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Final quarter improves stainless steel statistic: Nickel market comes surprisingly under pressure

New Material Development

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We have started on the environmental tack in these editorials, and so in view of recent developments in the steel sector, we might as well continue for a while, using perhaps the benefits, or not, of a long memory. As always, the views expressed here are exclusively the personal views of the Editor.

Having seen, many years ago, what was one of the first converters, located, but easily missed, at the side of the road in Sweden, and the Bedlam furnace at Ironbridge in the UK, one is aware of how things have progressed. Striving towards faster, more efficient, and cheaper ways of producing iron and steel has long been a preoccupation of mankind. The Bedlam furnace was one of the first blast furnaces designed for burning coke (as opposed to charcoal, for example), and the small converter at the side of the road in Sweden marked the start of a new era in

Things are not always as simple as they seem. Are we going green?

steelmaking, the development of the BOF, and the ultimate demise of the much slower open hearth furnace. Essentially, the basic technology has not changed fundamentally since that time.

Today, environmental concerns have to be added to the list of factors preoccupying steelmakers, and so it is perhaps not surprising, in view of Liberty Steel's focus on what is variously called green steel, scrapbased steelmaking, steel based on recycled material, and the use of electricity rather than coal, that the current financial difficulties being faced by the company are causing some concern. It is worth noting, however, that the trend towards the melting of scrap in an electric arc furnace started way back with the Bresciani mini-mills in Italy and is now extremely well established throughout the world, and not least, of course, when it comes to the production of stainless steel.

Another interesting topic which has hit the headlines in the UK is the debate over whether it is acceptable environmentally to open up a new coal mine in the country when we are apparently trying to move away from "dirty" coal. The question should really be perhaps, is it more acceptable to open up a coal mine so that coking coal can be sourced domestically, or is it better to continue to be reliant on coking coal imports to supply the country's needs?

Or, perhaps, one should be asking whether one needs coking coal at all? It is obvious, as steel production and consumption increase, that some virgin metal will be required. Scrap alone cannot meet the whole world's requirements for steel. But does this necessarily mean that the blast furnace (and therefore coking coal)/converter route is the only alternative.

DRI has been around for many years already and provides a route into steelmaking for those countries that do not have the necessary coking coal resources. But there are new developments on the horizon. This takes us back to Sweden again - and namely to the H2 Green Steel industrial initiative. The initiative, backed by EIT InnoEnergy, will build the world's first large-scale fossil-free steel plant in Boden-Luleå, north Sweden, using green hydrogen as the iron ore reductant. The location offers favourable conditions for fossil-free steel production with ready access to cheap energy from renewable energy sources, high-quality iron ore, a large seaport at Luleå, and a cluster of world-leading expertise in metallurgy and steel production.

Large-scale production will start as early as 2024, and the annual throughput of 5m tonnes of steel is planned to be reached by 2030. The initiative will mobilize Euro2.5 billion of investment and create 10,000 direct and indirect jobs.

EIT InnoEnergy state: "Green hydrogen is a high potential enabler for transforming Europe's energy, industrial and transport sectors, and a means for decarbonising energy intensive industries like steel. Steel is responsible for eight percent of global carbon dioxide emissions annually - making it one of the biggest carbon emitters. As a proven low emissions heat and power source, green hydrogen is well-positioned to become a central piece of the EU's climate neutral ambitions."

Green hydrogen for the production of virgin metal, and green energy for electric arc furnace melting, would seem to be a good way forward for the green steel industry of the future.

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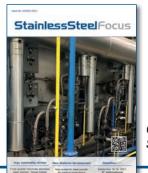
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Cautious signs of improvement during Q4 2020

Swiss Steel: challenging 2020 market negatively impacted sales and profitability

Swiss Steel Group has reported that an overall decline in sales volume in 2020 due to COVID-19 from 1,830,000 to 1,535,000 tonnes was mitigated in part by the sales volume of 445,000 tonnes in Q4 2020, up by 14.7% compared to Q4 2019. Revenue for the full-year 2020 fell by 23.2% year-on-year to Euro2,288.4m. Q4 2020 revenue at Euro604.5m was around 2.3% short of Q4 2019.

wiss Steel Group is anticipating continuing uncertainties due to COVID-19 in the first half of the year, but is cautiously optimistic of moderate normalizations across selected end-markets in the second half of 2021, depending on the further development of the COVID-19 crisis.

CEO Clemens Iller commented: "After a very difficult year due to COVID-19, sales cautiously started to improve after the summer break. This trend continued in the fourth quarter, generating improved sales and order volumes driven primarily by the automotive industry, with a slight recovery in mechanical and plant engineering. However, demand in the energy segment, especially with oil and gas, remains sluggish. Against this background, production was appropriately scaled up. On the price side we still see challenges, specifically for quality and engineering steel.

"In parallel, we continued to work towards achieving the targets of the transformation program 2020. The conclusion of the collective restructuring tariff agreement in Germany was a major milestone. We also pushed ahead with our planned rightsizing and cost saving measures in France, specifically at Ascometal. Furthermore we achieved the repositioning of our sales and service organization.

"Our focus in 2021 continues to be on implementing the transformation program, improving profitability and liquidity. In this context the completion of the capital increase approved by shareholders in December 2020 and expected to be completed later this month will form an important milestone, allowing us to benefit from greater resilience and significantly improved financing conditions."

Business performance in 2020

Swiss Steel Group reported a 16.1% decline in sales volumes for 2020 to 1,535,000 tonnes from 1,830,000 tonnes in 2019. The decline in revenue to Euro2,288.4m was higher in percentage terms, at 23.2%. Adjusted EBITDA came to Euro -68.9m, versus Euro51.2m in the previous year. Net debt amounted to Euro639.9m, significantly lower than Euro798.7m recorded at the end of 2019. Following a challenging year 2019, the first signs of improvement in demand emerged at the start of 2020. This recovery was dramatically interrupted by the COVID-19 crisis. The lockdown measures introduced in various countries and regions led to a global recession. The massive drop in demand left its mark in terms of both volumes and prices. Demand was dramatically affected by the almost complete shutdown of nearly all business activities at major European automobile manufacturers as well as their suppliers. Curbing production, short-time work programs and increasing cost variability could only partially offset the drop in sales. Even though demand has shown cautious signs of improvement towards the end of the year, Swiss Steel Group incurred significant losses with a negative net result in 2020.

