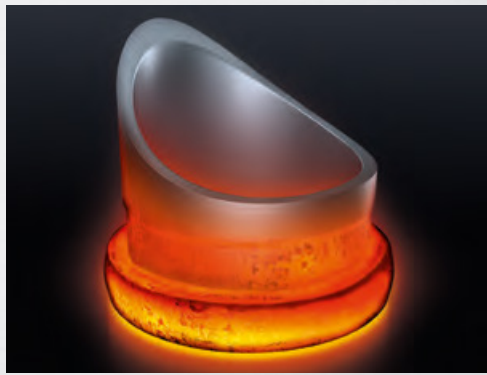




Represented by



Represented by



THINKING STEEL.



Corrosion Materials Inc.
2262 Groom Road | Baker, Louisiana 70714
800.535.8032 | 225.775.3675 | 225.774.0514 fax
www.corrosionmaterials.com



The extraordinary open die forging company.

Rolf Kind GmbH is specialized in manufacturing of forgings in high alloyed stainless and corrosion resistant materials, nickel based alloys as well as titanium and titanium alloys. As a German family run company, we strongly follow our traditional values like high class quality and strong business relationship.

Being responsible for the complete manufacturing chain, any customized product geometry such as shafts, rings, cylindrical bushings, hollows, round and square shapes as well as special shapes tailored to suit our customers' needs can be supplied. Due to our comprehensive and widespread technical know-how, we are able to produce forgings of highly sophisticated technical designs, being later used in machinery and equipment construction, oil and gas processing industries, on- and offshore applications and nuclear applications.

Our main focus and strength is our key skills in open die forging and machining, as well as detailed metallurgical knowledge. Paired with our very special business concept, we are able to offer any product from the raw material – up to the ready-to-install part from a single source.

Manufacturing capabilities

Steelmaking

Ingots from 3 to 50 t in nickel based alloys, high alloyed stainless steels and titanium.

Forging

From 20 MN to 120 MN forging pressure, open die forging and ring rolling up to 50 t ingot weight.

Heat treatment

Single forgings up to 4.5 m diameter and 16 m length.

Machining

Turning, milling and drilling up to 4.5 m diameter and 16 m length

Non Destructive Testing (NDT)

Ultrasonic testing, liquid penetrant testing, visual testing etc. (e.g. X-Ray).

Destructive Testing (DT)

All kinds of metallurgical tests possible, in collaboration with accredited laboratories like TÜV Rheinland or DEKRA, as well as LR, ABS, DNV•GL, etc. for special requirements.

Our challenge: to go beyond
the limits of conventional forgings.

Rolf Kind GmbH was founded in 1969. Since then we have set ourselves a task: we want to produce excellence with innovative ideas and highly efficient manufacturing technology. It is our aim to overcome the limits of conventional forging technology, so that we can offer our customers extremely resilient solutions in high-quality alloys.

Run as a family business right from the start, Rolf Kind focuses on the entire production chain, from the cast ingot to the finished and inspected work piece. We combine flexible manufacturing management with the precision of our in-house processing. This enables us to manufacture the quality that meets our own high standards and those of our customers.

Customers around the globe are convinced by the outstanding effectiveness of our working methods. In an economy that follows global rules, being a specialist manufacturer of unique parts has put us in the greatest demand. We export up to 80 per cent of our custom-made solutions from Germany throughout the world.

Excellence in the
making.



We shape the extraordinary.

Nothing is impossible with our
technologies in open die forging.

Our many years of experience in the field of hot-forming enable us to tailor the required work processes and production methods to each customer's special needs. Whether forged to "near-net shape", seamless hot-rolled or induction-heated and upsetted – we will find the optimal process for each work piece. The optimal forging equipment for each component – that's technology made by Rolf Kind.

