



Tailor-Made Protectivity™

## WELDTECH APPLICATION SERVICES: EXPERIENCE OUR EXPERTISE



voestalpine Böhler Welding  
[www.voestalpine.com/welding](http://www.voestalpine.com/welding)

**voestalpine**

ONE STEP AHEAD.









## PERFECT WELDING RESULTS – MAXIMUM PROCESS EFFICIENCY

### MORE SERVICE CREATES ADDED VALUE

UTP Maintenance offers its customers more than just outstanding welding filler metal products. After all, in practice, all that matters is a perfect welding result and efficient processes. We guarantee this with our industry-leading Application Services.

### TAILOR -MADE PROTECTIVITY™

With our individual expert support, we are the partner for tailor-made solutions in the area of repair, hardfacing and cladding – from consulting through process optimisation to the weld product for more protection and productivity.

### PERSONAL, STRAIGHTFORWARD CONTACT

Simply contact the known contact person or  
send an e-mail to: [application.services@voestalpine.com](mailto:application.services@voestalpine.com)

#### With our application services we offer

1. Product and application consulting
2. Efficiency consulting and process optimisation
3. Trainings and seminars
4. Support in the qualification of welding procedures (e.g. EN ISO 15617-7)
5. Prototype production (process development)

# 1. PRODUCT AND APPLICATION CONSULTING - THE OPTIMAL SOLUTION FOR YOUR NEEDS

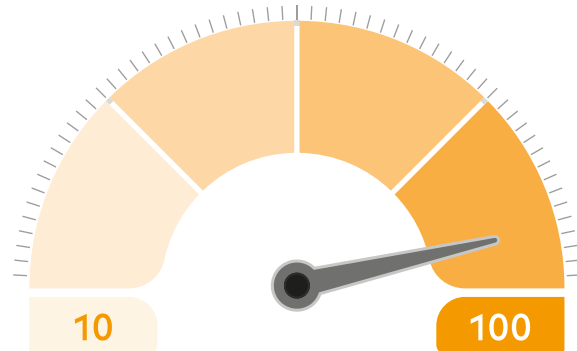
Our experts advise you on the optimal welding filler metal for your application and the welding filler metals you need to attain the specified technical values. We also advise on whether the hardfacing or repair welding meet the basic technical requirements.

## Services:

- » Converting the classification standards into a UTP Maintenance product
- » Support in verifying technical feasibility and economic efficiency
- » Specification review (operating standards, industry-specific working methods, etc.)
- » Recommendations on welding filler metals for the respective requirements
- » Developing complete welding solutions in collaboration with internal and external partners
- » Damage analysis / wear cause analysis in the event of repair

# 2. EFFICIENCY CONSULTING AND PROCESS OPTIMISATION

Welding solutions are often subject to cost pressure. Our experts, who have extensive application and production know-how, offer our customers comprehensive support in process optimisation. This means that in addition to analysing the welding process itself, we also critically review upstream and downstream process steps. The focus is on goals like cost savings and quality assurance.



## PERFORMANCE

## 3 steps to greater efficiency:

### Analysis:

Conspicuous error categories and the frequency of certain errors are identified. The WPS is checked from the workpiece preparation up to the welding parameters. If the basic requirements are fulfilled, further optimisation of all upstream and downstream welding process steps is identified with the goal of increased efficiency. Build-up welding allows component properties to be specifically adapted to requirements. The optimal material selection can significantly extend the lifetime, for example.

### Solution:

- » Development of tailor-made solutions to improve economic efficiency
- » Parameter-finding
- » Recommendation for workpiece preparation
- » Possible switch to a different welding process
- » Recommendation for the post-treatment of welded joints (i.a. heat treatments)
- » Increasing the degree of mechanisation
- » Analysis of all welding input parameters

### Implementation:

On-site support of the jointly defined measures by our welding engineers and welding specialists.





#### Process optimisation and engineering solutions:

Through the simulation of customer applications in our Application Technology Centres worldwide, new cost-efficient solutions in welding technology are developed together with our customers and partners.