Taking the whole of 2020 into account, the decline in demand caused by the pandemic could not be offset. At 1,535,000 tonnes, 16.1% less steel was sold than in the previous year (2019: 1,830,000 tonnes). In the full-year 2020, the average sales price per tonne of Euro1,490.8 was 8.5% below that of the previous year (2019: Euro1,628.9 per tonne). At the start of the COVID-19 crisis, the prices of commodities which shape steel price trends fell sharprevenue for the full-year 2020 fell by 23.2% year-on-year to Euro 2,288.4m. The fall in revenue is evidenced in all product categories, though the decline for quality

Frank Koch to become new CEO as of July 1, 2021

rank Koch will become chief executive officer of Swiss Steel Group on July 1, 2021. The board of directors appointed Koch as CEO in December 2020 effective no later than January 1, 2022 and has now reached an agreement with his previous employer for an earlier start date. The current CEO Clemens Iller has decided to step down on March 31, 2021, as originally planned.

Koch (49) successfully led and restructured the long-established German steel producer GMH Group (Georgsmarienhütte) as CEO in 2017 until the end of December 2020. Since 2008, he has been responsible for various functions within the Group. He began his career as CSO and Head of Logistics for the largest company in the GMH Group, the steel mill in Georgsmarienhütte. In 2015, he became COO of the entire GMH Group and thus joined the executive board as managing director. Koch began his career in 1991 with an apprenticeship in industrial general administration in the steel division of ThyssenKrupp. He then held various management positions in the ThyssenKrupp Group, including at Deutsche Edelstahlwerke, now part of the Swiss Steel Group, before taking on responsibility for strategy and sales at leading Italian steel producer Danieli from 2003 to 2005. In 2005 he returned to Deutsche Edelstahlwerke, where he was responsible for sales and strategy until the beginning of 2008.

Heinrich Christen, chairman of the board of directors, stated: "Frank Koch has everything it takes to lead Swiss Steel Group to success as CEO, even in times of continuing major challenges. With an impressive career from basic training to CEO of a complex industrial group and positions at several leading steel companies, Frank Koch has outstanding strategic and operational skills and experience. He has successfully implemented comprehensive turnaround and restructuring programs and in each case achieved significant improvements in the operating and financial performance of the companies he led."

Dr. Markus Boening, CFO, will hold the office of CEO until Koch joins the company.

ly. While commodity prices continued to recover over the year, base prices for the company's steel products remained low due to high price pressure.

On the back of weak sales figures,

& engineering steel was the highest at 28.1%. This product group was impacted particularly badly by the downturn in the automotive industry and the drop in demand from mechanical and plant engineering in the first and second quarter. Nearly all regions of the global market posted a decline in revenue.

For 2020 as a whole, adjusted EBITDA totalled Euro -68.9m, a significant drop versus the previous year (2019: Euro51.2m). Onetime effects amounted to Euro 30.1m and among other things are attributable to consultancy services in connection with setting-up efficiency improvement programs, restructuring measures and COVID-19 protection measures. EBITDA came to Euro -99.0m and was therefore lower than the previous year (2019: Euro - 12.5m).

In 2020, the financial result came in slightly improved at Euro -48.9m (2019: Euro -57.5m). Due to the capital increase in the first quarter of 2020 net debt was reduced, which in turn resulted in lower borrowing costs. State-guaranteed bank loans with an interest rate below the market rate also meant that some liabilities could be financed at more favourable conditions.

For 2020 as a whole, as a result of the poor operating results caused by COVID-19, the Swiss Steel Group posted a negative result of Euro -310.2m. However, this figure is up compared to the previous year (2019: Euro -521.0m), which can be attributed to the significantly higher impairments in the previous year.

Business performance in the fourth quarter of 2020 At 445,000 tonnes, 14.7% more

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steel was sold in the fourth guarter of 2020 than in the same quarter of the previous year (Q4 2019: 388,000). This was attributable to an increase of 20.8% in sales volumes of quality & engineering steel in comparison to the prior year quarter. In particular, the moderate recovery in demand from the automotive industry is reflected in this product group. The effect was stronger due to the automotive crisis experienced in the same quarter of the previous year, which had negatively impacted sales volumes due to amplified inventory reductions in the supply chain.

In contrast, sales volumes in the two product groups stainless steel and tool steel, decreased compared to the same quarter of the previous year. Despite the moderate signs of recovery in the most important segments in Q4 2020 and a stabilizing oil price that resulted in positive trends in rotary rig counts, overall demand in the fourth quarter in 2020 remained low.

The average sales price per tonne of steel was Euro1,358.4 in the fourth guarter of 2020 and therefore fell short of the average price achieved in the same guarter of the previous year (Q4 2019: Euro1,595.4 per tonne). Although commodity prices in the fourth quarter overall rose again, sales prices could not be raised. The price drop can be attributed firstly to ongoing high price pressure and secondly to the changed product mix, where quality & engineering steel now represents a larger share but has a lower average sales price.

Revenue in the fourth guarter fell by 2.3% compared with the same quarter in the previous year to Euro604.5m as a result of lower prices. While revenue in the quality & engineering steel product group rose by 7.3%, stainless steel revenue fell by 6.5% and tool steel revenue by 18.9%. By region. revenue in Europe increased by 1.3% over the same quarter in the previous year, reflecting a slight recovery in the automotive industry. In North America, where the company mainly serves customers in the oil and gas industry, further declines in revenue were posted.

Changes to the cost structure to accommodate the fall in demand and the further progress made in the transformation program resulted in an adjusted EBITDA in the fourth quarter of 2020 of Euro 4.1m, which was higher than in the prior-year quarter (Q4 2019: Euro 1.4m). One-time effects amounted to Euro12.9m and included restructuring expenses of Euro7.9m for the business unit Ascometal and the costs incurred by changing the company name to Swiss Steel Group. Including these onetime effects, EBITDA arrived at Euro -8.9m (Q4 2019: Euro -15.1m).