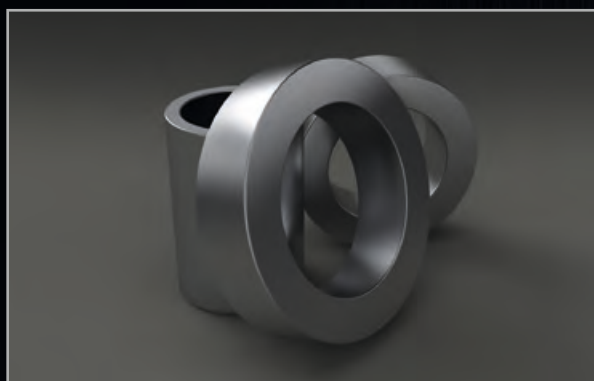
Our product groups:

- Bars in round/square/flat dimensions, as well as stepped and profile forged bars
- Seamless forged flanged shafts in all lengths
- Rings, cylindrical hollows and pierced discs, either forged or seamless hot-rolled
- Forged discs especially in large dimensions
- Any special shape, such as nozzles, cones, bushings or hollow parts, according to your requirements

Every product we manufacture has to meet the highest international quality criteria: tests to verify corrosion resistance, heat resistance or extreme mechanical loads are standard procedures at Rolf Kind.

Special shapes according to customer requirements





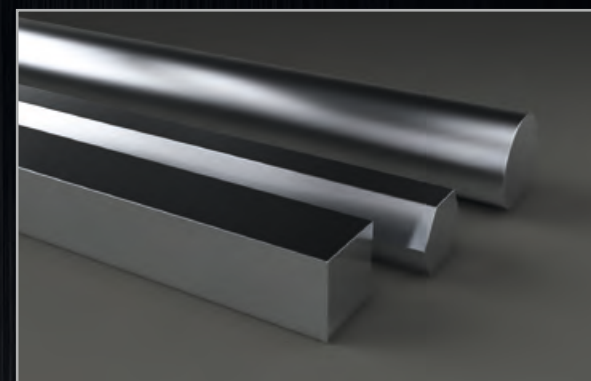
Rings and cylindrical hollows

Forged or seamless hot rolled rings, with plain or stepped profiles, rough, premachined or ready-to-build-in surface finishing including complete final machining.



Discs and pierced discs

Open die forged discs with rough, premachined or ready-to-build-in surface finishing, including complete final machining and drilling for tubesheet applications.



