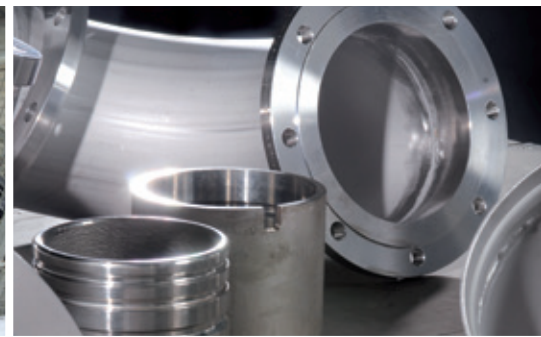
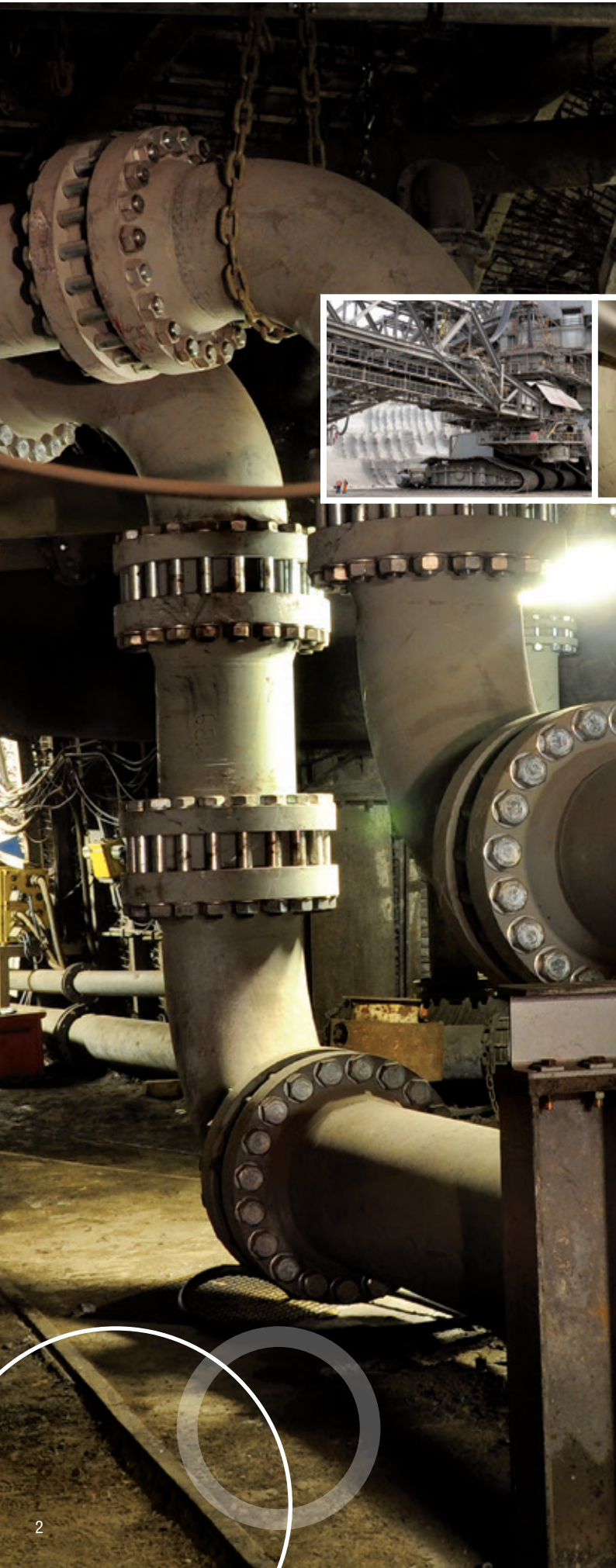


Carl Hamm



**EXPERTISE
IN STEEL**





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THE CARL HAMM GROUP

Enjoy the benefits of working with a powerful supplier dedicated to meeting your specific requirements – with over 85 years' experience in the industry.

We offer design services, manufacturing and installation support for your project. Our top-notch applications engineering and innovative approach provide the basis for optimum solutions for your problems at hand.

Our key to success: solid partnerships with our customers - built on trust and powered by our experience and know-how.