At Euro -14.2m, the financial result in the fourth quarter slightly improved when compared to the same quarter in the previous year (Q4 2019: Euro -19.4m). Earnings before taxes (EBT) for the fourth quarter were Euro -43.0m (Q4 2019: Euro -72.2m). A negative group result of Euro -42.4m was ultimately recorded in the fourth quarter (Q4 2019: Euro -75.9m).

Outlook for fiscal year 2021

For 2021, and subject to ongoing developments of the COVID-19 pandemic, market observers anticipate that the global economy and end markets will show initial signs of recovery, but not return immediately to the levels attained before the pandemic. On the one hand, this moderately positive outlook for 2021 is based on the start of the COVID-19 vaccination program at the beginning of the year and prospects for returning to normality in the next few months. Yet on the other hand, the spread of mutations of the original virus and further strict lockdown measures are unsettling consumers and companies, creating a high level of uncertainty. The company is, therefore, it says, at the moment not able to fully gauge the probability and economic consequences of a potential upcoming further wave of infections and still faces great uncertainty.

Swiss Steel believes that the way in which the COVID-19 pandemic progresses and the success of the associated governmental support programs will dictate how markets actually perform. These factors can change drastically and at very short notice. Expectations are therefore highly uncertain.

Dave's the Go2 man for Seychell

Bicester-based Seychell Engineering & Fabrication Limited (Seychell) has appointed a new operations manager, as the firm begins to roll out a major investment in training and equipment following its acquisition by Go2 Engineering Group in late 2020.

ith a 20 year career in the industry and a background in motorsport engineering, Dave Skidmore will work closely with Go2 Engineering's group commercial director Gareth Barnard and group managing director Peter Dodd.

In early February, Dodd announced that Northampton-based Go2 Engineering had acquired the Peterborough-based stainless steel engineering specialist 316 Engineering, the 8th acquisition in recent years by the group.

Like 316, Seychell's offering similarly dovetails with those of the other businesses in the group, manufacturing a wide variety of high quality products for industries including aerospace, automotive, medical, scientific and motor sport since 1991.

With 23 employees and further recruits likely this year, Skidmore will now focus on the training and development of the team and the integration of over £0.5m of new machinery.

That structured investment in both people and plant is the key to success for the business, as Skidmore explains: "This is a very exciting time for the business. We became part of the Go2 Engineering family in late 2020 and ever since the focus has been on investing in our people, both in terms of their own specific skill acquisition of Seychell, and added: "As Dave said, this really is an exciting time for the business and



sets and the equipment that we are bringing to the facility.

"It is a huge investment but we pride ourselves on exceptional quality and that requires the best resources, whether human or machine. I am looking forward to working with the Seychell team and of course with Gareth and Peter from the wider group perspective."

Go2 Engineering's commercial director Gareth Barnard led on the the wider group. We are investing heavily in our people and equipment and Dave's appointment is key in getting the very best out of both resources.

"He has a fantastic reputation in the industry and is a great leader. This is a time of transition for us. Along with the new equipment which should be arriving imminently we will be making further investments later in the year and Dave will be central to the success of this investment."

Tees shippers unite behind Freeport

Teesside family businesses secure home-win for the River Tees

Three Teesside family firms have worked together to secure a post Brexit shipping deal, keeping business in the region and supporting the growth of Middlesbrough's port facilities. Shipping companies, Casper Shipping and Cockfield Knight, along with AV Dawson, owner and operator of Port of Middlesbrough, have collaborated to provide a com-



plete local supply chain solution to help a major UK steel stockholder import steel into Teesside.

Casper Shipping secured a vessel on a long-term charter to deliver a broader, more competitive logistics offering to its clients. Cockfield Knight, who were looking to broker a vessel for their customer, to import steel pipes from Cyprus to Tees, decided to 'buylocal', selecting Casper Shipping's vessel for the job. Cockfield Knight also acted as port agent, coordinating the safe arrival of the vessel at AV Dawson's Port of Middlesbrough.

Gary Dawson, AV Dawson's managing director said: "This is a great example of not only the strength of the offering of the River Tees' maritime sector but also the appetite for collaboration among Teesside businesses. Using local operators rather than national chains keeps work in the region, supporting local jobs and the regional economy. "This particular cargo which has been imported for Cleveland Steel & Tubes, will be used within the UK construction sector - which, like the shipping and logistics sector, seems to have managed to continue to keep busy despite the challenges of Covid.

"A recent cargo we imported for this same customer will actually be staying at our port for a very long time - not because of any Brexit delays but because it will be utilised within the redevelopment of our quayside. The steel pipes will be used for piling on one of our berths at Port of Middlesbrough to support the reconstruction and strengthening of the quay wall - so they literally will be supporting the future growth of our port."

Over the last couple of years, both Cockfield Knight and Casper Shipping have seen a step increase in demand for their services. Ship brokering has increased dramatically for Cockfield Knight and Casper Shipping now has seven ships on charter.

Michael Shakesheff, managing director of Casper Shipping said: "We started our chartering business, Casper Chartering a few years ago as part of strategy and expansion plans as we approach our 150th anniversary in 2022. We are one of very few cargo vessel operators actually based in the UK. With the major infrastructure developments planned for Teesside we feel there is a real opportunity for us to provide a competitive solution and as a result, keep our ships very busy just on the River Tees. That would be a positive result as it would illustrate how Teesside is really moving forward."

Frans Calje, CEO of PD Ports, Statutory Harbour Authority of the River Tees, said: "With over 270 years between them and an unwavering commitment to the region, these three family businesses illustrate the innovation, resilience and ambition we have within the businesses that operate on the River Tees but also more widely in the region."

Meanwhile, Teesside's shipping industry has publicly acknowledged the importance of the region's new Freeport status - both for the shipping sector and the wider region. Following the announcement that Teesside has been identified as one of eight new Freeports in England, Gary Dawson, chair of the Tees and Hartlepool Port Users' Association (THPUA), the region's lobbying group for the shipping industry said: "This is a defining moment for Teesside, the government has unlocked a major opportunity and we now need to all work together to realise the potential that this can deliver for our industry and our region."

The THPUA, which alongside local ports and shipping agencies, includes some of the biggest manufacturers in the region, was heavily involved in supporting Mayor Houchen in shaping his winning bid.