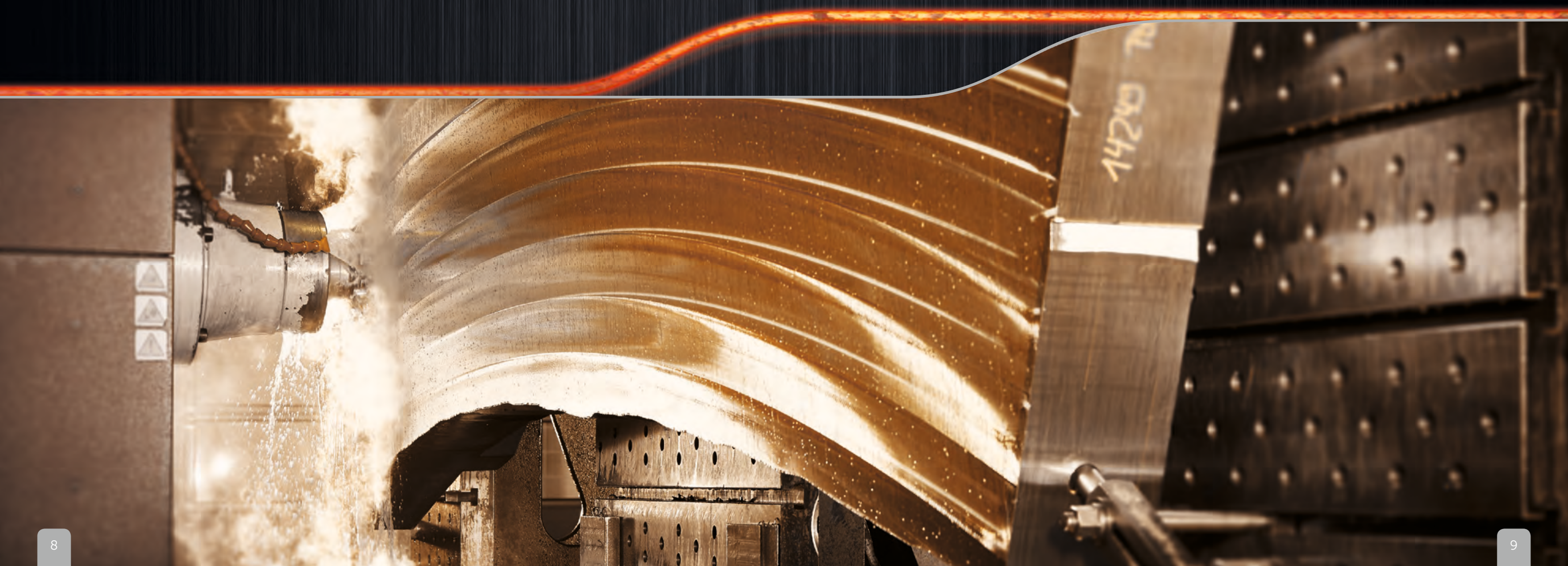
Bars

Forged and hot rolled bars, premachined or ready-to-build-in surface finishing. Furthermore, we are stocking the most usual material grades and diameters in our warehouse.



Shafts

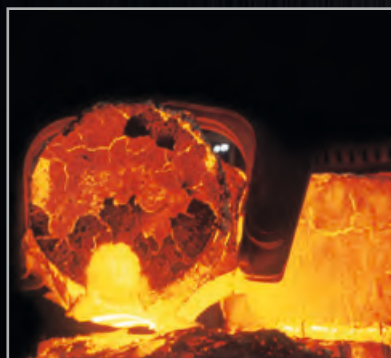
Forged shafts and hollow forged shafts, with integrated forged flanges, fully machined as per customer's drawings.





Our vision: forming reality.

Individually manufactured pieces meet even the highest customer demands.

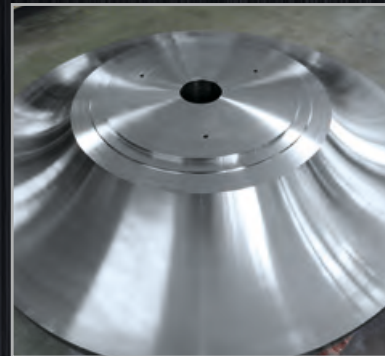
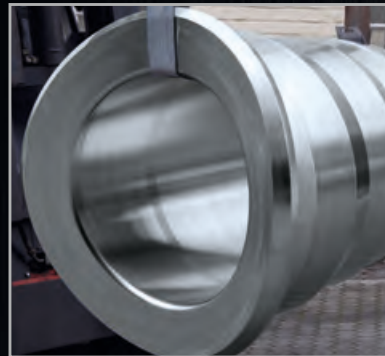


Individual know-how in the project development of open die forgings – that's what we provide our customers with, from the R&D stages on. We guarantee a solution that ultimately is both the best technically and the most cost-effective. At all times, our work focuses on fulfilling even the most demanding customer requirements.

For instance we have successfully supplied more than 2000 components for the construction of the magnets at the world's largest particle accelerator, the LHC at CERN – just one example of Rolf Kind technology in future-oriented projects.

Whether it's a high-stressed component for an ultra-performance centrifuge or a 15-ton propeller shaft for a super yacht – when it comes to special designs, the diversity of our shaping knows no bounds. And what applies to manufacturing technologies and their variations is also valid for the selection of materials processed: specialities only. Our exclusive qualities range from corrosion resistant stainless steels to nickel-based alloys and titanium. Please refer to pages 18 and 19 of this brochure for a list of our materials.

We manufacture work pieces with tightest tolerances and highest surface requirements.



