufactures on the basis of

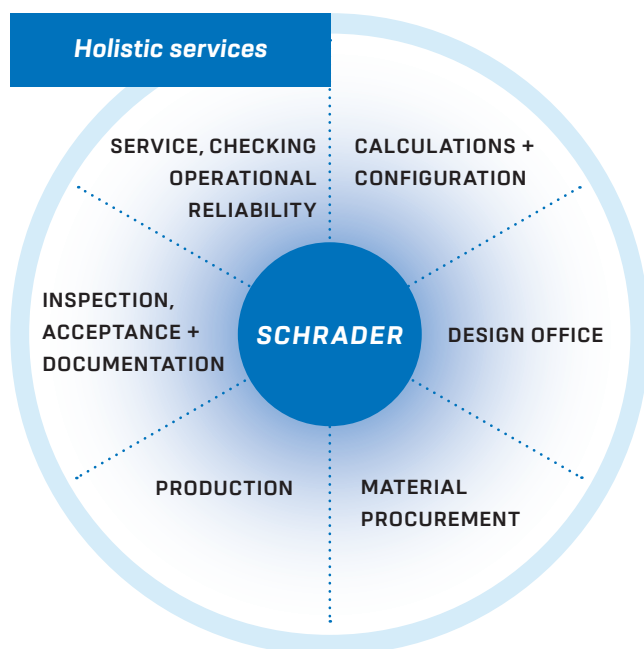
- ▶ Pressure Equipment Directive
- ▶ AD2000 guidelines
- ▶ EN 13445
- ▶ EN 13480

Flexibility, quality and technical expertise

Applying know-how – to your benefit

Customer and quality orientated, flexible, communicative and capable – SCHRADER team is ready for you, and keen to assist you in finding and implementing the best conceivable solution for your specific tasks.

This consistent implementation of international standards and regulations, coupled with the verifiable quality of Schrader apparatus, enables you to operate very high quality plants and secure your own success in the market.



SCHRADER is a preferred specialist for innovative, individual, rule-compliant apparatus and plants.

Even after completion, SCHRADER is your trusted partner for operational safety, service and maintenance.

WELDING TECHNOLOGY

One of the core competencies in the field of apparatus construction is welding technology. The following processes are in use in this company:

- ▶ MAG
- ▶ TIG
- ▶ SAW
- ▶ MIG
- ▶ Orbital TIG

All welding techniques and combinations of techniques are subject to welding procedure qualification records (WPQR) and welding procedure specifications (WPS) in conformity with:

- ▶ DIN EN ISO 15614
- ▶ ASME Section IX
- ▶ AD2000-HP2/1

In our company, only qualified welders with test certificates are employed, in conformity with:

- ▶ DIN EN ISO 9606
- ▶ ASME Section IX
- ▶ AD2000-HP3
- ▶ DIN 14732 (operative)



PICKLING BATH

We pickle all stainless steel parts in a pickling hall equipped in compliance with the latest health & safety regulations and with our own wastewater treatment plant.

We conduct both dip and spray pickling. We have the following equipment for these purposes:

- ▶ Pickling bath [LxBxH]: 6 x 2 x 2 metres
- ▶ Pickling bath [LxBxH]: 2 x 1 x 1 metres
- ▶ Hall area for spray pickling: approx. 30 x 15 metres



QUALITY MANAGEMENT

Our in-house qualified staff are certified to DIN ISO EN 9712 Stage 2. We can conduct the following inspection and testing processes for you:

- ▶ X-ray testing
- ▶ Dye penetrant examination
- ▶ Ultrasonic testing
- ▶ Magnetic particle inspection
- ▶ Visual examination

For our X-ray tests, we have both an X-ray chamber in compliance with the radiological protection ordinance and an X-ray cabinet with 200 kV energy output.

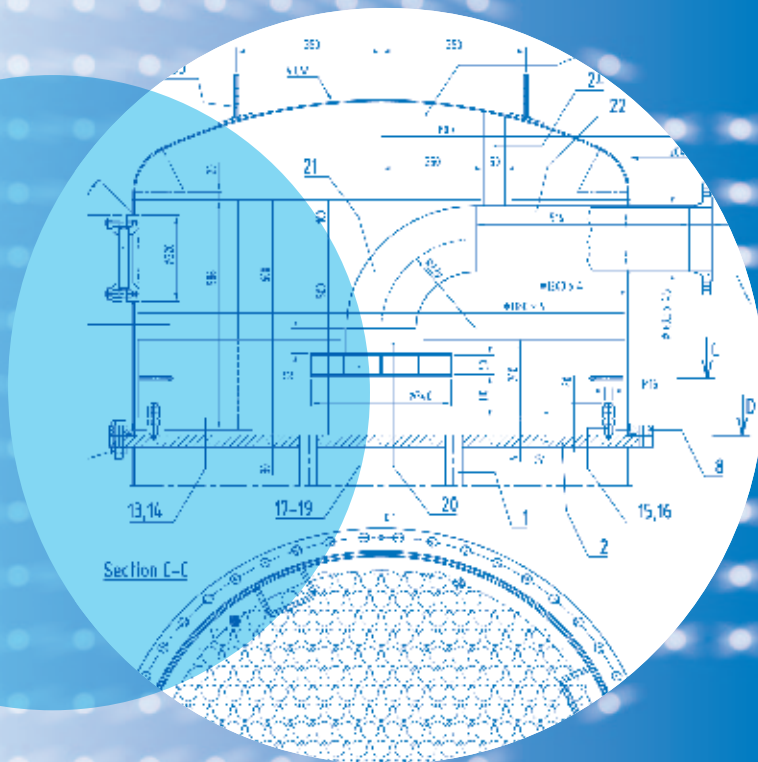
Additional quality assurance tests:

- ▶ Endoscopic internal inspections of components
- ▶ Material verification testing using X-ray fluorescence analysis [XRF]

Our quality department creates all the documentation in line with the regulatory instruments (pressure equipment directive, ASME, WHG) and customer requirements.

OPTIMUM LOGISTICS

We have good access to fast motorways and trunk roads and to inland waterways located nearby, such as the Datteln-Hamm canal.



VERFAHRENSTECHNIK • APPARATEBAU • FLUID TECHNOLOGY

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