Dawson said: "We provided knowledge and expertise from within our membership to assist the Mayor and the local authorities in developing a compelling bid. This included specialist customs expertise from one of our members, Casper Shipping. We also engaged with the Mayor's office and his team of economists to identify suitable sites for inclusion within the Freeport to ensure it delivered maximum impact for the region. "The strength of our membership has certainly been recognised in the final proposal - of the ten sites included within the Freeport, seven are actually THPUA member organisations, those being Liberty Steel Hartlepool, LV Shipping, PD Ports, Port of Hartlepool, Port of Middlesbrough, Teesworks and Wilton Engineering.

"I commend the Mayor and the local authorities for working closely with industry and listening to businesses' views to ensure the best bid was put forward. I also thank the statutory harbour authority, PD Ports for the support they have provided by engaging the services of MACE to analyse the Teesside landscape and help define the optimum Freeport boundary.

"We have a strong community in Teesside and a particularly strong community on the river, so we need to use this to our advantage and continue to work together to ensure the Freeport delivers on all of our ambitions.

"This really puts Teesside on the map and has the potential to significantly increase our imports and exports, which will keep all of us on the river very busy for years to come. It will also undoubtedly result in more jobs in the shipping industry and within the new businesses that are now attracted to Teesside."

Tees and Hartlepool Port Users' Association exists to develop and promote the economic, efficient and effective movement of goods through the ports of Tees and Hartlepool in the best interest of its members and



Gary Dawson, chair of the THPUA and managing director of AV Dawson, owner of Port of Middlesbrough

their clients. The Association exchanges information and coordinates activities among, and on behalf of, its 50 members. Its membership consists mainly of companies and organisations involved in port operations, oil, chemical and steel support and logistics related services, with some of the biggest brands in the region represented.

One of the main objectives of THPUA is the promotion of the River Tees and its business community in order to generate and maintain cargo flows via the Ports of Tees and Hartlepool. The Association also consults, cooperates and negotiates with PD Teesport and other private and public bodies which influence shipping activities within the ports. The chair of the Association is currently Gary Dawson, managing director of AV Dawson, owners of Port of Middlesbrough.

Lantek achieves record turnover in 2020

Trumpf enters into close partnership, expanding software business

Trumpf has acquired the software house Lantek and thus focuses on software in sheet metal processing that runs independently of the machine manufacturer.

"Trumpf is opening up to customers' production ecosystems with this acquisition," said Tom Schneider, managing director of machine tool development at Trumpf. "Our customers' process is our focus with Lantek, we comprehensively cover the sheet metal process chain, even with machines from different manufacturers. In this way, we are taking another big step toward efficient and connected sheet metal production and enriching the Smart Factory solution portfolio."

After participating in the development of umati, the open machine data interface, the development of Omlox, the open positioning standard, and the cooperation with intralogistics expert Jungheinrich on automated guided vehicles, the cooperation with Lantek is a consistent step towards process optimisation and connectivity for the sheet metal production of the future.

"We are looking forward to cooperating closely with Trumpf. Lantek has been leading the sheet metal software for 35 years thanks to its ability to bring the best manufacturing solutions to any cutting machine, and this will continue to be our goal, assuring interconnectivity and independency between machine tool builders. Our customers benefit from a close exchange in the key technologies of the future Al, data models and holistic process control. This enables us to bundle our competencies and develop software for the future of sheet metal production in an even more open and customer-oriented way in the future," said Alberto López de Biñaspre, CEO of Lantek.

The family-owned software specialist Lantek was founded in 1986 and is headquartered in Vitoria-Gasteiz, Spain. The company operates worldwide with 20 locations in 14 countries. More than 220 employees develop, implement, and maintain software for sheet metal and metalworking with any cutting technologies. This includes CAD, CAM, MES and ERP solutions.

Lantek will continue to operate under its current name. An integration under the Trumpf brand is not planned and Lantek continues committed to neutrality and independence from all machine tool builders.

Both companies have agreed not

to disclose the financial details of the transaction, which is expected to close by the end of March.

The high-technology company Trumpf offers production solutions in the machine tool and laser sectors. It is driving digital connectivity in manufacturing industry through consulting, platform and software offers. It is the world technological and market leader for machine tools used in flexible sheet metal processing, and also for industrial lasers.

In 2019/20 the company - which has about 14,300 employees achieved sales of Euro3.5 billion. With over 70 subsidiaries, the Trumpf Group is represented in nearly all the countries of Europe, North and South America, and Asia. It has production facilities in Germany, France, Great Britain, Italy, Austria, Switzerland, Poland, the Czech Republic, the USA, Mexico, China and Japan.

Meanwhile, in a year marked by the impact of the COVID-19 pandemic which triggered harsh restrictive measures that either slowed or paralysed activity in the sheet metal industry, Lantek achieved a record turnover.

In 2020, sales reached Euro 21.3m, slightly higher than the figure recorded in the previous finan-

cial year. As a result, the Spanish multinational, leader in software development and Digital Factory solutions and pioneer in the digital transformation of the fabrication and sheet metal sector, has consolidated its position in the international market.

The efforts of more than 220 Lantek employees worldwide in

contraction in sales of -10.4%, only to rebound as measures eased and sales returned to pre-pandemic levels. In the last quarter, Lantek achieved a 6% increase in turnover. In December 2020, the company billed Euro 2.1m, an increase of 9.9% compared to December 2019, resulting in a very positive year-end compared to previous years. global sales and now accounts for 88% of revenues. By region, the impact of the pandemic was felt more in Europe, where the mobility restrictions imposed by governments were more severe than in other areas. As a result, Europe made slower progress. However, in recent months Western Europe has regained some traction with increases of over 10% in Turkey



adapting to the new situation, and the confidence of customers have both contributed to an increase in revenues at the end of the year, showing a clear upward trend for 2021.

During the toughest quarter of the year, with confinement measures affecting many of its international offices, the company suffered a The company also achieved a record figure in terms of the number of active users, with a significant increase during the year. In 2020, it gained 2,247 new customers, bringing the total to 25,747 distributed across more than a hundred countries. In the Iberian Peninsula, the user base exceeds 2,500. The overseas market continues to increase its important share of and particular growth in Italy, one of the countries that has been most impacted by COVID-19, with increases of close to 10%.