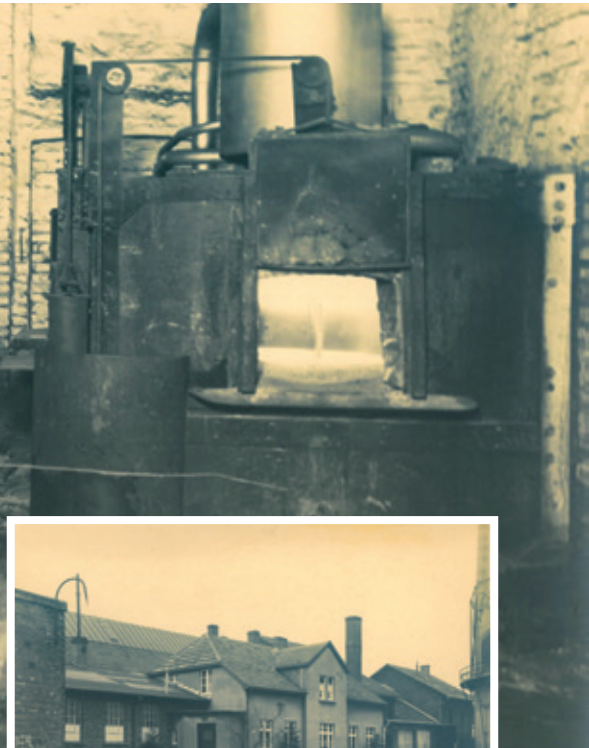
Our mission is to provide highest-quality products and services – with expert engineering for optimum performance in your project.

WHAT WE HAVE TO OFFER

- Extensive raw material stocks
- Modern equipment for wide range of machining operations
- On-time delivery
- Support in installation
- Shipping to destinations worldwide
- Documentation and traceability
- Quality management

OUR STRENGTHS

- Reliability
- Fast delivery times
- Highly motivated employees
- Outstanding service
- Flexibility
- Professional approach
- Innovative ideas



HISTORY

Back in April 1929, entrepreneur Carl Hamm founded a pipe manufacturing works at our present site in Kupferdreh, a district of Essen / Germany. Today the company is under the management of the fourth generation of the Hamm family.

Decades of experience as a supplier to the international mining industry, a sector known for strictest safety requirements, are our best reference as a high-performance pipe system provider. Our pipe systems are used in a wide variety of sectors including mining, power generation and supply, industrial processes, building services and stationary fire protection systems.

WORK WITH US AND BENEFIT FROM OUR

- Over 85 years' experience in the industry
- Decades of experience in the mining sector
- Readiness to master the challenges of the future



TODAY

Expertise, experience, innovations, state-of-the-art fabrication equipment and highly motivated staff provide the basis for success of the products and systems we provide.

Offering the flexibility of a modern medium-sized company and experience from over 85 years in the business, we are ready to master the challenges of the future.

A wide range of certifications and agency approvals ensure compliance with applicable regulations and standards throughout all production processes.

Our decades of experience and strengths are yours to profit from. We will meet your specific needs and exceed your expectations.

EXPERTISE IN STEEL





LOCATIONS

ESSEN

Gasstraße 12
45257 Essen
Germany

info@carl-hamm.de

Tel.: +49 (0) 2 01 / 8 48 17 - 0
Fax: +49 (0) 2 01 / 8 48 17 - 70

HAMBURG SALES OFFICE

Alter Kirchweg 7
21217 Seevetal
Germany

Kai Stelzner-Ripka

ripka@carl-hamm.de
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Mobile: +49 (0) 1 60 / 5 35 30 02
Fax: +49 (0) 40 / 21 90 81 - 13

RAVENSBURG SALES OFFICE

Wilhelm-Hauff-Straße 12
88214 Ravensburg
Germany

Wolfram Widmann

widmann@carl-hamm.de
Tel.: +49 (0) 7 51 / 2 85 09 - 60
Mobile: +49 (0) 1 71 / 2 74 11 55
Fax: +49 (0) 7 51 / 2 85 09 - 61



CORPORATE FIGURES

Key Data	
Site area	ca. 37,000 m ²
Building space	9,500 m ²
Manufacturing	6,500 m ²
Warehouse	3,000 m ²
Storage yard	27,500 m ²
Number of employees	96



CERTIFICATES

Our certified quality management system meets strict national and international standards.

We can produce a wide variety of procedure qualification certificates and welders' individual qualification certificates for our MAG, MIG, WIG, SAW and automated welding processes – as well as our certificate for marking transfer (restamping) authorisation for metallic products with DIN EN 10204:2005 Type 2.2 and 3.1 Test Certificates.

All manufacturing processes are carried out in accordance with our ISO 9001:2008-certified quality management system.

Various certifications of our testing procedures and personnel assure highest consistency and accuracy of our QC testing.

Other areas of our company also operate in accordance with our ISO 9001:2008-certified QM system:

- Development and design of pipes and fittings
- Manufacturing of pipes and fittings
- Trading of steel pipes and pipe accessories

We also have compliance certificates for Russian standards.



