R. STAHL AG
Germany - Engineering

HAUCK & AUFHÄUSER
Investment Banking

Buy (Initiation)

Price target: EUR 31.00 (Initiation)

Price:	EUR 24.00	**Next result:**	Q2-21 12.08.21
Bloomberg:	RSL2 GR	**Market cap:**	EUR 154.6 m
Reuters:	RSLG.DE	**Enterprise Value:**	EUR 249.2 m

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BOOM! Now, that's a nic(h)e story. Initiating with BUY.

Oilrigs, refineries, chemical plants, LNG transport ships and hydrogen plants all have one thing in common. They carry a high risk of explosion due to the nature of the products they process. The smallest spark could trigger a catastrophe. Hence, ensuring that electrical components don't pose a risk is safety and mission-critical. Prime time for **R. STAHL, a globally leading producer of explosion protected electrical components.**

R. STAHL's leading market position (#2 in Europe and #3 globally) is shielded by sound barriers to entry, predominantly:

- **Tight regulations.** Due to the mission critical nature of R. STAHL's products, they are subject to tight regulations and certifications. Obtaining those is time consuming, costly and requires expertise, a particularly daunting task for smaller companies.
- **Portfolio breadth.** Supported by decades of R&D efforts, R. STAHL offers the most comprehensive portfolio with more than 10,000 different products, essential when bidding for large tenders/complete systems.
- **Perception.** Thanks to R. STAHL's flawless record and its innovative strength, the company has become a synonym for quality and reliability. In light of the fact that explosion protection usually accounts for 0.5-2% of the cost of greenfield projects, the willingness to switch suppliers should be rather low.

During the past few years, R. STAHL's solid competitive quality was not visible in its figures, mainly due to subdued demand from its key end market, oil & gas (typically >40% of sales), as well as internal inefficiencies. **Yet, this looks set to change.**

Thanks to a cyclical upswing of its key end market coupled with a revitalization of CoV-related project postponements, **sales look set to grow at a 7% CAGR** (2020-23E). Notably, past and future improvements from efficiency measures should increasingly become visible on the earnings level. Coupled with the positive operating leverage stemming from a return to growth, EBITDA should grow by 25% p.a. until 2023E.

As a result, we expect a notably **improving value creation** (ROCE from 0% in 2020 to 8% by 2023E) coupled with **rising FCF generation** (€ 12m by 2023E) to equip the company to resume its long-paused dividend payments and/or become active in M&A.

With R. STAHL's solid competitive quality as well as the strong earnings growth potential during the next few years not adequately being reflected in its share price, we **initiate with BUY and a € 31 PT**, based on FCFY 2023E.

Y/E 31.12 (EUR m)	2017	2018	2019	2020	2021E	2022E	2023E
Sales	268.5	280.1	274.8	246.5	254.9	275.6	299.1
Sales growth	-6 %	4 %	-2 %	-10 %	3 %	8 %	9 %
EBITDA	2.3	9.5	25.3	17.2	14.3	23.0	33.3
EBIT	-10.7	-4.2	6.3	0.5	-3.1	5.0	15.3
Net income	-21.1	-7.1	1.3	-3.5	-6.0	2.6	10.5
Net debt	18.1	5.5	4.2	5.8	6.0	1.1	-10.9
Net gearing	7.2 %	2.4 %	7.2 %	12.2 %	13.0 %	2.1 %	-15.9 %
Net Debt/EBITDA	7.9	0.6	0.2	0.3	0.4	0.0	0.0
EPS pro forma	-3.28	-1.10	0.21	-0.54	-0.93	0.41	1.63
CPS	1.85	1.61	1.73	1.29	0.59	1.40	2.52
DPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dividend yield	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Gross profit margin	17.6 %	63.4 %	67.1 %	68.2 %	66.3 %	66.6 %	66.8 %
EBITDA margin	0.9 %	3.4 %	9.2 %	7.0 %	5.6 %	8.4 %	11.1 %
EBIT margin	-4.0 %	-1.5 %	2.3 %	0.2 %	-1.2 %	1.8 %	5.1 %
ROCE	-2.6 %	-1.1 %	2.3 %	0.3 %	-1.6 %	2.6 %	7.9 %
EV/sales	0.9	0.8	0.9	1.0	1.0	0.9	0.8
EV/EBITDA	108.2	25.2	9.6	14.5	17.5	10.6	7.0
EV/EBIT	-23.1	-57.1	38.4	504.1	-81.2	48.9	15.2
PER	-7.3	-21.9	115.4	-44.1	-25.7	58.9	14.7
Adjusted FCF yield	-5.7 %	0.7 %	6.0 %	2.2 %	1.8 %	5.5 %	9.0 %

Source: Company data, Hauck & Aufhäuser Close price as of: 13.07.2021

Source: Company data, Hauck & Aufhäuser

High/low 52 weeks:	27.60 / 18.90
Price/Book Ratio:	3.3
Relative performance (SDAX):	
3 months	-9.3 %
6 months	-7.4 %
12 months	-16.6 %

Changes in estimates

		Sales	EBIT	EPS
2021	*old:*			
	Δ			
2022	*old:*			
	Δ			
2023	*old:*			
	Δ			

Key share data:

Number of shares: (in m pcs)	6.4
Authorised capital: (in € m)	3.3
Book value per share: (in €)	7.2
Ø trading volume: (12 months)	1,000

Major shareholders:

Founding Families	48.0 %
Free Float	18.0 %
RSBG	14.0 %
TGV	10.0 %
Langfrist-Investoren	10.0 %

Company description:
Manufacturer of electrical explosion protection components and systems.

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Introducing R. STAHL

- **Leading producer of components for electrical explosion protection**, mainly for the oil & gas, chemical and pharma industry: #2 in Europe and #3 globally
- **Global set-up with highly comprehensive product portfolio** of more than 10,000 different products

R. STAHL is a globally leading producer of components for electrical explosion protection, mainly for the oil & gas, chemical and pharma industry. While explosion protection only accounts for 0.5-2% of a project's total cost, it plays an absolutely crucial role in the safety of people, the environment and equipment/production plants.

Whenever explosive substances such as flammable gases, liquids and dusts come in contact with the right amount of oxygen, the smallest electrical spark can trigger a catastrophe. This is exactly what R. STAHL's products rule out by (1) preventing the formation of an explosive atmosphere, (2) preventing the ignition of an explosive atmosphere or (3) confining the explosion impact to a controllable and harmless level.

Product overview

Source: Company data, Hauck & Aufhäuser

With its comprehensive portfolio consisting of **more than 10,000 different products**, R. STAHL is not only able to supply standard components but also complete systems and tailored and individually engineered solutions for large-scale projects. Its products can be clustered in four product groups:

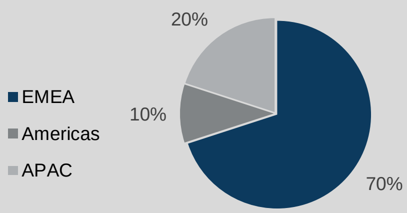
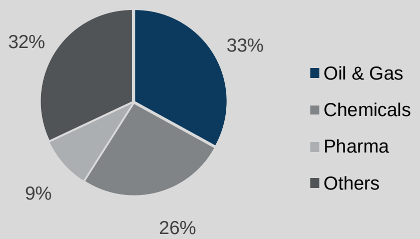
- **Electromechanical components and solutions** such as junction and terminal boxes, cable glands, connectors and enclosure systems.
- **Light fittings & signaling devices** such as explosion-proof LED luminaires (global market leader), standard neon tube lighting, signaling devices, emergency lights and battery boxes.
- **Network & automation products and solutions** such as access points, remote I/O systems, fieldbus solutions and switches.
- **Human machine interfaces** such as indoor and outdoor CCTV systems, displays, handheld devices and panel PCs.

While R. STAHL does not produce all of the electrical components itself, the company is an expert in making them explosion-proof and thus ready to use in any hazardous area. This can be done, though quite costly, by (1) putting an encapsulation around the electrical component and flushing it with nonexplosive gases such as nitrogen. Therefore, much more common and cheaper approaches are: (2) reducing the electrical energy that runs through the electrical component to a level that is insufficient to ignite an explosive atmosphere or (3) encapsulating the electrical component with an explosion proof case, which keeps the explosion inside and thus safely prevents the explosion from spreading outside the case.

In light of the mission-critical nature of its products, tight regulations and certifications are omnipresent and differ regionally: ATEX is the standard for members of the European Union, NEC for the USA and CEC for Canada. However, products that comply with the internationally widely accepted IECEx certification can be used almost anywhere – and R. STAHL is a market leader here.

The company operates a total of seven production sites in Europe (5), the USA (1) and Asia (1) as well as >50 globally spread sales offices and agencies, essential to ensure close proximity to customers and thereby low delivery times.

R. STAHL sells its products to a highly diversified customer base with no individual customer accounting for more than € 3-4m of recurring sales. Customers from the oil & gas, chemical and pharma industry account for roughly 70% of group sales with the remainder largely coming from a machinery, food & beverage or shipbuilding background.