Other continents are showing robust growth, such as Asia, with South Korea growing by more than 25% and China by nearly 20%; and the Americas, where the USA is up 7% after winning new

customers with major solutions and projects. The UK market continued its growth path and adapted well to remote working with online support, commercial training, presentations and ERP installations being particularly successful. "We have closed a really complex year, but we have been able to adapt, respond and mitigate it. Our activity has not stopped, and productivity has increased; already in the last part of the year our strong order book and maintenance contracts have helped us decisively recover lost ground and end 2020 with a turnover above that of 2019. The figures demonstrate our collective effort to recover from this shock, both on the part of employees and partners. They also show our great ability to adapt to changing and uncertain environments while continuing to assist our customers on their path to digital transformation," said the CEO.

Digital activity

Proof of Lantek's ability to support remote working was the launch of Lantek v2020 under the slogan "Never stop Manufacturing". This new version was prepared to deal with this contingency by virtualising the work of teams and allowing customers to continue using Lantek solutions wherever they might be.

Likewise, Lantek's Solutions Division, focused on the Digital Factory and advanced manufacturing, finalising the evolution and launch of two relevant offerings for sheet metal and metal fabricators: Lantek Analytics and Lantek iQuoting, two operational services hosted in the Cloud environment under the SaaS model. The goal is to help companies make better decisions based on the analysis of current and historical manufacturing and customer data. With Lantek Analytics, manufacturers can substantially improve their productivity and efficiency to compete in an Industry 4.0 environment, anticipating responses and prospecting for new business. With Lantek iQuoting, customers will be able to generate quotes with greater speed and accuracy. Innovation is in the company's DNA. Last year, the R&D&I area invested Euro2.4m to develop solutions in the field of advanced manufacturing, specific to the sheet metal sector and directly related to automotive, aerospace, railroad and shipbuilding activities, amongst others.

Outlook for 2021

The second half of 2020 marked a turning point, and between October and December, Lantek resumed its upward trend. This growth was accompanied by the incorporation of more professionals into its technical teams for MES, CAD/CAM and Cloud solutions.

"We start this new year prepared and confident. Our teams are ready to take on the challenge, to continue to grow and implement the solutions that the industry needs," said Lantek's CEO.

New office in Bilbao

The company has also recently opened a new Centre of Excellence in Bilbao, with offices located in the iconic Iberdrola Tower. With the opening of the new office, which is in addition to Lantek's headquarters in the Álava Technology Park, the company boosts its strategic investment in the Basque Country. In this way, it is committed to attracting talent specialised in STEAM (Science, Technology, Engineering, Arts and Mathematics) to Bilbao, a city that is a global benchmark in the transformation of its industrial and technological fabric.

This new Lantek centre of excellence will be staffed by at least 40 professionals, mainly from the fields of engineering, physics and mathematics. New professionals will be added to the current team in the coming months to respond to the needs of growth at Lantek, the industry it serves and the company's strategic commitment to the digitisation of the industrial sheet metal sector.



StainlessSteelFocus FEATURE PLAN

	December/ January	Feature	Stainless Steel Long Products Nickel Alloys Lean Duplex Deadline: December 14, 2020
	February	Feature	Architecture, Building & Construction Seamless & Welded Tubes Deadline: January 18, 2021
	March	Feature	The BREXIT issue, the new opportunities facing Europe Handling & Logistics, Stainless Steel Scrap Deadline: February 15, 2021
	April	Feature	New Material Developments, new grades, additives Chemical, Petrochemical, Offshore, Energy & Environment Focus on Turkey Deadline: March 15, 2021
	May	Feature	Focus on India, Power Generation Deadline: April 19, 2021
	June	Feature	Aerospace Focus on China & the Far East Focus on Germany Deadline: May 17, 2021
	July/August	Feature	Offshore Europe Exhibition preview (September 7th-10th, Aberdeen, Scotland) Oil & Gas, Duplex & Super Duplex Deadline: June 21, 2021
	September	Feature	Stainless2021 Exhibition issue (September 15th-16th, Brno, CZ) Titanium USA preview (October 3rd-6th) Cutting, Welding, Finishing & Polishing Deadline: August 16, 2021
	October	Feature	Stainless Steel Flat Products Automotive, Railway & Transport BlechexpoExhibitionpreview(October26 th -29 th , Stuttgart, Germany) Made in Steel Exhibition preview (October 5 th -7 th , Milano, Italy) Deadline: September 20, 2021
	November	Feature	Focus on Italy Maastricht Exhibition Issue Nuclear Power Deadline: October 18, 2021

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Hamilton Precision Metals assists poverty alleviation in Asia

Ametek Specialty Metal Products renews ISO 9001:2015 certification

Ametek Specialty Metal Products (SMP) has renewed its ISO to 2015 standards. The accreditation covers the company's manufacturing of precision strip, shaped wire and engineered shaped components from powder metallurgy and cast/wrought products. The certification mark was granted by Bureau Veritas and runs for three years. Hamilton Precision Metals, meanwhile, is supplying precision metal foils in Asia and thereby helping in a project to alleviate poverty in the region.

SO 9001:2015 is an internationally recognized standard that sets out detailed requirements for quality management, regulatory compliance, and

the completion of months of hard work, preparation and close attention to detail. We are extremely proud to hold this certification and look forward to continuing



to meet its exacting standards into 2021 and beyond."

Ametek Specialty Metal Products recently hosted three online booths during the first ever Ametek Virtual Trade Show, aimed at decision makers in a wide range of global manufacturing industries.

The event took place on March 16, 2021 for pre-registered guests, who were able to participate from anywhere in the world. The three Ametek SMP booths focused on the company's portfolio of high-performance metal products aimed at the medical, aerospace, and energy sectors. Representatives from Ametek SMP's five businesses - Fine Tubes, Superior Tube, Hamilton Precision

industry best practice. More than one million companies have been awarded this accreditation worldwide. Those companies that have achieved the required standard can clearly demonstrate their high level of performance and product quality control to customers and suppliers through this widely known and wellrespected accreditation.