CERTIFICATIONS & MATERIALS

Test certifications

Welder qualification tests according to DIN EN 287-1

Welding procedure tests according to DIN EN ISO 15614-1

Welding certifications

DIN EN ISO 3834-3	Quality requirements for fusion welding of metallic materials
AD 2000	Bulletin HP 0
PED Directive 97/23/EC	Pressure Equipment Directive –Category II piping, Module A1
GL-Code I/1/2-Section 11	Welding of piping and machine installations, Classes I through III, of seagoing vessels
EN 1090-2	Up to and including EXC3

Certified welding processes in accordance with DIN EN ISO 4063

121	UP	Submerged-arc welding with solid wire electrode
131	MIG	Metal inert gas welding with solid wire electrode
135	MAG	Metal active gas welding with solid wire electrode
136	MAG	Metal active gas welding with flux-cored wire electrode
138	MAG	Metal active gas welding with metal-cored wire electrode
141	WIG	Tungsten inert gas welding with solid wire electrode
135/138		Metal active gas welding with solid wire electrode / Metal active gas welding with metal-cored wire electrode
135/121		Metal active gas welding with solid wire electrode/ Submerged-arc welding with solid wire electrode
141/138		Tungsten inert gas welding with solid wire electrode/ Metal active gas welding with metal-cored wire electrode

International certificates - Russia

GOST-R Certificate	Documentation of conformity of DN 25-500, PN 10-400 piping with corresponding Russian standards
Rostekhnadzor	Certification for use in Russian mines



Material designation (e.g.)	Material group	Material number
S 355J2G3	1.2	1.0570
L 485MB	2	1.8977
X6CrNiMo 17-12-2	8	1.4571
X6CrNiTi 18 10 with P235 Tr 1	8/1.1	1.4541/1.0254

Authorisation for restamping with certificates	
DNV GL DIN EN 10204 certification	UG 0212 HH

We comply with the following welding standards:	
Welding coordination	DIN EN ISO 14731
Welding procedure test	DIN EN ISO 15614-1
Welding procedure specification	DIN EN ISO 15609-1
Testing of welders / welding personnel	DIN EN 287-1 / 1418
Joint preparation	DIN EN ISO 9692-1,-2
Welding processes	DIN EN ISO 4063
Welding consumables	DIN EN ISO 14341 / 17632
Shielding gases	DIN EN ISO 14175
Quality requirements for welding	DIN EN ISO 3834-3

The following non-destructive tests can be performed in-house:	
NDT personnel	DIN EN ISO 473 (9712)
Magnetic particle testing (MT)	DIN EN ISO 17638
Penetrant testing (PT)	DIN EN 571-1
Radiographic testing (RT)	DIN EN 1435
Visual testing (VT)	DIN EN ISO 17637
Other tests are carried out with the assistance of third-party providers.	



DESIGN AND DOCUMENTATION

DESIGN

You provide the idea, we do all that is needed to make it reality!