	R. STAHL
Products	
Sales 2020, 2023E (€m)	246, 299
Sales 2020-23E CAGR	6.7%
End markets	Oil & Gas, Chemicals, Pharma, Food & Beverage, Shipbuilding, etc.
Market position	Leading player in the market for electrical explosion protection: #2 in Europe and #3 globally
Competitors	Highly fragmented market, yet key competitors include Bartec, Pepperl+Fuchs, Cooper Crouse-Hinds and Appleton
Customers	Highly fragmented customer base with no individual customer accounting for more than € 3-4m sales annually
Raw materials	A wide range of raw materials incl. plastic parts, steel housings, aluminium parts, cable, light bulbs, switches and gears; electronic components come from a wide range of suppliers
Sales distribution by region and end market (2020)*	 
Production sites	**R. STAHL operates seven production sites:** Waldenburg, Weimar and Cologne (Germany), Hengelo (Netherlands), Stavanger (Norway), Houston (USA) and Chennai (India)
EBITDA 2020, 2023E (€m)	17.2, 33
EBITDA 2020-23E CAGR	24.7%
ROCE 2020, 2023E	0.3%, 7.9%

*Source: Company data, Hauck & Aufhäuser; *Oil & Gas was strongly hit by CoV, a normalized level is around 40-45%*

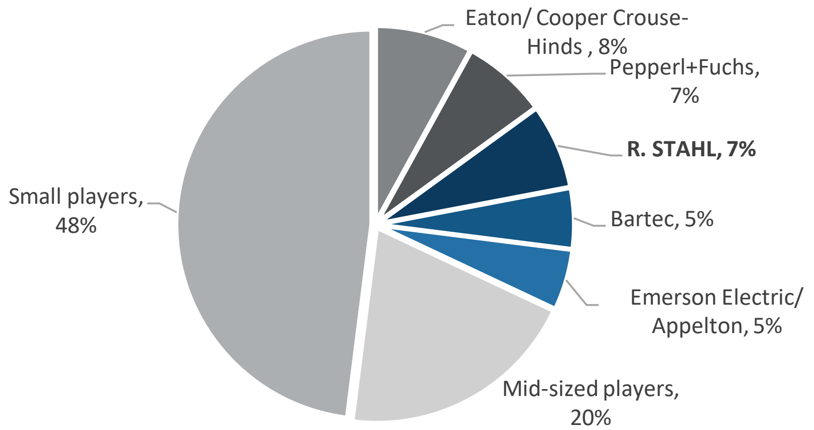
Competitive Quality

- **Leading position** in the electrical explosion protection market **shielded by sound entry barriers** such as a high degree of regulation, portfolio breadth, a global set-up and R. STAHL's brand perception and innovative strength
- **Strong degree of differentiation:** Among the industry's top 10, R. STAHL is the only public pure play with a dedicated strategy on explosion protection and thus the broadest product portfolio

R. Stahl, one of the few chosen ones…

The global market for electrical explosion protection is worth about € 3.7bn (based on IECEx/ATEX certification) and shows a high degree of fragmentation. Besides the five largest players which hold a combined ~30%, the market comprises a handful of mid-sized players with 2-5% market share each as well as a large number of smaller players, each with <2% market share. **R. STAHL is the third largest player globally and the second largest in Europe** in the IECEx/ATEX certification field.

Global market shares within electrical explosion protection market*



Source: Company data, Hauck & Aufhäuser; *based on IECEx/ATEX certification

R. STAHL's key competitors include:

- **Cooper Crouse-Hinds** (US), a private company owned by US-based Eaton Group, which is a diversified power management company with more than $ 21bn sales. Within Eaton, CCH focuses on electrical explosion protection.
- **Pepperl+Fuchs** (GER), a privately held company with roughly € 700m sales p.a. while focusing on a variety of sensor technology and electrical explosion protection.
- **Bartec** (GER) is a private company solely focusing on electrical explosion protection products and solutions, just like R. STAHL. The company is currently being owned by EQT and shows a quite dynamic history in its ownership structure and leadership team over the past ten years.
- **Appleton** (US), a company that belongs the US-based Emerson Group, an industrial conglomerate with > $18bn sales. Appleton only produces solutions for the oil and gas industry.

…thanks to sound entry barriers…

R. STAHL's market leading position is largely stemming from sound entry barriers including:

- **Regulatory requirements.** Given the mission critical nature of R. STAHL's products, the legal environment surrounding the industry is extremely tough. Potential new market entrants would have to obtain certifications to be able to compete in all regulated markets. Receiving certification can not only be time consuming but also expensive, forming a particularly hard to beat entry barrier for smaller companies. Mind you, R. STAHL offers more than 10,000 different products, all with the necessary certification.

- **Portfolio breadth.** Supported by decades of R&D efforts, R. STAHL offers a highly comprehensive product portfolio with more than 10,000 different products, effectively turning itself into a one-stop-shop with complete system solutions. This does not only yield cross-selling opportunities and reduces its customer's supply chain complexity but also allows R. STAHL to bid for large-scale projects.

- **A global set-up.** The necessity to operate a global distribution network, something particularly smaller competitors fail to deliver, is essential when selling a globally accepted product to a well-spread customer base. Further, production sites around the world allow R. STAHL to commit to short delivery times.

- **Perception.** Thanks to its flawless record, R. STAHL built a brand that reflects quality and reliability. In light of the mission-critical nature of such coupled with the fact that explosion protection usually account for no more than 2% of a project's total cost, the hesitancy to switch suppliers should be rather high.

Consequently, we view the still fragmented nature of the industry not as a sign of low barriers to entry. After all, these entry barriers helped to successfully keep low cost providers e.g. from China out of markets.

…and a strong degree of differentiation.

R. STAHL is the only serious pure-play in the electrical explosion protection industry who also can offer the broadest product portfolio. This should give the company an edge when pitching for business, especially with smaller customers who are unlikely to be top priority for large electrical groups such as Eaton (Cooper Crouse-Hinds) and Emerson (Appleton).

That said, we see R. STAHL primarily competing with Bartec and Pepperl+Fuchs in the MRO and brown field business while Cooper Crouse-Hinds and Appleton are the main competitors when it comes to large greenfield investment projects. Pepperl+Fuchs is positioning itself as a factory automation player, offering electrical components and sensor technology (explosion protection accounts for less than 50% of group sales).

In terms of product portfolio, Bartec is closest to R. STAHL, focussing wholly on electrical explosion protection. However, R. STAHL has a significantly longer experience and track-record in explosion protection. Further, Bartec is highly indebted (a result of its long private equity ownership history) and a debt-to-equity swap in conjunction with another high double digit million Euro cash infusion was needed in 2019 to prevent insolvency. This should ultimately benefit R. STAHL, particularly when dealing with larger clients and projects as the ability to service and replace installations after a project has been completed plays an important role (and with it the confidence of a going concern of suppliers) when pitching for outstanding tenders.

Business Quality

- **Solid competitive quality is not yet evident in its financials, which looks set to change:**
  - Adj. ROCE to improve to 8% by 2023E
  - FCF generation of around € 12m by 2023E and further improvements subsequently
  - Resumption of long-paused dividend payments from 2023E likely

During the past years, R. STAHL's financials have not been an ideal reflection of the company's solid competitive quality mainly due to the cyclical down-turn of its key end market (oil & gas) but also as a result of various internal inefficiencies such as partially unprofitable sites, unnecessary high product complexity and different IT systems across sites (slowing down order management and work flow and creating double work to manually bridge interface incompatibilities).

Yet, the tide is turning. We expect a gradually improving value creation with rising FCF generation giving the company enough financial flexibility to resume its long-paused dividend payments or invest into external growth in the mid-term.

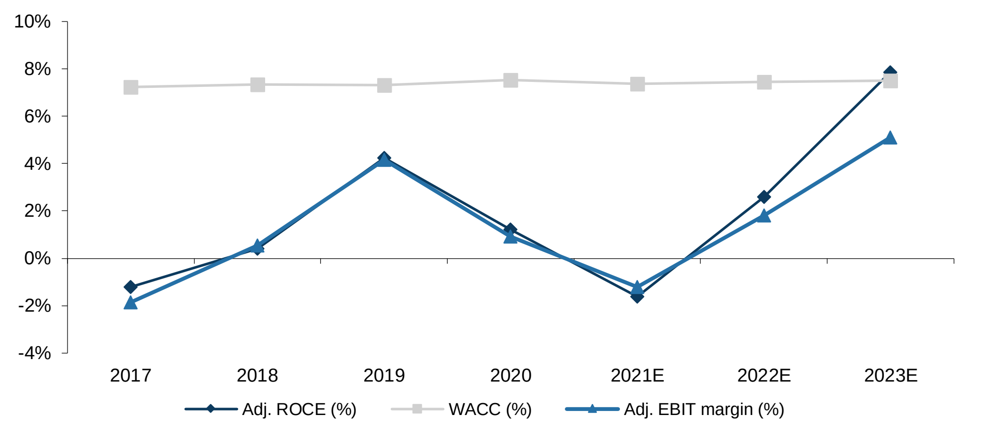
We expect **adj. ROCE** (adj. EBIT/avg. capital employed) **to reach 7.9% by 2023E**, which is well above the levels seen during the past few years, stemming from an improving profitability largely on the back of:

(1) **Cyclical upswing of its key end market + a revitalization of CoV-related project postponements:** Not only is the oil & gas industry seen to ramp-up investments to close the otherwise widening supply-demand gap during the next few year, but the chemical industry looks set to resume its capex projects that got put on hold as a result of CoV-related uncertainties.

The resulting return to mid to high single-digit top-line growth in the near-term should allow for an **improving fixed cost coverage**.

(2) **Efficiency measures bearing fruit:** Thanks to management's efforts to create a more streamlined, centralized and efficient company during the past three years, R. STAHL's break-even point (EBITDA) decreased from € 260m sales in 2017 to around € 228m. The full benefit should begin to become visible as growth returns.

Returns

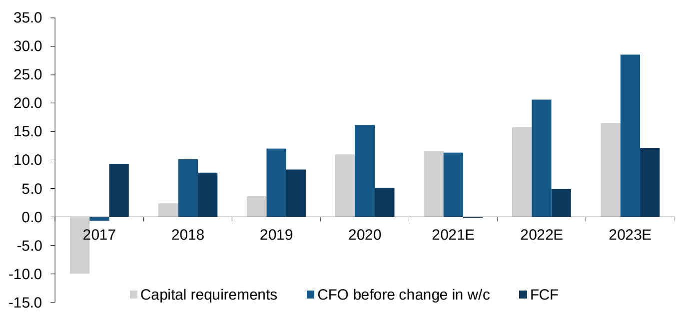


Source: Company data, Hauck & Aufhäuser Note: Adj. are regarding all one-off expenses related to the company's efficiency program

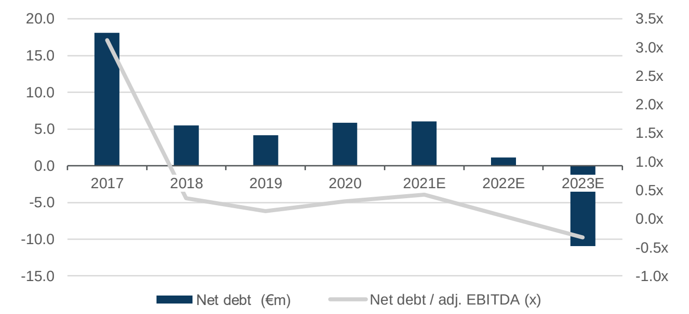
As a result of the projected earnings growth (21% adj. EBITDA CAGR 2020-23E) and supported by sustaining capex of € 12-13m annually, R. STAHL's **FCF**

generation looks set to gradually improve from € 5.1m in 2020 to around € 12m by 2023E.