Doug Van Wie, quality assurance manager at Ametek SMP, said: "The ISO 9001:2015 renewal represents

Metals, Ametek SMP Wallingford, and Ametek SMP Eighty Four - manned the three booths.

Guests visiting all the halls were able to share and discover new products; engage in selling and purchasing opportunities; take part in webinars; and build relationships through online chat facilities.

Commenting on the event, Tom Matway, vice president and general manager at Ametek SMP, said: "While many face-to-face interactions are necessarily curtailed because of the pandemic, we are offering the wider industry a valuable opportunity to connect with an engaging, informative virtual experience instead."

Precision metal foils for vending machines

Meanwhile, as the global COVID-19 pandemic causes and exacerbates wider societal issues, such as poverty and reduced access to essential supplies, companies across the world are turning their attention to providing solutions designed to help those directly affected.

In Asia, a national pro-consumption project is placing

vending machines. The ultra-thin precision foils separate the products stacked within each of the vending machines' independent grids and help to automatically calculate weights in order to process payments. Michael Zhu, China's regional sales manager, comments: "We are pleased to support this innovative and highly practical pro-consumption project and help those in poor rural areas affected by poverty. Our precision resistor alloy foil is engineered in a range of alloys and is custom-made to meet highly specific criteria for applications like the gravity sensors inside these crucial vending machines."

Hamilton Precision Metals supplies leading strain

New Ametek Land representative

A metek Land, a leader in industrial non-contact temperature measurement as well as combustion and emissions monitoring, has appointed FLW Southeast Instrumentation Solutions (FLW Southeast) as its exclusive representative in the Southeastern region of the USA.

The new agreement means customers in the region will access the highest quality monitors and analysers for industrial infrared non-contact temperature measurement, combustion efficiency and environmental pollutant emissions, backed up by the dedicated service for which FLW Southeast is renowned.

FLW Southeast is a leading supplier of measurement instrumenta-

tion and control systems for primary instrumentation solutions. Headquartered in Marietta, Georgia, FLW Southeast's expertise lies in process instrumentation, with a particular emphasis on measurement for temperature, pressure, flow, level, positioning, weighing, and control of industrial applications.

Larry Smith, director of sales -Americas, Europe and Africa, from Ametek Land, explained: "It was an easy decision to select FLW Southeast as our representative for the Southeastern US. It is a well-established firm that has extensive experience in our core market sectors and an excellent reputation with their customers." He added: "There is a great opportunity for our products to be promoted to key markets, such as metals, glass, and power generation in this potentially lucrative region of the US. With FLW Southeast's experience and market knowledge in infrared and combustion emissions technologies, we expect to be able to significantly extend the reach of our US business."

Michael Calbert, president of FLW Southeast, said: "We are delighted to be working in partnership with Ametek Land as its exclusive distributor for the Southeastern US. Ametek Land's high-quality infrared temperature measurement, combustion, and emissions equipment perfectly complements our existing portfolio, and we look forward to driving forward with new business opportunities."

unmanned vending machines in strategic locations across communities and stations. The goal is to help boost sales of products in poorer areas and give people easier access to affordable food and key supplies. Hamilton Precision Metals is working alongside this project to supply its specialty metal foils for strain gauges to operate as gravity sensors in unmanned gauge manufacturers with a range of specialty materials, including Evanohm[®] R and Constantan. Qualities include surface control for bonding strength, repeatable tight tolerance control, and a choice of thermal resistivities. Foil is re-rolled to some of the tightest tolerances and thinnest gauges in the industry to 1.5 microns (.000060") in thickness.

Building a stronger, more profitable company for the long term

Olympic Steel acquires Action Stainless & Alloys

Ivmpic Steel Inc, a leading US metals service centre, recently announced that it has acquired the assets of Action Stainless & Alloys, Inc, the company's fourth acquisition in the past three years. The all-cash purchase is immediately accretive. Terms were not disclosed.

Action Stainless & Alloys, based outside of Dallas, Texas, is a fullline distributor of stainless steel and aluminium plate, sheet, angles, rounds, flat bar, tubing and pipe and offers a range of processing, including plasma, laser and waterjet cutting and CNC machining. In 2019, the company generated more than \$40m in sales. The business will be incorporated into Olympic Steel's specialty metals business segment, led by Andy Markowitz, president - Specialty Metals.

"The history of strong business performance from Action Stainless delivers on our growth strategy and furthers our efforts to reduce cyclicality and consistently earn stronger returns," said Richard T. Marabito, CEO. "Continued growth of our specialty metals business is an important element of our strategy. In addition, the culture and focus on safety at Action Stainless are well aligned with Olympic Steel, which will make for a seamless and successful integration."

"Action Stainless & Alloys will ex-

pand the geographic footprint of our specialty metals business and provide additional product and processing offerings to support existing customers and continue extending our market reach," said Andrew Greiff, president and chief operating officer. "The business is a natural fit, and we expect to realise a number of commercial synergies as a result of the acquisition."

Action Stainless & Alloys, which opened in 1982, operates approximately 145,000 sq feet of warehouse space across five facilities in Dallas and Houston, Texas; Springdale, Arkansas; Rock Hill, South Carolina; and Kansas City, Missouri. The company will continue to operate under its established brand as an Olympic Steel Company, led by the existing management team, including Lee Martinson, president of Action Stainless & Alloys.

Founded in 1954, Olympic Steel is a leading US metals service centre focused on the direct sale of processed carbon, coated and stainless flat rolled sheet, coil and plate steel, aluminium, tin plate, and metal-intensive branded products. The company's CTI subsidiary is a leading distributor of steel tubing, bar, pipe, valves and fittings, and fabricator of valueadded parts and components. Headquartered in Cleveland, Ohio, Olympic Steel operates from 36 facilities in North America, inclusive of the five new locations added as part of the Action Stainless & Alloys acquisition.

Meanwhile, Olympic Steel has reported that net income for the fourth guarter 2020 totalled \$1.8m, or \$0.16 per diluted share, compared with a net loss of \$0.9m, or \$0.08 per diluted share, in the fourth guarter of 2019. The results include \$0.4m of LIFO pre-tax income in the fourth quarter of 2020, compared with \$2.4m in the same period a year ago. Adjusted EBIT-DA for the fourth quarter of 2020 was \$9.9m, compared with \$3.4m in the fourth guarter of 2019. Sales for the fourth quarter of 2020 totalled \$332m, compared with \$320m in the fourth quarter of the previous year, as a result of a 3% increase in consolidated volumes compared with the fourth guarter of the prior year.