High-quality manufacturing leaves no room for compromise. The basis of our precision work is an optimally aligned production process, because this is the only way for us to meet our customers' requirements and our own high standards. Our continuously refined in-house manufacturing that specializes in turning, milling and drilling work to highest quality standards, focuses on the processing and surface finishing of materials that are difficult to machine. With our NC- and CNC-controlled machines we can meet the most complex requirements in perfect machining quality.

We are specialized in single-item and small batch production and offer plenty of unique know-how that our customers are glad to benefit from. Furthermore, we can offer refinishing work on our machines. Just ask us for detailed information!

We work with:

- Vertical Lathes
- Centre Lathes
- Boring and Milling Machines
- High-performance Drilling machines
- Deep Hole Drilling Machines
- Band Sawing Machines (Vertical and Horizontal Sawing)
- 5-Dimensional precision Milling Machines

To be precise.



Customers all over the world use our alloy solutions for critical parts and equipment.



Chemicals/Petrochemicals

Manufacturers of apparatuses and plants all over the world know: Rolf Kind materials will defy all adversities even in the most corrosive environments. With 40 years of experience, we stand for quality.



Machinery construction and abrasive/corrosive plant engineering

Whether it's a 10-metre-long agitator shaft, a high-precision centrifuge drum or a high-speed rotating compressor wheel: our components are manufactured in accordance with all current international standards and will satisfy any customer requirement.

Our components are mostly used in sensitive industries with very high product requirements. Our customers know that they can rely on the very high standards of Rolf Kind quality.



Offshore technology

In offshore technology the focus is on highest quality and absolute adherence to delivery times. Rolf Kind has been known as a reliable and acknowledged partner to the global market leaders in offshore facility manufacturing for many years.



Research and Innovation

Hardly any other forging manufacturer has as strong reputation as Rolf Kind in the field of international research projects. We are committed to designing and manufacturing specialized forgings for major international research equipment, like LHC Cern or ITER.

The world of intelligent forging solutions.





Quality made in Germany.

When it comes to manufacturing in accordance with international standards, you can count on our quality management.

With all the enthusiasm for innovation that we show with every newly developed work piece – our focus will be on product quality at all times. Especially in sectors such as the chemical industry or plant engineering the smooth functioning of our components always takes top priority. We ensure trouble-free operations for increased efficiency and help to save costs. Our own “Level III” certified personnel is capable of preparing and conducting all types of Non-Destructive Tests, like Ultrasonic Testing, Liquid Penetrant Testing and Visual Testing.

Your wish is our command.

We fulfil all customer-specific standards and approval requirements as well as the strict German KTA (Nuclear Safety Standards Specifications), as well as the French RCC-MR guidelines for nuclear power plants. Furthermore, we are certified according to NORSOK M650 requirements. All you have to do is ask!

Our certified quality management guarantees that even the highest customer requirements will be met. To us, “Made in Germany” does not only mean manufacturing at an internationally recognized level but also guaranteeing the highest standards. The development of quality assurance plans, comprehensive component reporting or as-built drawings are our daily business. We work closely with all leading inspection organizations, such as TÜV Rheinland, TÜV Süd, DEKRA, DNV•GL, LR, ABS, etc.



ISO 9001:2008



Pressure Equipment Directive
97/23/EC IAW AD/WO



EN 9120:2010

Our materials.

This overview only shows the materials we most frequently use. Please contact us if you require other qualities!