- » Generation of weld metal samples and welded joints to investigate different material combinations
- » Integration of internal and external testing laboratories to determine mechanical and technological properties, chemical compositions, corrosion resistance, metallographic investigations (light microscopy and scanning electron microscopy), wear tests, etc.
- » Support in the preparation of welding instructions through to the qualification of welding solutions based on EN ISO 15614-7 and others

### 3. TRAINING AND EDUCATION - TRANSFER OF KNOW-HOW FOR A SUSTAINABLE ADVANTAGE

Every welding process is only as good as the person responsible for it. At our Welding Academy, we impart the know-how that benefits our customers' specialist staff and their companies in the long term. Individual courses and seminars can also be held at our customers' premises. This way, the best results can be achieved with the equipment they have.

#### Services:

- » Individual product and welding training in our world-wide Application Technology Centres (ATC) as well as customers' companies on-site
- » Product-specific and application-specific seminars to improve specialist knowledge in the field of conventional fusion welding processes for welders and welding technologists

Welding possibilities in the field of repair and maintenance / wear protection:

- » Cladding for the purpose of wear protection
- » Welding of cast iron
- » Welding in tool making
- » Tailor-made product and handling training according to customer requirements
- » Training of welding technologists and welding engineers on specific welding problems





## 4. SUPPORT IN THE QUALIFICATION OF WELDING PROCEDURES (EN ISO 15614-7)

Depending on the manufacturing standard, certification of a qualification of the welding procedures and processes must be provided by the manufacturer of a welded structure. Our experts are available to assist you with the preparatory activities, carrying out the welds, downstream activities such as preparation, testing and examination of the samples and compilation of all documents, as well as the final drafting of the welding process qualification record (WPQR).

### Services:

- » Individual tasks agreed with the customer for the creation of a WPQR

## 5. PROTOTYPE PRODUCTION (PROCESS DEVELOPMENT)

We offer our customers a technical partnership for innovative, forward-looking project developments. Our customers' competitiveness is strengthened by our support in a joint project strategy.

### Services / Development of approaches for new welding solutions:

- » Support in the selection of materials, the choice of welding processes and of creating welding procedures
- » Carrying out test welds (creation of the DOE matrix - design of experiment)
- » Analysing the results and making recommendations for efficient, production-technical solutions that meet the requirements
- » Listing of representable welding processes and other services such as metallographic examinations, mechanical tests, heat treatment, etc



# JOIN! voestalpine Böhler Welding

We are a leader in the welding industry with over 100 years of experience, more than 50 subsidiaries and more than 4,000 distribution partners around the world. Our extensive product portfolio and welding expertise combined with our global presence guarantees we are close when you need us. Having a profound understanding of your needs enables us to solve your demanding challenges with Full Welding Solutions - perfectly synchronized and as unique as your company.



**Lasting Connections** – Perfect alignment of welding machines, consumables and technologies combined with our renowned application and process know-how provide the best solution for your requirements: A true and proven connection between people, products and technologies. The result is what we promise: Full Welding Solutions for Lasting Connections.



**Tailor-Made Protectivity™** – The combination of our high-quality products and application expertise enables you to not only repair and protect metal surfaces and components. Our team of engineers, experienced in your specific applications, offer you customized solutions resulting in increased productivity for your demanding challenge. The result is what we promise: Tailor-Made Protectivity™.



**In-Depth Know-How** – As a manufacturer of soldering and brazing consumables, we offer proven solutions based on 60 years of industrial experience, tested processes and methods, made in Germany. This in-depth know-how makes us the internationally preferred partner to solve your soldering and brazing challenge through innovative solutions. The result is what we promise: Innovation based on in-depth know-how.

The Management System of voestalpine Böhler Welding Group GmbH, Peter-Mueller-Strasse 14-14a, 40469 Duesseldorf, Germany has been approved by Lloyd's Register Quality Assurance to: ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007, applicable to: Development, Manufacturing and Supply of Welding and Brazing Consumables. More information: [www.voestalpine.com/welding](http://www.voestalpine.com/welding)