Capital requirements and CFO before changes in w/c



Financial leverage



Source: Company data; Hauck & Aufhäuser

This would give R. STAHL the **financial flexibility to either resume paying dividends** (no dividend payment since 2016) or **invest into acquisitions**.

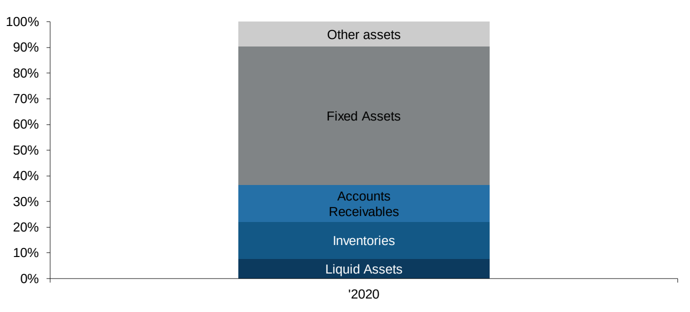
The M&A focus of the company should be on **expanding its market share** (eH&A: more than 20 players with average sales below € 75m) or on **buying technology**. A potential technology target would either have to have a strong focus on automation or/and software solutions, in our view.

A look at the FY 2020 Balance Sheet

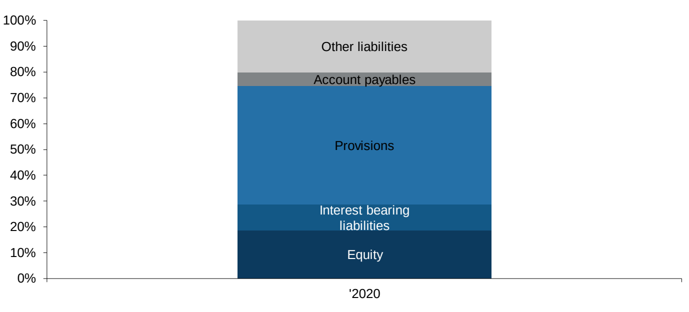
R. STAHL's balance sheet quality is solid with only little net financial debt (excl. pension provisions and excl. lease liabilities). What stands out, are the company's provisions, which account for roughly 57% of Total Liabilities, or € 118m. Thereof, **pension provisions account for € 103m**.

Fixed Assets dominate the left-hand side of the balance sheet. At the end of 2020, they amounted to € 138m or 54% of Total Assets. Fixed Assets mainly include Goodwill of € 10m, € 28m of capitalized R&D and € 80m Property, Plant & Equipment (mainly properties, buildings and rights of use as R STAHL's business is rather manual labor intensive). By the end of 2020, the company also sat on a gross cash position of € 20m, which should further improve during the next few years. Inventories stood at € 37m, 14% of Total Assets.

Balance sheet - Assets



Balance sheet - Equity & Liabilities



Source: Company data, Hauck & Aufhäuser

Besides the above mentioned pension provisions, which dominate the right-hand side of the company's balance sheet, **Total Liabilities are plain vanilla** with € 26m in financial debt (€ 5m due October 2022) as well as € 6m short-term and € 21m long-term lease debt. The company's Equity stood at € 48m, equaling an equity ratio of 19%.

Growth

- **Sound top-line growth of 7% p.a. expected** (2020-23E), driven by a notable demand recovery of its key end markets such as oil & gas as well as structural growth
- **Disproportionate adj. EBITDA growth of 21% p.a.** (2020-23E) thanks to its efficiency program bearing fruit, continued profitable sales quality and positive operating leverage

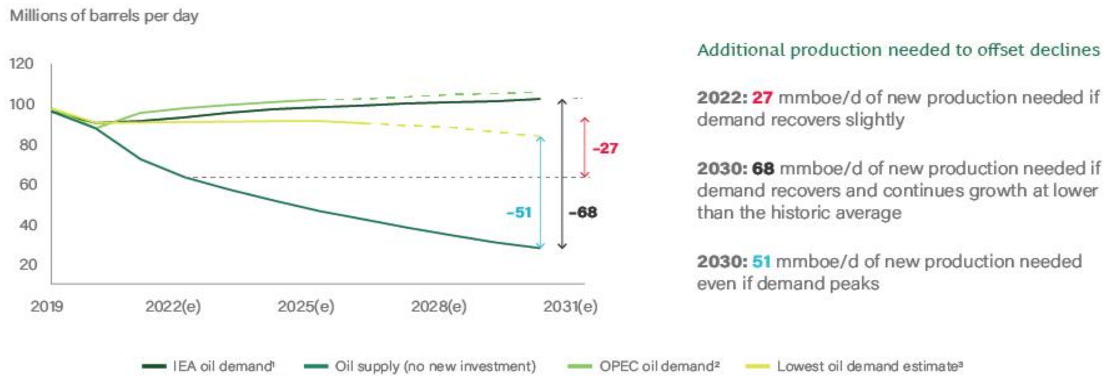
Explosion protection to remain a growth market

On average, the **global market for explosion protection is expected to grow above global GDP, i. e. between 4% and 7% annually for the next five years**, driven by a revitalization of capex spending across key end markets such as oil & gas, structural growth of chemical, pharma and food & beverage industries as well as technological innovations and rising workplace safety standards.

Key end market at an inflection point

With the **oil & gas industry** accounting for roughly >40% of R. STAHL's top-line, subdued capex spending amid low oil prices has been weighing on the company's top line. Headwinds were particularly stemming from a temporary CoV-related demand shock one year ago, which lead to a roughly 26% yoy sales decline from oil & gas customers in 2020.

Demand and supply gap with no new investments



Source: Boston Consulting Group, IEA, OPEC, BP, Hauck & Aufhäuser

The good news is that we see oil & gas demand at an inflection point with plenty of pent-up demand having build-up. Schlumberger anticipates a gradual return of demand throughout 2021. Halliburton assesses 2022 as the year of "global rebalancing of supply and demand", creating a multi-year upcycle. Considering rising depletion, investments are seen to increase by double-digits in the next few years to close the supply-demand gap (see chart below).

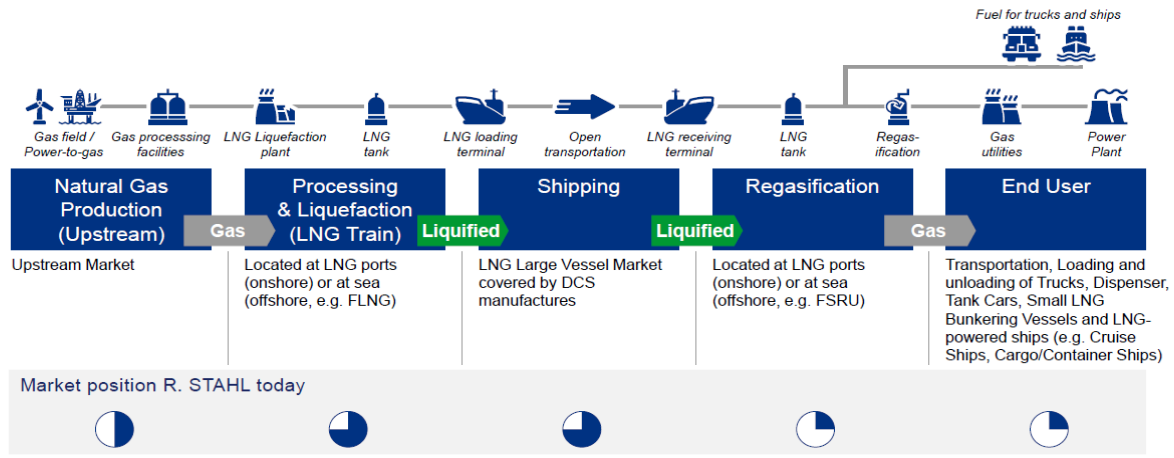
The **chemical industry** (26% of sales) also experienced a significant temporary demand shock last year. This was widely coupled with postponements of investment projects in order to preserve cash. For instance, Germany's chemical "big-shots" BASF, Lanxess and Covestro **cut their capex spending by 18% vs 2019 and 15% vs 2018**. However, until 2023E, they are expected to revitalize postponed projects: **capex should rise at a 9% CAGR (2020-23E)**.

Additional growth prospects from LNG and hydrogen

Natural gas is the most eco-friendly fossil fuel. Comparing all three fossils coal, oil and natural gas, and assuming equal combustion energy, oil emits 40% less

CO_2 than coal. Natural gas poses an even more eco-friendly energy source, emitting 60% less CO_2 than coal. Domestically used natural gas is typically transported via land-based pipelines, but its intercontinental transport in ships and trucks requires its liquefication (LNG). While LNG already accounts for 30% of the consumed energy in the Americas and 33% in Europe, Asia's LNG share stands at only 12%. In light of a narrowing gas premium over coal and rising environmental standards, a gradual increase to 20%, which would imply a doubling of the global market to 800m tonnes annually, seems likely.