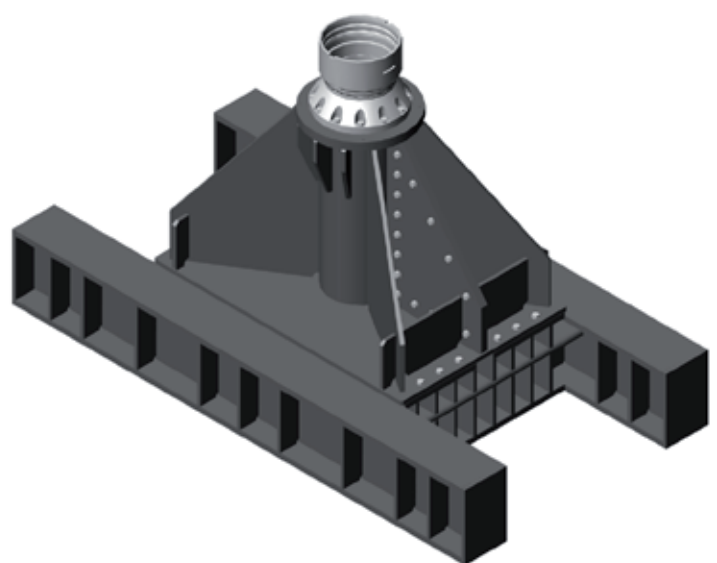
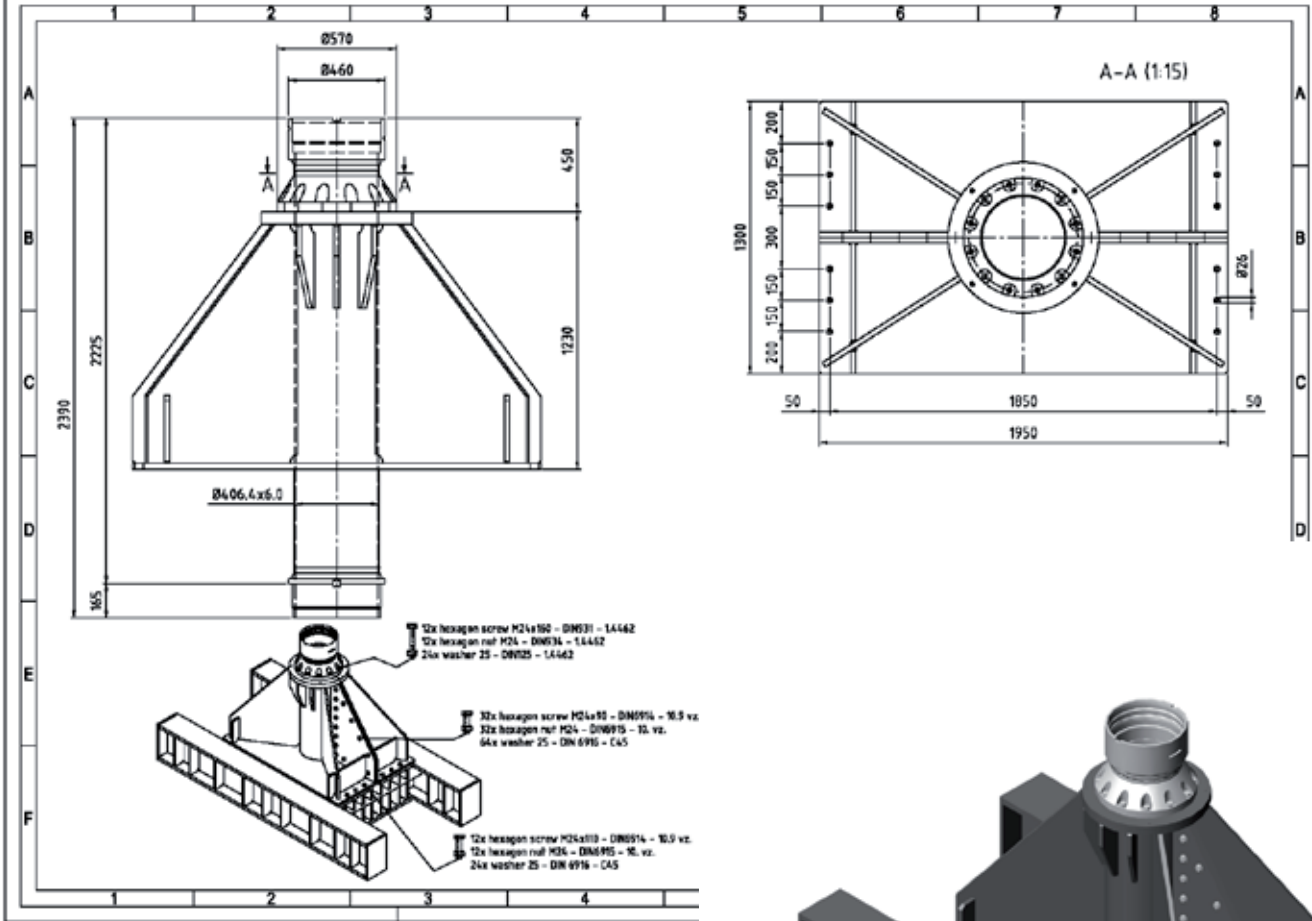
Design and development – the link between sales and manufacturing – are among the ISO-9001 certified functions carried out by our company.

In our company these activities also include preparation of:

- Drawings
- Calculations
- Parts lists
- Risk assessments regarding machine safety
- Operating instructions

We carry out design of your products in-house or in conjunction with expert engineering consultants in accordance with the circumstances at hand.

Utilising all required resources and know-how, we realise optimum technical solutions which are custom-designed to your specific project requirements.



DOCUMENTATION

We carry out comprehensive documentation for all manufacturing operations:

- Pipe systems
- Machine systems
- Auxiliary / mounting structures

You receive all important documentation for your products including:

- Material certificates
- Welding seam lists, test methods and reports
- Certificates and certifications
- Shipping documents

Manufacturing and shipping documentation are provided separately wherever possible for the sake of clarity and convenience.