In the full year 2020, the net loss totalled \$5.6m, or \$0.49 per diluted share, compared with net income of \$3.9m, or \$0.34 per diluted share, in 2019. The results include \$1.5m of LIFO income in 2020, compared with \$3.7m in 2019. Sales for 2020 totalled \$1.2 billion, compared with \$1.6 billion in 2019.

"Olympic Steel delivered its strongest performance of the year in the fourth quarter of 2020, which is a true testament to the hard work and resilience of our entire



team," said Marabito. "We are proud to finish this unprecedented year on a high note by delivering improved profitability while safely operating as an essential business."

He continued: "Market dynamics became increasingly favourable throughout the fourth quarter, as shipping volumes approached pre-pandemic levels and metals prices rose, driving sales increases across all three of our segments. At the same time, we maintained the disciplines enacted early in the pandemic, including operating expense reductions, improved inventory turns and reduction of debt to a four-year low, all of which contributed to the successful fourth guarter. In addition, we continue to execute on our strategy to profitably grow and reduce cyclicality, with the successful December 2020 acquisition of Action Stainless & Alloys, Inc, which brings a talented team, additional product offerings and an expanded geographic footprint, including Texas, Missouri and Arkansas, to grow our specialty metals business."

Marabito concluded: "We enter 2021 with optimism and momentum as market conditions are favourable and metal prices have reached all-time highs. We will stay vigilant in our operational discipline to capitalise on efficiencies and operate with flexibility in the face of the ongoing pandemic, the recovering economy and changing industry dynamics. Looking forward, we believe we are in an excellent position to drive significantly higher profitability in the first quarter of 2021, while executing on our long-term strategy to further diversify our business through both investing in higher-return growth opportunities and through additional acquisitions."

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DP World celebrates BoxBay milestone

P World, the Dubai-based enabler of worldwide smart end-to-end supply chain logistics, together in a Joint Venture called BoxBay with the German industrial engineering spe-

print of terminals can be reduced by up to 70%. The system is designed to run automatically and enables any container to be accessed individually without moving any other.



cialist SMS group GmbH, has successfully completed the first 10,000 container moves in the BoxBay high bay store system at Jebel Ali Port.

The milestone demonstrates the disruptive technology concept works, and makes possible dramatic changes to the way containers are handled in ports around the world. Construction of the test facility with 792 container slots was completed in July last year in Terminal 4 of Jebel Ali Port in Dubai. BoxBay is a patented automated container handling system that stores containers up to eleven storeys high in steel racks. It delivers more than three times the capacity of a conventional yard, so the footTraditionally containers are stacked one on top of the other in rows meaning many containers have to be moved to access containers lower down in the stacks. BoxBay is designed to be fully electrified and can be powered by solar panels on its roof.

The technology behind BoxBay was originally developed by SMS group for handling of metal coils that weigh as much as 50 tonnes in racks as high as 50 metres. The system will be demonstrated to the public during "EXPO2020" in Dubai in October 2021.

Sultan Ahmed Bin Sulayem, Group chairman and CEO of DP World, said: "The completion of the first 10,000 moves demonstrates that the BoxBay concept works in the real world. This technology has the potential to revolutionise how ports and terminals operate around the world. BoxBay adds value for our operations and customers and demonstrates DP World's strengths as a global provider of smart and innovative logistics solutions".

Mathias Dobner, chairman and CEO of BoxBay, said: "We have been making great progress in setting up the system in Terminal 4. Usually, when setting up a new plant or system, you first have to run practical tests to find out where further optimisation will be needed - especially, when the system you are building is the very first one of its type, as is the case with Box-Bay. In order to enhance the reliability of the technology, we have been thoroughly analysing the information collected by our warehouse management system. These were immense amounts of data. But they enabled us to make adjustments continuously wherever necessary. BoxBay has set out to revolutionise global supply chains". Klaus Poeggeler, general site manager of SMS group company AMOVA GmbH said: "Seeing the new system set up within just one year was really impressive. Nevertheless, safety of the teams on site has always had top priority. We didn't have a single accident during the complete assembly and installation phase - not even a cut in a finger".

Sandvik invests in new mill in Mehsana, India

Sandvik is to invest in a new hydraulic and instrumentation tubing mill at its Mehsana works in Gujarat, western India, designed to take Sandvik's production to the next level and meet increasing demand for locally produced products in India.

ichael Andersson, president of Tube Division, Sandvik, says: "The Mehsana Mill is an important facility in our journey towards increasing our footprint in Asia. As part of our strategy to invest capacity and capability in growth markets, the brand new hydraulic and instrumentation tubing factory, as well as the extensively revamped finishing facilities for the heat exchanger flow, will enable us to capture growth opportunities created by the change towards increased natural gas in the energy mix."

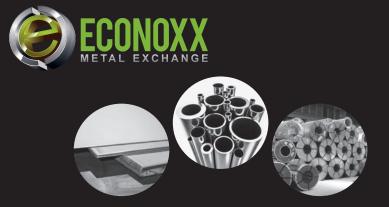
The Mehsana manufacturing facility has been successively expanded and modernized in recent years to increase availability of high quality seamless stainless steel and high alloy tubes as well as to strengthen service in the region. The first phase of this growth initiative was completed in 2020 when Sandvik added a new cold finishing tube manufacturing line mainly for heat exchanger tubing and other demanding industrial applications. The investment this time around is divided into two parts and will be fully completed and operational by early 2023.

"For the past few years, we have been focusing on boosting capacity, adding new grades and sizes, and constantly improving to meet the highest global quality standards as well as customer specifications", says Sharath Satish, president, Business Unit Tube APAC, Sandvik. "This new investment will provide a significant transformation in our portfolio and improve the utilization and productivity of the existing heat exchanger line. It will also expand the hydraulic and instrumentation tube capacity to meet the growing market for infrastructure around natural gas.