R. STAHL positioning along LNG value chain



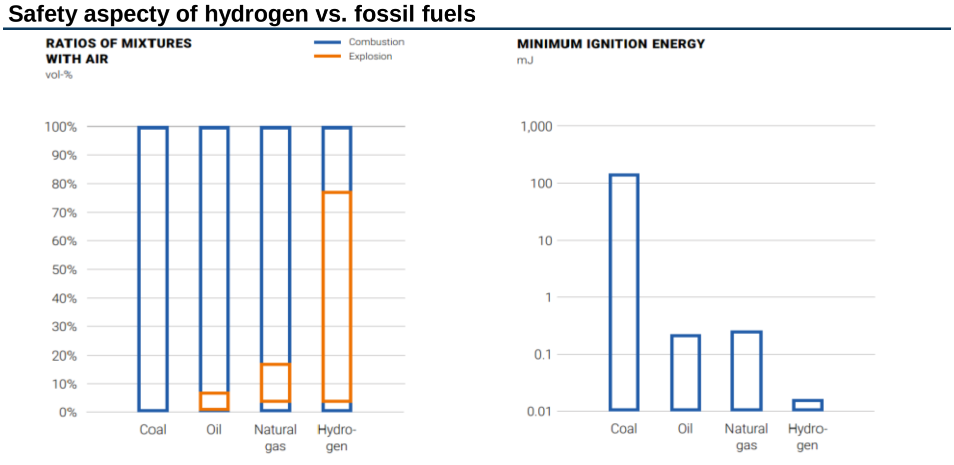
Source: EIC Research (2019), SHELL Research (2019), company data, Hauck & Aufhäuser

A doubling of the global LNG market would require substantial infrastructure investments along the value chain, which should strongly benefit companies such as R. STAHL. In fact, the company holds a ~75% share of the LNG tanker market and +60% of the processing and liquefaction market and should hence not only be well positioned to capture this additional growth but also to grow its market share in regasification and end user distribution applications.

Hydrogen has the potential to play an important role for the explosion protection industry and particularly R. STAHL in the long-run, assuming a breakthrough as source or storage solution of energy. The key reason behind it are the unique hazardous properties compared to todays fossil fuels oil, gas and coal.

While oil and gas need very specific ratios of mixtures with oxygen in order to become explosive, hydrogen forms explosive mixtures at nearly all ratios (left-hand side of graph). Further, the amount of energy needed to ignite a hydrogen-oxygen mixture is extremely low, with ~1/20 of what's needed for oil and gas (right-hand side of graph).

Safety aspecty of hydrogen vs. fossil fuels



Source: Company data, Hauck & Aufhäuser

Despite the fact that hydrogen market growth expectations from various research institutions strongly vary depending on assumed adoption rates, **growth of around 15% p.a. until 2030E seems achievable** (eH&A).

Putting it all together – implications for the top-line

All in all, we expect the gradual recovery of R. STAHL's end markets, in particular oil & gas, coupled with structurally growing demand from other industries to effectively **fuel 6.7% top-line growth p.a. till 2023E.**

(in € m)	2018	2019	2020	2021E	2022E	2023E	CAGR '20-23E
Group sales	**280.1**	**274.8**	**246.5**	**254.9**	**275.6**	**299.1**	**6.7%**
yoy		*-2%*	*-10%*	*3%*	*8%*	*9%*	
thereof Oil & Gas		**109.9**	**81.3**	**84.2**	**88.4**	**99.0**	**6.8%**
yoy			*-26%*	*3%*	*5%*	*12%*	
thereof Chemical		**61.8**	**64.1**	**66.7**	**73.3**	**79.9**	**7.6%**
yoy			*4%*	*4%*	*10%*	*9%*	
thereof Pharma		**20.6**	**22.2**	**23.1**	**24.8**	**25.6**	**4.9%**
yoy			*8%*	*4%*	*8%*	*3%*	
thereof Shipbilding		**20.6**	**19.7**	**19.7**	**21.5**	**23.4**	**5.9%**
yoy			*-4%*	*0%*	*9%*	*9%*	
thereof Food & Beverages		**13.7**	**13.6**	**13.9**	**14.5**	**15.1**	**3.7%**
yoy			*-1%*	*2%*	*4%*	*4%*	
thereof Others		**48.1**	**45.6**	**47.4**	**53.1**	**56.0**	**7.1%**
yoy			*-5%*	*4%*	*12%*	*5%*	

Company data, Hauck & Aufhäuser

A detailed look at how sales from individual end markets are expected to perform:

- **Oil & Gas is seen to grow at a 6.8% CAGR** (2020-23E), driven by the above described highly likely revitalization of investments into production capacities in order to close the otherwise widening supply demand gap. Worth highlighting is the strong growth acceleration in 2023E, which is inline with expectations of companies such as Schlumberger und Halliburton.

- **Chemical** end markets are expected to grow at roughly 8% p.a. (2020-23E) thanks to plenty of pent-up investments through CoV-related postponements. One should expect a normalization of 3-4% growth p.a. beyond 2023E.

- **Pharma to grow at a 4.9% CAGR** (2020-23E), partially driven by some project postponements due to CoV and inline with capex expectations of Johnson & Johnson.

- **Shipbuilding** with 9% growth p.a. from 2022E onwards as a result of a rising LNG share in the energy mix of Asia and supported by R. STAHL's market leading position in this field.

- **Food & Beverages to grow at a 3.7% CAGR** (2020-23E) thanks to a constant flow of replacement needs but also some investments in capacity expansions and efficiency improvements.

- **Others**, which includes a variety of industrial end markets as well as a so far small part of hydrogen, is seen to **grow at around 7% p.a.** due to similar effects compared to chemical end markets.

This is clearly a >10% EBITDA margin business

R. STAHL's adj. EBITDA is seen to disproportionately improve from € 19m in 2020 to € 33m by 2023E (21% CAGR), implying a 3.4pp margin increase to 11.1%. Key drivers for the strong adj. EBITDA growth and margins ahead of historical levels :

- **Efficiency program bearing fruit.** "R. STAHL 2020" set the stage to substantially and sustainably improve the efficiency of the company's structures and processes. With its subsequent strategy program "EXcellence 2023", R. STAHL continues to drive efficiency across all business functions, thereby constituting one of the most important drivers of the company's expected sustainable margin improvement. In detail, R. STAHL created a more centralized and leaner organisational structure through reducing the operative subsidiaries by 20%, employees by 5% and cut the product portfolio roughly by half (to now ~10,000), which effectively also helps with capacity utilization and working capital as well as reduced delivery times and a higher service quality for customers. As a result, **the break-even point** (EBITDA) **decreased from € 260m sales in 2017 to around € 228m sales by the end of 2020**.

- **Improved project selection.** Historically, R. STAHL engaged in as many tenders as possible in order to drive the top-line, which often resulted in poor margins: historical gross margins (i. e. sales minus material costs) were around 63-64% on average. Since the company has become more selective, margins have improved to around 68%, which is a sustainable level, in our view.

- **Positive operating leverage.** Given the projected re-acceleration of top-line growth from 2021E onwards, R. STAHL should strongly benefit from an improving fix cost coverage.

(in € m)	2018	2019	2020	2021E	2022E	2023E	CAGR '20-23E
Net sales	**280.1**	**274.8**	**246.5**	**254.9**	**275.6**	**299.1**	**6.7%**
yoy		-2%	-10%	3%	8%	9%	
+/- (un)finished goods	-3.1	3.5	7.4	3.8	3.8	3.8	
% of sales	-1.1%	1.3%	3.0%	1.5%	1.4%	1.3%	
Total sales	**277.0**	**278.2**	**253.9**	**258.7**	**279.4**	**302.9**	**6.1%**
yoy		0%	-9%	2%	8%	8%	
Material expenses	99.4	94.0	85.7	89.7	95.9	103.2	
% of sales	35.9%	33.8%	33.7%	34.7%	34.3%	34.1%	
Gross profit	**177.6**	**184.3**	**168.2**	**169.0**	**183.5**	**199.7**	**5.9%**
yoy		4%	-9%	0%	9%	9%	
margin	63.4%	67.1%	68.2%	66.3%	66.6%	66.8%	
Personnel expenses	119.3	122.0	115.6	117.8	123.3	128.9	**3.7%**
% of sales	42.6%	44.4%	46.9%	46.2%	44.7%	43.1%	
+/- other op. Income/expenses	-48.8	-37.0	-35.4	-36.9	-37.2	-37.5	**1.9%**
% of sales	17.4%	13.5%	14.4%	14.5%	13.5%	12.5%	
EBITDA (IFRS)	**9.5**	**25.3**	**17.2**	**14.3**	**23.0**	**33.3**	**24.7%**
yoy		167%	-32%	-17%	61%	45%	
margin	3.4%	9.2%	7.0%	5.6%	8.4%	11.1%	
Adjustments*	5.7	5.1	1.8	0.8	0.0	0.0	
Adj. EBITDA	**15.2**	**30.4**	**19.0**	**15.1**	**23.0**	**33.3**	**20.6%**
Adj. margin	5.4%	11.1%	7.7%	5.9%	8.4%	11.1%	
D&A	13.6	18.9	16.7	17.3	18.0	18.0	
% of sales	4.9%	6.9%	6.8%	6.8%	6.5%	6.0%	
EBIT (IFRS)	**-4.2**	**6.3**	**0.5**	**-3.1**	**5.0**	**15.3**	**214.1%**
yoy		-252%	-92%	-722%	-263%	206%	
margin	-1.5%	2.3%	0.2%	-1.2%	1.8%	5.1%	

*Source: Company data, Hauck & Aufhäuser *Adjustments are largely related to the company's "R. STAHL 2020" efficiency program*

Valuation

- **We value R. STAHL on adj. FCFY 2023E with a price target of € 31 per share**, reflecting the expected cyclical recovery of its most important end markets
- **Our DCF model would imply a fair value of € 34 per share**

Adj. FCFY model

The main driver of this model is the level of return available to a controlling investor, influenced by the cost of that investors' capital (opportunity costs) and the purchase price – in this case the enterprise value of the company.

Here, the adjusted FCF yield is used as a proxy for the required return and is defined as EBITDA less minority interest, taxes and investments required to maintain existing assets (maintenance capex).