Documentation: The Benefits

We maintain and provide documentation beyond the extent required by legal regulations. This reflects the high quality of the products we supply, keeps pace with ever-stricter operational safety legislation and provides other advantages as well:

- Accelerated inspections by approval agencies and third-party supervisory organisations (TÜV, DNV GL Group, etc.)
- Potential for reduced insurance premiums





WELDING

We are certified welding specialists for black steel and stainless steel in compliance with a wide variety of national and international standards and codes.

Our compliance is assessed and confirmed by independent supervisory agencies including DNV GL and TÜV.

Our capability to satisfy your exacting requirements is documented by our certifications to

- AD2000HPO
- Pressure Equipment Directive 97/23/EC, Category II, Module A
- DIN EN ISO 3834-3
- EN 1090-2

and other codes as well.

All of our welders have - as a matter of course - valid test certification for the welding processes carried out.

Our welders regularly take part in continuing education courses which keep them updated on state-of-the-art technologies and procedures.

Our fabrication facility is divided in two separate processing buildings, one for non-stainless and one for stainless steel. This prevents airborne particle contamination, ensuring 100 % material purity at all times.





REFERENCES

ARCELOR MITTAL BREMEN / GERMANY – STEEL WORKS
DN 1400 connecting pipeline for deslagging station, high-precision works fabricated components designed from on-site measurements

VENDÉE / FRANCE
Municipal drinking water supply line, restrained-socket jointed fittings and flap housings, approx. 800 custom fittings DN 250 to DN 700 – steel-PE-CM

PROSPER COKING PLANT IN BOTTRUP / GERMANY
Gas filtering station and pipelines, TÜV tested, DN 1200 to DN 3000

GELSENWASSER AG / HAMBURG WATERWORKS / MUNICH CITY WORKS
Pipelines with standard and custom PE/CM fittings DN 100 to DN 1200

TOWER 185 FRANKFURT / MOORBURG POWER PLANT IN HAMBURG / GERMANY
Prefabrication of manifolds and tanks with different diameters for building services – stationary fire protection systems, cooling, air conditioning

RAG/ZOLLVEREIN IN ESSEN / GERMANY
Dewatering of defunct mining facility, ZSM-jointed DN 500 pipe, 2 x 1000 m in length

WITWATERSRAND / SOUTH AFRICA
Acid mine drainage, ZSM-jointed DN 400 pipe, 7 x 400 m in length, material of construction: duplex stainless

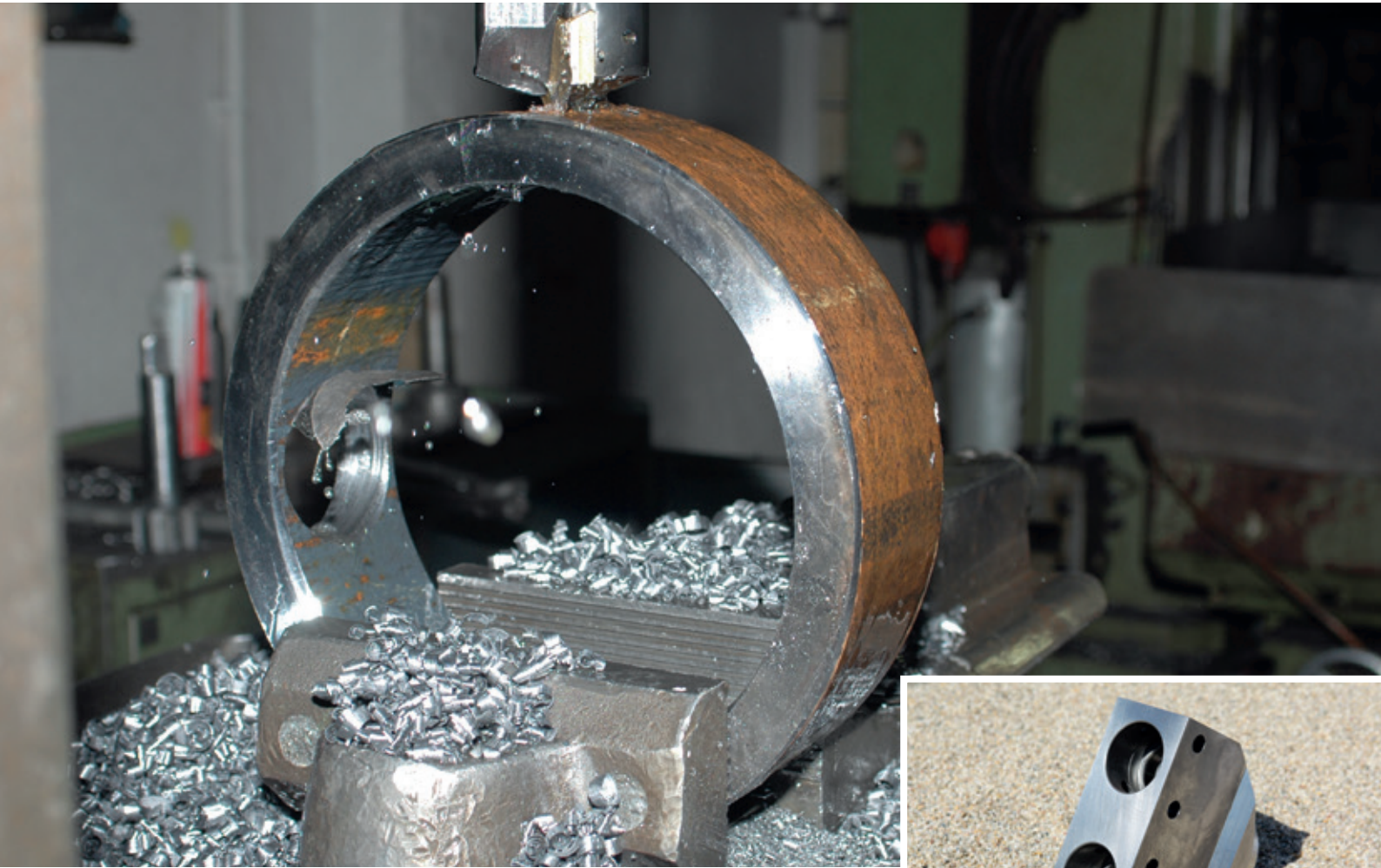
ALROSA / RUSSIA
Mining facility, ZSM-jointed DN 250 pipe, 3 x 550 m in length