Nickel-based alloys

Material no.	Description	UNS no.	ASTM	VdTÜV material data sheet
1.4864	Alloy 330	N08330	SEW 470/B511	
1.4876	Alloy 800	N08800	B564/B408	WB 412
1.4876 H / 1.4958	Alloy 800 H	N08810	B564/B408	WB 412/434
1.4876 HT / 1.4959	Alloy 800 HT	N08811	B564/B408	WB 412
2.4605	Alloy 59	N06059	B564	WB 505
2.4610	Alloy C4	N06455	B574	WB 424
2.4602	Alloy C22	N06022	B564/B574	WB 479
2.4819	Alloy C276	N10276	B564/B574	WB 400
2.4617	Alloy B2	N10665	B564/B335	WB 436
2.4600	Alloy B3	N10675	B564/B335	WB 517
2.4066	Alloy 200	N02200	B564/B160	
2.4068	Alloy 201	N02201	B564 /B160	WB 345
2.4858	Alloy 825	N08825	B564/B335	WB 432
2.4816	Alloy 600	N06600	B564/B166	WB 305
2.4851	Alloy 601	N06601	B166	
2.4663	Alloy 617	N06617	B564/B166	WB 485
2.4856	Alloy 625	N06625	B564/B446	WB 499
2.4642	Alloy 690	N06690	B564/B166	
2.4668	Alloy 718	N07718	B637	
2.4669	Alloy X750	N07750	B637	
2.4951	Alloy 75	N06075		
2.4952	Alloy 80A	N07080	B637	
2.4969	Alloy 90	N07090		
2.4650	Alloy C263	N07263		
2.4360	Alloy 400	N04400	B564/B164	WB 263
2.4375	Alloy K500	N05500	B865	
2.4660	Alloy 20	N08020	B462/B473	

Corrosion resistant stainless steels

Material no.	Description	UNS no.	ASTM	VdTÜV material data sheet
1.3912	Ni36	K93600	SEW385	
1.3964	X2CrNiMnMoNNb21-16-5-3		SEW390	
1.4313	X3CrNiMo13-4	S41500	A182 (F6NM)	WB 395-3
1.4418	X4CrNiMo16-5-1			
1.4404	X2CrNiMo17-12-2	S31603	A182 (F316L)	
1.4429	X2CrNiMoN17-13-3	S31653	A182 (F316LN)	
1.4438	X2CrNiMo18-15-4	S31703	A182 (F317L)	
1.4462	X2CrNiMoN22-5-3	S31803	A182 (F51)	WB 418
1.4410	X2CrNiMoN25-7-4	S32750	A182 (F53)	
1.4501	X2CrNiMoCuWN25-7-4	S32760	A182 (F55)	
1.4507	X2CrNiMoCuN25-6-3	S32520	A182 (F59)	
1.4465	X1CrNiMoN25-25-2	S31050	A182 (F310MoLn)	
1.4466	X1CrNiMoN25-22-2	S31050	A182 (F310MoLn)	WB 415-3
1.4541	X6CrNiTi18-10	S32100	A182 (321)	
1.4562	X1NiCrMoCu32-28-7	N08031	B564/B649	
1.4571	X6CrNiMoTi17-12-2	S31635	A182 (F316Ti)	
1.4529	X1N1CrMoCuN25-20-7	N08926	B649	WB 502
1.4539	X1NiCrMoCu25-20-5	N08904	A182/B649 (F904L)	WB 421
1.4542	X5CrNiCuNb16-4	S17400	A705/A564 (630)	
1.4547	X1CrNiMoCuN20-18-7	S31254	A182 (F44)	
1.4550	X6CrNiNb18-10	S34700	A182 (F347)	
1.4563	X1NiCrMoCu31-27-4	N08028		WB 483
1.4565	X2CrNiMnMoNbN25-18-5-4	S34565	A182 (F49)	
1.4828	X15CrNiSi20-12	S30900	A473/SEW470 (309)	
1.4841	X15CrNiSi25-21	S31000	A182 (F310)	
1.4910	X3CrNiMoBN17-13-3			
1.4971	X12CrCoNi21-20		B639	
1.4980	X6NiCrTiMoVB25-15-2	S66286	A638 (660)	WB 435-3

Titanium and titanium alloys

Material no.	Description	UNS no.	ASTM	VdTÜV material data sheet
3.7025	Titan Grade 1	R50250	B381/B348	WB 230-3
3.7035	Titan Grade 2	R50400	B381/B348	WB 230-3
3.7164	Titan Grade 5 (LF)	R56400		
3.7165	Titan Grade 5	R56400	B381/B348	WB 230-3
3.7235	Titan Grade 7	R52400	B381/B348	WB 230-3
3.7105	Titan Grade 12	R53400	B381/B348	

Subject to change without notice.

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