Simply put, the model assumes that investors require companies to generate a minimum return on the investor's purchase price. The required after tax return equals the **model's hurdle rate of 7.5%**. Anything less suggests the stock is expensive; anything more suggests the stock is cheap.

We choose to **value R. STAHL on 2023E** to reflect the expected demand recovery of its rather cyclical end markets. Thanks to positive operating leverage from higher sales volumes, EBITDA margins above 10% should be in reach by 2023E, eH&A 11.1%. This is also supported by the company's recently implemented restructuring program.

The adjusted FCFY model implies a price target of € 31 per share.

FCF yield, year end Dec. 31	2021E	2022E	2023E
EBITDA	**14.3**	**23.0**	**33.3**
- Maintenance capex	8.5	8.7	8.9
- Minorities	0.0	0.0	0.0
- Tax expenses	1.3	0.9	3.5
= Adjusted Free Cash Flow	**4.5**	**13.4**	**20.9**
Actual Market Cap	**154.6**	**154.6**	**154.6**
+ Net debt (cash)	6.0	1.1	-10.9
+ Pension provisions	103.1	103.1	103.1
+ Off balance sheet financing	0.0	0.0	0.0
+ Adjustments prepayments	0.0	0.0	0.0
- Financial assets	-14.5	-14.5	-14.5
- Dividend payment	0.0	0.0	0.0
EV Reconciliations	*94.6*	*89.7*	*77.7*
= Actual EV'	**249.2**	**244.3**	**232.2**
Adjusted Free Cash Flow yield	**1.8%**	**5.5%**	**9.0%**
Sales	**254.9**	**275.6**	**299.1**
Actual EV/sales	1.0x	0.9x	0.8x
Hurdle rate	7.5%	7.5%	7.5%
FCF margin	1.8%	4.9%	7.0%
Fair EV/sales	0.2x	0.7x	0.9x
Fair EV	**59.5**	**179.2**	**278.8**
- EV Reconciliations	*94.6*	*89.7*	*77.7*
Fair Market Cap	**-35.1**	**89.5**	**201.1**
No. of shares (million)	6.4	6.4	6.4
Fair value per share	**-5.5**	**13.9**	**31.0**
Premium (-) / discount (+) in %	**-123%**	**-42%**	**30%**

Sensitivity analysis fair value				
Hurdle rate	5.0%	-0.8	27.8	52.9
	7.5%	-5.5	13.9	31.2
	10.0%	-7.8	6.9	20.4
	12.5%	-9.2	2.8	13.9

Source: Company data, Hauck & Aufhäuser

DCF model would point towards a fair value of € 34 per share

We model **7% sales CAGR in the short-term** (2020-23E), a **mid-term growth rate of 5.1% p.a.** (2023-27E) and a **long-term growth rate of 2.0%**.

The discount factor (WACC) of 7.5% is made up of a risk-free rate of 1.5%, a 6.0% equity risk premium and a beta of 1.0.

The **terminal EBIT margin is set at 9%**, thanks to ongoing top-line growth with the related positive operating leverage, a continued discipline in regards to project selection (minimum margin for large projects) as well as sustained benefits from its recent restructuring program.

DCF (EUR m) (except per share data and beta)	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	Terminal value
NOPAT	-3.9	3.7	11.5	18.1	22.8	23.4	24.1	24.5	23.9
Depreciation	17.3	18.0	18.0	16.2	14.9	15.3	15.8	16.2	15.1
Increase/decrease in working capital	1.0	-2.9	-3.4	-4.5	-3.2	-2.8	-2.5	-1.0	-1.0
Increase/decrease in l-term provisions & accruals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capex	-12.5	-12.8	-13.1	-13.4	-13.7	-14.1	-14.5	-14.9	-15.1
Acquisitions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital increase	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash flow	**1.9**	**6.0**	**13.0**	**16.4**	**20.7**	**21.9**	**22.9**	**24.8**	**22.9**
Present value	1.8	5.4	10.9	12.8	15.0	14.7	14.3	14.5	235.7
WACC	7.4%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%	7.5%

DCF per share derived from	
Total present value	325
thereof terminal value	72%
Net debt (net cash) at start of year	6
Financial assets	15
Provisions and off balance sheet debt	118
Equity value	216
No. of shares outstanding	6.4
Discounted cash flow per share	**34.0**
upside/(downside)	**42%**
Share price	**24.0**

DCF avg. growth and earnings assumptions	
Short term growth (2020-2023)	6.7%
Medium term growth (2024 - 2027)	5.1%
Long term growth (2028 - infinity)	2.0%
Terminal year EBIT margin	9.0%

WACC derived from	
Cost of borrowings before taxes	3.0%
Tax rate	25.0%
Cost of borrowings after taxes	8.2%
Required return on invested capital	7.5%
Risk premium	6.0%
Risk-free rate	1.5%
Beta	1.00

Sensitivity analysis DCF

		Long term growth				
		0%	1.0%	2.0%	2.5%	3.0%
WACC	9.5%	14	16	20	22	25
	8.5%	17	21	26	29	33
	7.5%	21	26	34	38	44
	6.5%	27	35	46	53	62
	5.5%	36	47	65	78	97

Sensitivity analysis DCF

		EBIT margin terminal year				
		7.0%	8.0%	9.0%	10.0%	11.0%
WACC	9.5%	15	17	20	23	25
	8.5%	19	22	26	29	32
	7.5%	25	30	34	38	42
	6.5%	35	40	46	51	57
	5.5%	49	57	65	73	81

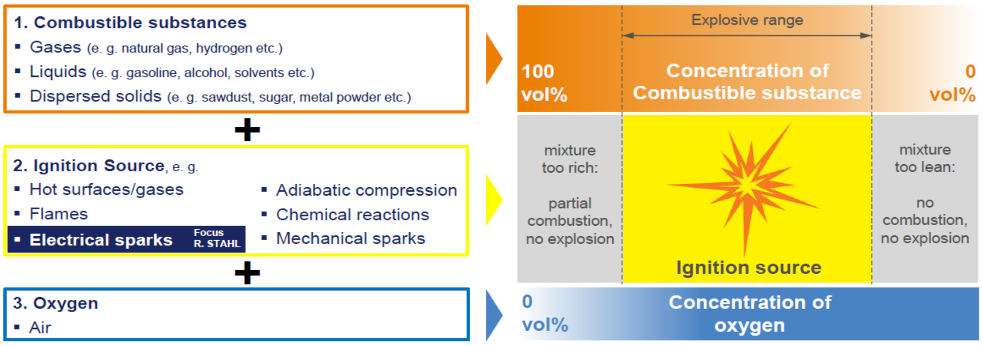
Source: Company data, Hauck & Aufhäuser

Company Background

Technical background

Whenever combustible substances such as gases (e.g. natural gas or hydrogen), liquids (e.g. gasoline or alcohol) or solids (e.g. sawdust or sugar) come in contact with the right amount of oxygen, the mixture forms a highly explosive material. At this point, the smallest ignition source such as electrical sparks (R. STAHL's focus) is enough to trigger a catastrophe.

Basic principle of explosions



Source: Company data, Hauck & Aufhäuser

Preventing such explosions can be done through either one of three ways:

- **Preventing the formation of an explosive atmosphere** is the first approach to prevent explosions. If the usage of combustible substances and critical concentrations of such substances cannot be avoided, the electrical installation can be made explosion-proof by putting it into a pressurized encapsulation flushed with an inert gas, e. g. nitrogen.

- **Preventing the ignition of an explosive atmosphere** by preventing sparks (when talking about electrical ignition source) through running a low voltage, suppressing a formation of sparks or avoiding the intrusion of explosive atmospheres (filling enclosures with solids or liquids).

- **Confining the explosion impact to a controllable and harmless level** by encapsulating the potential center of an explosion (ignition area). If done right, the potential damage is limited to the source of ignition and the enclosure around it while everything outside the enclosure remains 100% safe.

Electrical explosion protection

Conceptual approach	Solution	Technology	Position R. STAHL
1. Prevent formation of explosive atmospheres	▪ **Avoid combustible substances** (replacement)	not part of electrical explosion protection	
	▪ **Avoid critical concentration** (e. g. dilution)	not part of electrical explosion protection	
	▪ **Exclude oxygen** (e. g. flushing with nitrogen)	Pressurized encapsulation (Ex p)	✓
if impossible			
2. Prevent ignition of explosive atmospheres	▪ **Keep electrical energy below critical level**	**Intrinsical safety (Ex i)**	✓
	▪ **Suppress formation of electrical sparks**	**Increased safety (Ex e)**	✓
	▪ **Avoid intrusion of explosive atmospheres**	Fill enclosures with liquids or solids (Ex o, q, m)	✓
if impossible			
3. Confine explosion impact to a controllable and harmless level	▪ **Encapsulate electrical devices**	**Flame proof enclosures (Ex d)**	✓

Source: Company data, Hauck & Aufhäuser

Product overview

Product overview

Source: Company data, Hauck & Aufhäuser

R. STAHL's product portfolio with **more than 10,000 different products** can be clustered in four groups:

- **Electromechanical components:** The company offers a large variety of products essential for explosion-proof wiring such as cable glands and entries, adapters and connectors as well as junction and terminal/ control boxes. All products are certified for wiring systems worldwide.

  R. STAHL recently introduced its new "EXpressure" cabinets, a revolutionary capsulation technology that can safely confine an explosion around the ignition area. Compared to currently used solutions, it is notably lighter and thus cost saving where weight counts (e. g. on platforms), easier to handle/install, much more flexible in size (available also in standard industry formats) and thus more flexible in engineering customized solutions .

- **Light fittings & signalling devices:** R. STAHL is the globally leading producer of explosion-proof LED luminaires, which are produced in India as well as in Weimar, Germany. While LED luminaires account for the majority of sold lightning solutions, the company also sells conventional technologies such as neon tubes. R. STAHL also sells a variety of signalling devices, emergency lights and battery boxes.