LAS VEGAS / USA
Water supply line, ZSM-jointed DN 800 pipe, 150 m in length

MACHINERY LINE-UP

Machine Type	Technical Data
Transport	
Bridge cranes	Each with 5 t lifting capacity
Forklift trucks	1.8 t to 6 t lifting capacity
Heavy-duty roller conveyors	up to 10 t capacity
Marking	
Computer-controlled hard-stamp marking systems	
Computer-controlled inkjet marking systems	
Machining	
CNC lathes	Maximum turning diameter 500 mm Maximum turning length 800 mm
Universal lathes / conventional control	Maximum turning diameter 1000 mm
NC milling machines	1000 x 600 x 600 mm traverse paths
Vertical processing centre	1000 x 600 x 600 mm traverse paths
Welding	
Tank rotary stand	DN 500 to DN 3000 turning diameter 10 t load capacity
MAG welding units	up to 400 A
Rotary welding mounts	up to DN 1400
Semi-automatic pipe welding systems	up to DN 1400 lengths to 16 m
SAW welding units	up to 1000 A – dual-wire process
Fully automated pipe welding system	up to DN 200 lengths to 12 m integrated stand for hydraulic testing to 600 bar
WIG welding units with cold wire infeed	
Orbital welding device with open weld head and turntable	60.3 to 275 mm
Cutting	
Band saw	up to DN 500
CNC plasma / oxy-torch pipe cutting unit	up to DN 1500
Programmable band saws	up to DN 400
Miscellaneous	
Computer-aided 2C foaming machine	for PU foam insulation, includes preheating conveyor oven
Sand blasting unit	
Multi-roll bending machines	bending capacity up to 20 mm max. bending length 2.5 m with conical bending capability
Hydraulic pressure test stand	for expansion compensators and fittings, hydraulic force capacity up to 320 t
Incoming Product QC	
Scanning arm	FaroArm Fusion, 3.7 m working radius, 7 axis
Spectral analyser	





MACHINING CAPABILITIES

Thanks to our extensive machinery line-up we can offer you a wide variety of optional features and processing steps:

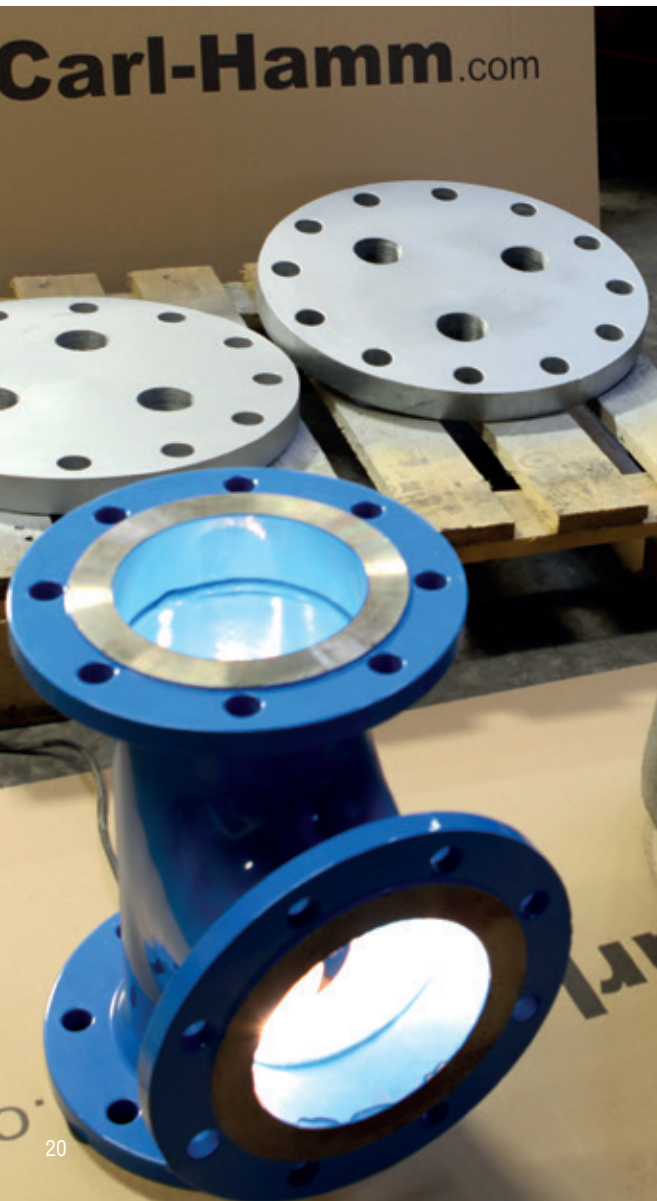
READY-TO-INSTALL PIPES

- Cut to desired length
- Threaded in accordance with DIN2999/ISO7-1
- Rolled grooves for coupling systems
- Drilled holes
- Threaded fittings, sealed and screwed together
- Pre-installed clamp saddles
- Custom welded components with subsequent machining steps
- Tailor-made parts (steel or plastic) fabricated in our in-house turning facility

TECHNICAL CAPABILITIES

- Saw cutting of diameters up to DN 500
- Thermal cutting of diameters up to DN 1500
- Rolled grooves for pipe coupling systems: DN 25 - DN 800 (AGS available for DN 350 and up) in lengths from 150 mm to 12,000 mm
- Welding chamfers DIN 2559 Shape 21 and 22
- Mitre cuts from 0 to 45°, up to DN 1400
- DIN 2999 threading from ½" to 6", in common commercial lengths or custom lengths
- Bending of steel pipes





COATINGS & CORROSION PROTECTION

SAND BLASTING

- According to DIN EN ISO 12944
- To SA 2.5 purity standard

PE SHEATHING

- Single or double layer systems in accordance with DIN 30670
- With or without fibre-cement coating

CM LINING

- In accordance with EN 10298/DIN 2614

PRIMER COATS / TOP COATS

1 or 2-component primer and top coats based on epoxy resins, available in various RAL colours:

- Zinc phosphate
- Zinc dust
- Micaceous iron oxide, PUR etc.

HIGH-BUILD COATINGS (E.G. FOR REFRIGERATION SYSTEMS)

- In accordance with AGI-Q151-1.3 (2003) / LEED compliant

GALVANISATION IN ACCORDANCE WITH EN 1461

POWDER COATINGS

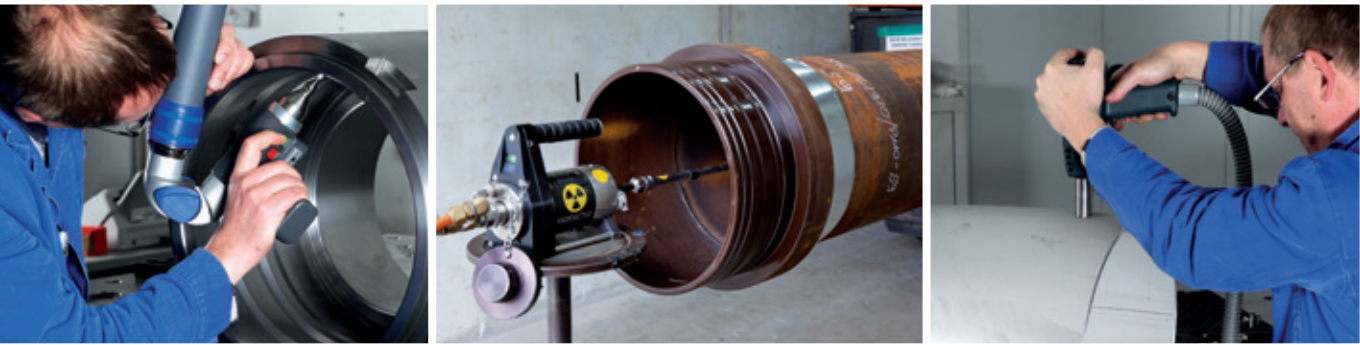




QUALITY CONTROL

Our quality control is carried out in-house by certified test technicians in our QC department. A variety of tests are used to monitor product quality on a continuous basis.