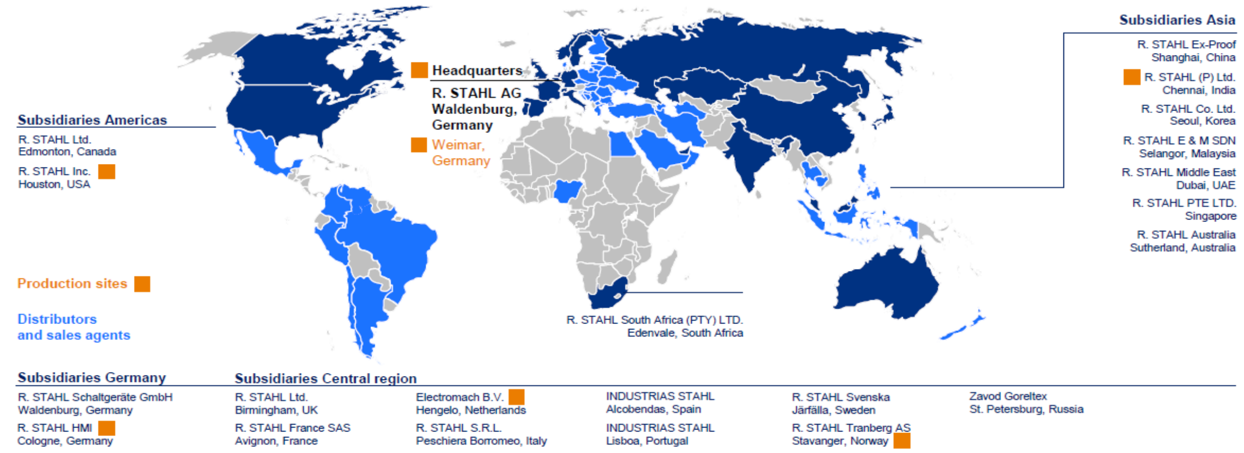
- **Network & automation products and solutions:** In light of the constantly increasing degree of production automation across all industries, the company's access points, remote I/O systems, fieldbus solutions and switches have become an important pillar of R. STAHL's product offering.

- **Human machine interfaces** refers to the company's state-of-the-art indoor and outdoor CCTV systems (wide range of compact, zoom, dome, PTZ and thermal imaging cameras) as well as displays, handheld devices and panel PCs. In addition, R. STAHL offers services around monitoring systems, especially tests in plants and video management software.

Global footprint

R. STAHL has a global footprint: major markets are EMEA with 70% of sales (Germany with ~ 25%), APAC with 20% of sales and the Americas with 10%.

Global pressence



Source: Company data, Hauck & Aufhäuser

The company has a total of seven production site: three in Germany, including the headquarters in Waldenburg, one in the Netherlands, one in Norway, one in the USA and one in India. On top of that, R. STAHL operates a globally well-spread sales network.

Company history

1876	Metalworker Rafael Stahl and his partner Gustav Weineck founded a company named "Stahl und Weineck"
1880	Set up of circular knitting machine factory with Wilhelm Stücklen
1893	Expansion of business into producing lifts, electric hoists and cranes
1926	Development and production of explosion-proof electrical equipment
1949	Market leader in the field of explosion-proof electrical components
1953	First explosion-proof hoist
1962	Introduction of explosion protected plastic encapsulations
1970	Sales of elevator business to Rheinstahl and focus on explosion protection and material handling equipment
1988	Development of very first explosion-proof remote I/O system
1989	Introduction of EXLUX, the first explosion-proof luminaries
1993	Change of legal form from GmbH & Co. to AG
1997	Initial Public Offering
1998	Acquisition of the Dutch company ELECTROMACH B.V. and the related entry into the market for operating and monitoring systems through acquisition of today's R.STAHL HMI Systems
2005	Sale of its Materials Handling Equipment division to a Finnish rival
2018	Introduction of EXpressure, a revolutionary new explosion-proof housing technology

Management

Dr. Mathias Hallmann, CEO

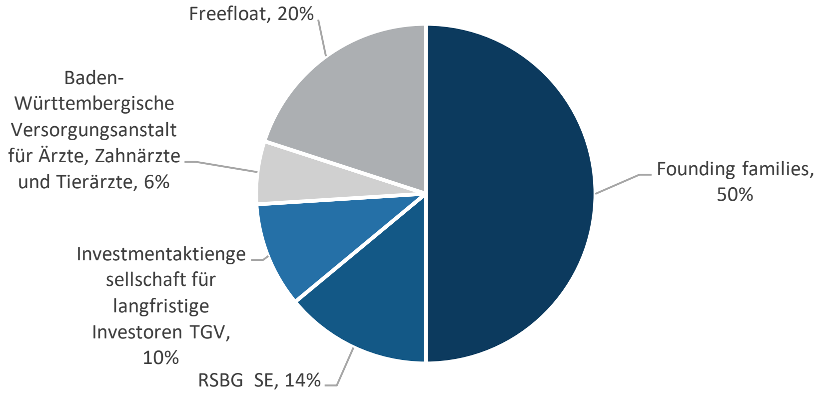
Dr. Hallmann joined R. STAHL in 2017 as CEO with more than 20 years of experience working at leading industrial and electrical companies. Prior to joining R. STAHL, he was responsible for the operational and strategic development of Lincoln Electric's business outside the Americas. He also held positions at the voestalpine Group, Moeller GmbH and McKinsey. Dr. Hallmann studied mechanical engineering at the University of Karlsruhe.

Bernardo Kral, COO (as of August 1st)

Mr. Kral joined R. STAHL in 2018 as Senior Vice President with responsibilities surrounding the firms global operations and roughly 30 years of experience. He will take over the role as COO starting August 1st. Prior to joining R. STAHL, he worked two years as CEO at K-Square Consulting and more than six years as Managing Director at Lincoln Electric in Brazil and Voestalpine in the Americas. Mr. Kral studied Mechanical Engineering, Industrial Management, Finance and Strategic Corporate Management in Brazil.

Shareholder structure

Shareholder structure



Source: Company data, Hauck & Aufhäuser

R. STAHL has 6.44m shares outstanding, with a free float amounting to roughly 20%. The **key shareholders are the two founding families** (Stahl and Zaiser), which hold 48% together. Other large shareholders include:

- **RSBG with 14%:** An investment holding associated with RAG AG, Germany's largest coal mining operation (and majority shareholder in Evonik AG)
- **Investmentaktiengesellschaft für langfristige Investoren TGV with 10%:** The (multi) family office of Bonn-based publisher Norman Rentrop
- **Baden-Württembergische Versorgungsanstalt für Ärzte, Zahnärzte und Tierärzte with 6%:** The pension insurance company for medical doctors and veterinarians based in the German state of Baden-Wuerttemberg

Key investment risks

Cyclical risk: Due to its large exposure to the oil & gas and chemical industry (combined 59% of group sales), a cyclical downturn would naturally affect R. STAHL's business.

Competitive risk: In light of the still highly fragmented market, consolidation could form competitors with a comparable size, potentially trying to gain market share through lower selling prices, which would eventually also put pressure on R. STAHL's margins.

Capital market risk: Disruptions on the capital market could come with notable share price movements, which can be unrelated to the operational performance of the company.

Financials

Profit and loss (EUR m)	2017	2018	2019	2020	2021E	2022E	2023E
Net sales	**268.5**	**280.1**	**274.8**	**246.5**	**254.9**	**275.6**	**299.1**
Sales growth	*-6.3 %*	*4.3 %*	*-1.9 %*	*-10.3 %*	*3.4 %*	*8.1 %*	*8.5 %*
Increase/decrease in finished goods and work-in-process	1.0	-3.1	3.5	7.4	3.8	3.8	3.8
Total sales	**269.5**	**277.0**	**278.2**	**253.9**	**258.7**	**279.4**	**302.9**
Other operating income	8.0	13.8	13.7	11.1	11.9	11.9	11.9
Material expenses	100.1	99.4	94.0	85.7	89.7	95.9	103.2
Personnel expenses	121.1	119.3	122.0	115.6	117.8	123.3	128.9
Other operating expenses	54.0	62.6	50.7	46.5	48.8	49.1	49.4
Total operating expenses	267.2	267.6	253.0	236.7	244.5	256.4	269.6
EBITDA	**2.3**	**9.5**	**25.3**	**17.2**	**14.3**	**23.0**	**33.3**
Depreciation	7.7	7.0	12.0	11.4	12.1	12.8	12.8
EBITA	**-5.4**	**2.4**	**13.3**	**5.7**	**2.2**	**10.2**	**20.5**
Amortisation of goodwill	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Amortisation of intangible assets	5.2	6.6	6.9	5.2	5.2	5.2	5.2
Impairment charges	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT (inc revaluation net)	**-10.7**	**-4.2**	**6.3**	**0.5**	**-3.1**	**5.0**	**15.3**
Interest income	0.2	1.2	0.1	0.1	0.2	0.2	0.2
Interest expenses	3.2	4.9	4.7	3.5	3.4	3.4	3.4
Other financial result	1.0	1.0	1.7	1.6	1.6	1.7	1.9
Financial result	-1.9	-2.8	-2.9	-1.8	-1.6	-1.5	-1.3
Recurring pretax income from continuing operations	**-12.6**	**-7.0**	**3.4**	**-1.3**	**-4.7**	**3.5**	**14.0**
Extraordinary income/loss	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Earnings before taxes	**-12.6**	**-7.0**	**3.4**	**-1.3**	**-4.7**	**3.5**	**14.0**
Taxes	8.5	0.0	2.1	2.2	1.3	0.9	3.5
Net income from continuing operations	**-21.2**	**-7.0**	**1.3**	**-3.5**	**-6.0**	**2.6**	**10.5**
Result from discontinued operations (net of tax)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net income	**-21.2**	**-7.0**	**1.3**	**-3.5**	**-6.0**	**2.6**	**10.5**
Minority interest	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Net profit (reported)	**-21.1**	**-7.1**	**1.3**	**-3.5**	**-6.0**	**2.6**	**10.5**
Average number of shares	6.4	6.4	6.4	6.4	6.4	6.4	6.4
EPS reported	**-3.28**	**-1.10**	**0.21**	**-0.54**	**-0.93**	**0.41**	**1.63**

Profit and loss (common size)	2017	2018	2019	2020	2021E	2022E	2023E
Net sales	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**
Increase/decrease in finished goods and work-in-process	0.4 %	neg.	1.3 %	3.0 %	1.5 %	1.4 %	1.3 %
Total sales	**100.4 %**	**98.9 %**	**101.3 %**	**103.0 %**	**101.5 %**	**101.4 %**	**101.3 %**
Other operating income	3.0 %	4.9 %	5.0 %	4.5 %	4.7 %	4.3 %	4.0 %
Material expenses	37.3 %	35.5 %	34.2 %	34.8 %	35.2 %	34.8 %	34.5 %
Personnel expenses	45.1 %	42.6 %	44.4 %	46.9 %	46.2 %	44.7 %	43.1 %
Other operating expenses	20.1 %	22.3 %	18.4 %	18.9 %	19.1 %	17.8 %	16.5 %
Total operating expenses	99.5 %	95.5 %	92.1 %	96.0 %	95.9 %	93.0 %	90.1 %
EBITDA	**0.9 %**	**3.4 %**	**9.2 %**	**7.0 %**	**5.6 %**	**8.4 %**	**11.1 %**
Depreciation	2.9 %	2.5 %	4.4 %	4.6 %	4.8 %	4.6 %	4.3 %
EBITA	**neg.**	**0.9 %**	**4.8 %**	**2.3 %**	**0.8 %**	**3.7 %**	**6.9 %**
Amortisation of goodwill	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Amortisation of intangible assets	2.0 %	2.4 %	2.5 %	2.1 %	2.1 %	1.9 %	1.7 %
Impairment charges	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
EBIT (inc revaluation net)	**neg.**	**neg.**	**2.3 %**	**0.2 %**	**neg.**	**1.8 %**	**5.1 %**
Interest income	0.1 %	0.4 %	0.0 %	0.1 %	0.1 %	0.1 %	0.1 %
Interest expenses	1.2 %	1.8 %	1.7 %	1.4 %	1.3 %	1.2 %	1.1 %
Other financial result	0.4 %	0.3 %	0.6 %	0.6 %	0.6 %	0.6 %	0.6 %
Financial result	neg.	neg.	neg.	neg.	neg.	neg.	neg.
Recurring pretax income from continuing operations	**neg.**	**neg.**	**1.2 %**	**neg.**	**neg.**	**1.3 %**	**4.7 %**
Extraordinary income/loss	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Earnings before taxes	**neg.**	**neg.**	**1.2 %**	**neg.**	**neg.**	**1.3 %**	**4.7 %**
Tax rate	-67.6 %	-0.3 %	60.6 %	-172.4 %	-28.0 %	25.0 %	25.0 %
Net income from continuing operations	**neg.**	**neg.**	**0.5 %**	**neg.**	**neg.**	**1.0 %**	**3.5 %**
Income from discontinued operations (net of tax)	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Net income	**neg.**	**neg.**	**0.5 %**	**neg.**	**neg.**	**1.0 %**	**3.5 %**
Minority interest	neg.	0.0 %	0.0 %	neg.	0.0 %	0.0 %	0.0 %
Net profit (reported)	**neg.**	**neg.**	**0.5 %**	**neg.**	**neg.**	**1.0 %**	**3.5 %**

Source: Company data, Hauck & Aufhäuser

Balance sheet (EUR m)	2017	2018	2019	2020	2021E	2022E	2023E
Intangible assets	**41.8**	**40.9**	**41.4**	**43.3**	**45.0**	**47.0**	**49.0**
Property, plant and equipment	57.2	54.5	86.0	80.3	73.7	66.6	59.6
Financial assets	15.2	13.4	13.8	14.5	14.5	14.5	14.5
FIXED ASSETS	**114.2**	**108.9**	**141.2**	**138.2**	**133.3**	**128.1**	**123.2**
Inventories	45.5	35.0	34.2	36.9	35.7	37.2	38.9
Accounts receivable	50.0	47.6	42.5	36.7	38.0	41.1	44.6
Other current assets	11.9	10.2	14.2	11.2	11.2	11.2	11.2
Liquid assets	16.1	14.6	15.0	19.9	19.7	24.6	36.6
Deferred taxes	11.9	11.6	12.4	13.4	13.4	13.4	13.4
Deferred charges and prepaid expenses	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CURRENT ASSETS	135.4	119.1	118.2	118.1	117.9	127.4	144.6
TOTAL ASSETS	**249.6**	**227.9**	**259.4**	**256.2**	**251.2**	**255.5**	**267.8**
SHAREHOLDERS EQUITY	249.6	227.9	58.0	47.9	46.4	53.5	68.5
MINORITY INTEREST	0.1	0.1	0.4	0.2	0.2	0.2	0.2
Long-term debt	13.1	11.5	10.2	8.8	8.8	8.8	8.8
Provisions for pensions and similar obligations	93.7	91.2	98.7	103.1	103.1	103.1	103.1
Other provisions	8.9	13.1	11.2	14.5	14.5	14.5	14.5
Non-current liabilities	**115.7**	**115.8**	**120.1**	**126.4**	**126.4**	**126.4**	**126.4**
short-term liabilities to banks	21.1	8.7	9.0	16.9	16.9	16.9	16.9
Accounts payable	18.2	13.5	15.1	13.8	14.3	15.4	16.8
Advance payments received on orders	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other liabilities (incl. from lease and rental contracts)	-158.3	-141.2	54.1	48.3	44.3	40.3	36.3
Deferred taxes	3.2	3.1	2.7	2.7	2.7	2.7	2.7
Deferred income	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Current liabilities	**-115.8**	**-115.9**	**80.8**	**81.7**	**78.2**	**75.3**	**72.7**
TOTAL LIABILITIES AND SHAREHOLDERS EQUITY	**249.6**	**227.9**	**259.4**	**256.2**	**251.2**	**255.5**	**267.8**

Balance sheet (common size)	2017	2018	2019	2020	2021E	2022E	2023E
Intangible assets	**16.7 %**	**17.9 %**	**16.0 %**	**16.9 %**	**17.9 %**	**18.4 %**	**18.3 %**
Property, plant and equipment	22.9 %	23.9 %	33.1 %	31.4 %	29.4 %	26.1 %	22.2 %
Financial assets	6.1 %	5.9 %	5.3 %	5.7 %	5.8 %	5.7 %	5.4 %
FIXED ASSETS	**45.8 %**	**47.8 %**	**54.4 %**	**53.9 %**	**53.1 %**	**50.1 %**	**46.0 %**
Inventories	18.2 %	15.4 %	13.2 %	14.4 %	14.2 %	14.6 %	14.5 %
Accounts receivable	20.0 %	20.9 %	16.4 %	14.3 %	15.1 %	16.1 %	16.6 %
Other current assets	4.8 %	4.5 %	5.5 %	4.4 %	4.5 %	4.4 %	4.2 %
Liquid assets	6.4 %	6.4 %	5.8 %	7.7 %	7.8 %	9.6 %	13.7 %
Deferred taxes	4.8 %	5.1 %	4.8 %	5.2 %	5.3 %	5.2 %	5.0 %
Deferred charges and prepaid expenses	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CURRENT ASSETS	54.2 %	52.2 %	45.6 %	46.1 %	46.9 %	49.9 %	54.0 %
TOTAL ASSETS	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**
SHAREHOLDERS EQUITY	100.0 %	100.0 %	22.4 %	18.7 %	18.5 %	21.0 %	25.6 %
MINORITY INTEREST	0.0 %	0.1 %	0.2 %	0.1 %	0.1 %	0.1 %	0.1 %
Long-term debt	5.2 %	5.0 %	3.9 %	3.4 %	3.5 %	3.4 %	3.3 %
Provisions for pensions and similar obligations	37.6 %	40.0 %	38.1 %	40.3 %	41.1 %	40.4 %	38.5 %
Other provisions	3.6 %	5.8 %	4.3 %	5.6 %	5.8 %	5.7 %	5.4 %
Non-current liabilities	**46.4 %**	**50.8 %**	**46.3 %**	**49.3 %**	**50.3 %**	**49.5 %**	**47.2 %**
short-term liabilities to banks	8.4 %	3.8 %	3.5 %	6.6 %	6.7 %	6.6 %	6.3 %
Accounts payable	7.3 %	5.9 %	5.8 %	5.4 %	5.7 %	6.0 %	6.3 %
Advance payments received on orders	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Other liabilities (incl. from lease and rental contracts)	neg.	neg.	20.9 %	18.8 %	17.6 %	15.8 %	13.5 %
Deferred taxes	1.3 %	1.4 %	1.0 %	1.1 %	1.1 %	1.1 %	1.0 %
Deferred income	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Current liabilities	**-46.4 %**	**-50.9 %**	**31.2 %**	**31.9 %**	**31.1 %**	**29.5 %**	**27.1 %**
TOTAL LIABILITIES AND SHAREHOLDERS EQUITY	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**	**100.0 %**