- Nondestructive testing in our in-house x-ray bunker (approx. 2.20 x 14 m in size)
- Cold-water pressurisation tests
- Visual and dimensional inspection
- Real-time radiographic testing (RT), penetrant testing (PT) and magnetic particle testing (MT)
- Dimensional measurements by 3D scanning arm
- Composition testing



QUALITY MANAGEMENT

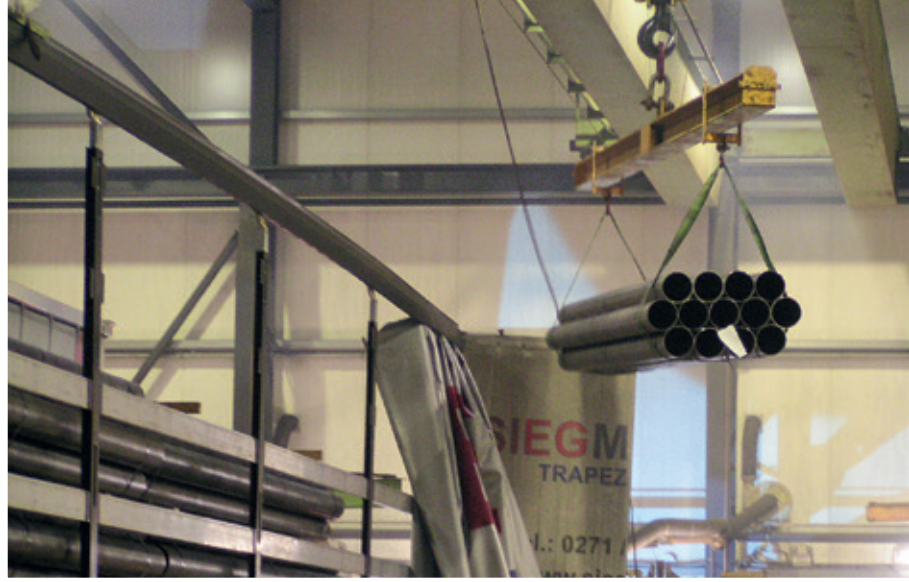
We work in certified accordance with a QM system which has been in place since 1997. The system was expanded to include our development and design activities in the year 2010.

We are certified as qualified welding provider. This certification is verified by periodic inspections confirming compliance with stringent national and international standards.

Our certificates, third-party certifications (from DNV GL and others), welding procedure qualifications and our highly qualified production and QA personnel are your assurance of consistently high quality.

WE COMPLY WITH NUMEROUS STANDARDS INCLUDING:

Quality management system	DIN EN ISO 9001:2008
Quality requirements for welding	DIN EN ISO 3834-3
Manufacturing and associated testing	AD 2000 HPO
In-house quality control	EN 1090-1:2009 + A1:2001
Fabrication of steel structures	EN 1090-2
EC declaration of conformity	CE marking of pressure equipment
Welding procedure qualification	DIN EN ISO 15614-1
Testing of welders/welding personnel	DIN EN 287-1 and DIN EN 1418
NDT (RT, PT, MT, VT)	DIN EN 473 – Level 2



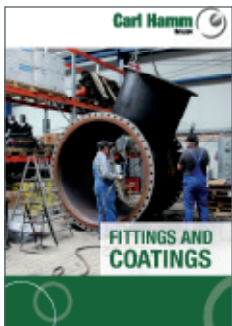
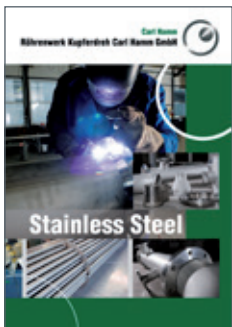
LOGISTICS

PACKING, TRANSPORT, SHIPPING

We deliver worldwide, handling customs processing as well as freight and packing arrangements required for whatever logistics paths are used.



EXPERIENCE IN ALL SECTORS



We will be happy to send you any of the brochures shown above on request.

EXPERTISE IN STEEL



HEADQUARTERS

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