Source: Company data, Hauck & Aufhäuser

Cash flow statement (EUR m)	2017	2018	2019	2020	2021E	2022E	2023E
Net profit/loss	-21.2	-7.0	1.3	-3.5	-6.0	2.6	10.5
Depreciation of fixed assets (incl. leases)	7.7	7.0	12.0	11.4	12.1	12.8	12.8
Amortisation of goodwill	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Amortisation of intangible assets	5.2	6.6	6.9	5.2	5.2	5.2	5.2
Others	7.5	3.6	-8.3	3.0	0.0	0.0	0.0
Cash flow from operations before changes in w/c	-0.7	10.2	12.0	16.1	11.3	20.7	28.5
Increase/decrease in inventory	5.4	10.5	0.9	-2.8	1.2	-1.5	-1.7
Increase/decrease in accounts receivable	10.2	2.3	5.1	5.8	-1.3	-3.1	-3.5
Increase/decrease in accounts payable	4.8	-4.7	1.6	-1.3	0.5	1.2	1.3
Increase/decrease in other working capital positions	0.0	0.0	0.0	0.0	0.5	0.5	0.5
Increase/decrease in working capital	20.4	8.0	7.6	1.7	1.0	-2.9	-3.4
Cash flow from operating activities	**19.7**	**18.2**	**19.6**	**17.9**	**12.3**	**17.7**	**25.2**
CAPEX	10.4	10.4	11.3	12.7	12.5	12.8	13.1
Payments for acquisitions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial investments	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Income from asset disposals	-1.1	4.8	0.2	0.5	0.0	0.0	0.0
Cash flow from investing activities	**-11.5**	**-5.7**	**-11.1**	**-12.2**	**-12.5**	**-12.8**	**-13.1**
Cash flow before financing	8.2	12.6	8.5	5.7	-0.2	4.9	12.1
Increase/decrease in debt position	-3.8	-14.0	-8.3	-0.1	0.0	0.0	0.0
Purchase of own shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital measures	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dividends paid	4.0	0.0	0.0	0.0	0.0	0.0	0.0
Others	0.0	0.0	0.0	-0.2	0.0	0.0	0.0
Effects of exchange rate changes on cash	-0.5	0.0	0.2	-0.4	0.0	0.0	0.0
Cash flow from financing activities	**-7.8**	**-14.0**	**-8.3**	**-0.3**	**0.0**	**0.0**	**0.0**
Increase/decrease in liquid assets	-0.1	-1.5	0.3	4.9	-0.2	4.9	12.1
Liquid assets at end of period	**16.1**	**14.6**	**15.0**	**19.9**	**19.7**	**24.6**	**36.6**

Source: Company data, Hauck & Aufhäuser

Regional split (EUR m)	2017	2018	2019	2020	2021E	2022E	2023E
Domestic	60.9	70.3	62.5	62.6	64.7	70.0	76.0
yoy change	-0.7 %	15.4 %	-11.1 %	0.2 %	3.4 %	8.1 %	8.5 %
Rest of Europe	120.7	116.1	120.9	111.5	115.3	124.7	135.3
yoy change	-8.5 %	-3.8 %	4.1 %	-7.8 %	3.4 %	8.1 %	8.5 %
NAFTA	29.0	31.2	34.5	23.8	24.6	26.6	28.9
yoy change	-19.0 %	7.6 %	10.6 %	-31.0 %	3.4 %	8.1 %	8.5 %
Asia Pacific	57.9	62.5	56.8	48.6	50.3	54.3	59.0
yoy change	0.7 %	7.9 %	-9.1 %	-14.5 %	3.4 %	8.1 %	8.5 %
Rest of world	0.0	0.0	0.0	0.0	0.0	0.0	0.0
yoy change	neg.	neg.	214.3 %	neg.	neg.	neg.	neg.
TTL	**268.5**	**280.1**	**274.8**	**246.5**	**254.9**	**275.6**	**299.1**
yoy change	-6.3 %	4.3 %	-1.9 %	-10.3 %	3.4 %	8.1 %	8.5 %

Source: Company data, Hauck & Aufhäuser

Key ratios (EUR m)	2017	2018	2019	2020	2021E	2022E	2023E
P&L growth analysis							
Sales growth	-6.3 %	4.3 %	-1.9 %	-10.3 %	3.4 %	8.1 %	8.5 %
EBITDA growth	-89.7 %	314.0 %	167.3 %	-32.0 %	-16.9 %	61.3 %	44.7 %
EBIT growth	-221.8 %	-61.1 %	-252.4 %	-92.2 %	-721.5 %	-262.8 %	206.2 %
EPS growth	-611.0 %	-66.6 %	-119.0 %	-361.5 %	71.7 %	-143.7 %	300.0 %
Efficiency							
Total operating costs / sales	99.5 %	95.5 %	92.1 %	96.0 %	95.9 %	93.0 %	90.1 %
Sales per employee	151.2	162.2	163.6	146.8	146.5	152.9	163.3
EBITDA per employee	1.3	5.5	15.0	10.2	8.2	12.8	18.2
Balance sheet analysis							
Avg. working capital / sales	32.6 %	26.1 %	23.8 %	24.6 %	23.4 %	22.2 %	21.7 %
Inventory turnover (sales/inventory)	5.9	8.0	8.0	6.7	7.1	7.4	7.7
Trade debtors in days of sales	67.9	62.1	56.4	54.4	54.4	54.4	54.4
A/P turnover [(A/P*365)/sales]	30.0	22.5	25.5	25.0	25.1	25.7	26.3
Cash conversion cycle (days)	167.4	141.3	130.6	152.9	141.5	137.2	132.7
Cash flow analysis							
Free cash flow	9.3	7.8	8.3	5.1	-0.2	4.9	12.1
Free cash flow/sales	3.5 %	2.8 %	3.0 %	2.1 %	-0.1 %	1.8 %	4.0 %
FCF / net profit	neg.	neg.	622.6 %	neg.	neg.	186.8 %	114.8 %
Capex / depn	80.4 %	76.6 %	59.6 %	76.3 %	72.1 %	71.0 %	72.7 %
Capex / maintenance capex	42.3 %	58.8 %	64.9 %	54.6 %	64.7 %	64.9 %	65.1 %
Capex / sales	3.9 %	3.7 %	4.1 %	5.2 %	4.9 %	4.6 %	4.4 %
Security							
Net debt	18.1	5.5	4.2	5.8	6.0	1.1	-10.9
Net Debt/EBITDA	7.9	0.6	0.2	0.3	0.4	0.0	0.0
Net debt / equity	0.1	0.0	0.1	0.1	0.1	0.0	neg.
Interest cover	0.0	0.0	1.3	0.1	0.0	1.5	4.5
Dividend payout ratio	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Asset utilisation							
Capital employed turnover	0.7	0.8	1.5	1.3	1.3	1.4	1.4
Operating assets turnover	2.0	2.3	1.9	1.8	1.9	2.1	2.4
Plant turnover	4.7	5.1	3.2	3.1	3.5	4.1	5.0
Inventory turnover (sales/inventory)	5.9	8.0	8.0	6.7	7.1	7.4	7.7
Returns							
ROCE	-2.6 %	-1.1 %	2.3 %	0.3 %	-1.6 %	2.6 %	7.9 %
ROE	-8.5 %	-3.1 %	2.3 %	-7.3 %	-13.0 %	4.9 %	15.3 %
Other							
Interest paid / avg. debt	8.8 %	18.1 %	23.9 %	15.5 %	13.4 %	13.4 %	13.4 %
No. employees (average)	1776	1727	1680	1680	1740	1802	1832
Number of shares	6.4	6.4	6.4	6.4	6.4	6.4	6.4
DPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EPS reported	-3.28	-1.10	0.21	-0.54	-0.93	0.41	1.63
Valuation ratios							
P/BV	0.6	0.7	2.7	3.2	3.3	2.9	2.3
EV/sales	0.9	0.8	0.9	1.0	1.0	0.9	0.8
EV/EBITDA	108.2	25.2	9.6	14.5	17.5	10.6	7.0
EV/EBITA	-45.4	97.4	18.4	43.4	115.3	23.9	11.3
EV/EBIT	-23.1	-57.1	38.4	504.1	-81.2	48.9	15.2
EV/FCF	26.5	30.5	29.2	48.5	-1238.0	49.8	19.3
Adjusted FCF yield	-5.7 %	0.7 %	6.0 %	2.2 %	1.8 %	5.5 %	9.0 %
Dividend yield	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %

Source: Company data, Hauck & Aufhäuser

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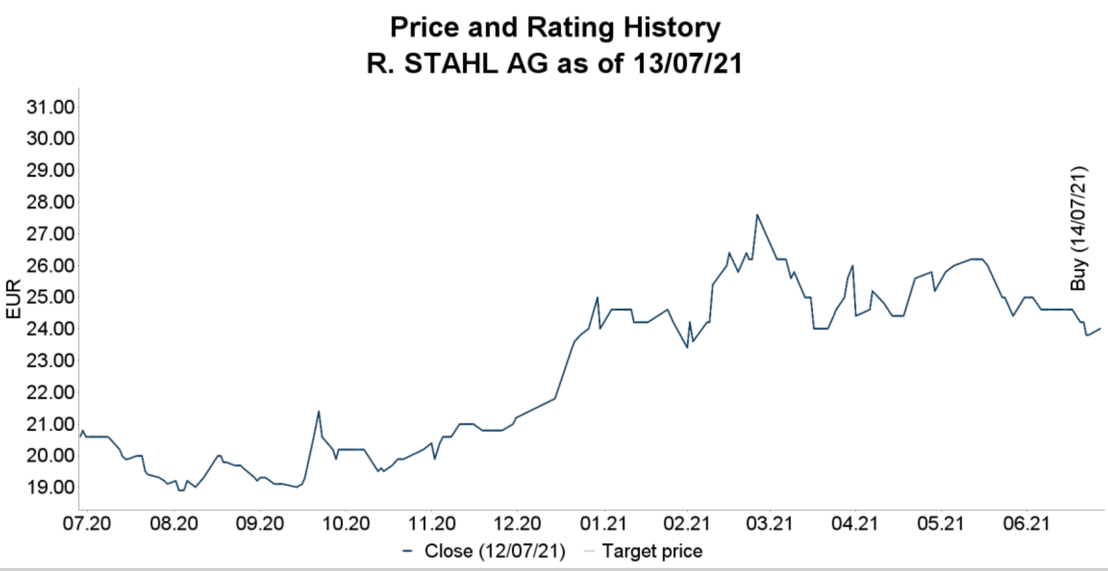
Company	Disclosure
R. STAHL AG	2, 6, 8

Historical target price and rating changes for R. STAHL AG in the last 12 months



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14-July-21

Company	Date	Analyst	Rating	Target price	Close

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