"We look forward to ramping up on our production to cater to the in-



creasing demand for locally manufactured products in India, while aligning with the Government of India's "Make in India" and "AtmaNirbhar Bharat" or "Self-Reliant" program. We also look forward to enabling further export and swifter delivery times to customers across the region," Satish continued.



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COVID-19 is forcing the world to take new paths. But new paths often present new opportunities. This is also true for Stainless2021 - International Stainless Steel Fair in Brno in the Czech Republic, which this time will take place not as usual in the spring, but in the autumn, and in parallel with the MSV Fair which is known all around the world. The International Engineering Fair is the most impor-

tant industrial trade fair in Central Europe with more than 1,600 exhibitors and

For more Information:

www.Stainless202I.com

markets, as well as the markets of surrounding countries, an ideal platform for presentation and communication. Stainless2021 makes it particularly easy to meet and cultivate potential partners for cooperation and buyers because the leading pillars of the European stainless steel sector will be coming together in September 2021 in Brno.

and 80% of them are decision makers when it comes to investing. A third of them hold top management positions. All key sectors of the mechanical engineering and electrical industries are in exhibiting at Stainless 2021, you should contact FocusRostfrei urgently.

Further details about how to get to the event, regarding stand construction,



represented. The key areas covered are traditionally processing and transformation.

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Christine Schmidt **Ralf Abromeit**

Final quarter improves stainless steel statistic

Nickel market comes surprisingly under pressure

Black swan in the nickel market

The party atmosphere in nickel on the London Metal Exchange (LME) came to an abrupt halt on the 25th February 2021. Within a few minutes the nickel price dropped from USD 19,900/mt to USD 18,700.00/mt, when it had actually been on the brink of breaking the psychological barrier of USD 20,000.00/mt on the upside. An intraday loss of USD 1,200.00/mt, minus 6%, is a moment, like a bolt out of the blue, which even a long-term market participant does not experience very often. This raised, therefore, the suspicion

	in US\$/lb	in US\$/t
Ni average February:	8.44	18,610
High22.02.:Low04.02.:	8.95 7.98	19,722 17,590
March (3 months' nickel):		
30.03.:	7.42	16,359
29.03.:	7.39	16,302
26.03.:	7.40	16,312
25.03.:	7.26	16,012
24.03.:	7.34	16,183
23.03.:	7.52	16,584
22.03.:	7.47	16,473
19.03.:	7.34	16,171

that fundamentals were not the reason. It could rather be something which is not quite right, as all other financial and commodity markets were behaving quite normal. The stock markets were even still on their way to new highs. The movement could therefore be only traced back to the nickel market, but without any plausible cause in sight.

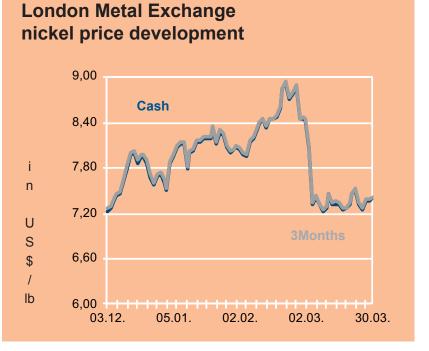
Had perhaps a trader made a mistake of a sales volume entered into the electronic trading system of the LME? This has led to talk about a "thick thumb" which had accidentally used the keyboard. But, as would be usual in such cases, there hasn't been an immediate reversal and correction of the nickel price. With just short breaks, not enough to take a breath, the landslide continued. Another two momentous trading days then pushed the price of the alloy and battery metal down to even below the USD 16,000.00/mt level. Many were shaken for a second time, as there was initially no buying interest due to a lack of physical buyers on the LME. And which investor or speculator grabs at a falling knife before the market has bottomed out.

The Commodity Review is a regular contribution by the Oryx Stainless Group. Oryx Stainless is one of the world's leading companies for trading and processing raw materials needed for the stainless steel industry. One of the company's services, for traders and processors of stainless steel alike, is to offer concepts to optimise scrap marketing, hedging of metal prices and foreign exchange risks and to provide commodity analyses. At this level, last seen in November/ December 2020, the downwards movement then came to a standstill. Since then prices have been moving in a range between USD 16,000.00/mt and 16,300.00/mt. Media and analysts quickly found various, more or less plausible explanations for the occurrence: Elon Musk might have thought that nickel prices were too high and Tesla would therefore change to another type of battery, China's Congress would consider stricter environmental legislation, which could put pressure on the domestic stainless steel production and therefore also nickel demand.

It was also reported that the Chinese nickel and stainless steel giant, Tsingshan Holding Group would like to supply nickel preliminary products on a large scale for battery nickel production in the future, which could alleviate the suspected medium term undersupply in the nickel market. Finally chart technicalities have to be mentioned. The rapid price decline must have certainly triggered many stop-loss orders, which, combined with electronic trading programmes based on following trends, intensified the downward spiral.

Old hands amongst the brokers at the LME do not, however, trust in such attempts at explanations very much. In their point of view, this totally unexpected Black Swan event is explained as follows. The collapse of the British-Australian Greensill Capital could be behind it, also since there is a close time connection. The sudden loss in the financing value chain which had been provided by Greensill could have led to one or two, or more, of Greensill's clients having short-term liquidity requirements. These could, for example, be quickly and effectively covered by the sale of certain warehouse stocks or futures positions.

Whilst other finance and commodity markets are sufficiently big enough to accept substantial sales orders without creating distortions, the nickel market is a comparatively small segment. Here the price drops which were triggered must first be



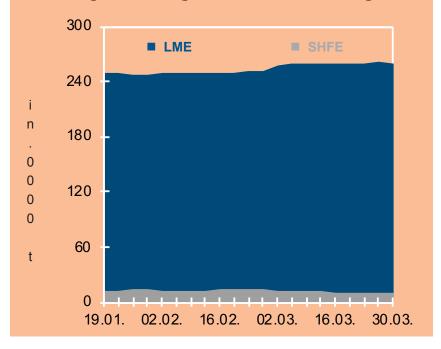
absorbed before a counter movement can begin. The fact that the LME nickel warehouse stocks, around the same time as the difficulties with Greensill became known, suddenly increased by about 12,000 tons, corresponding to a value of approximately 200 to 250 million US-dollars, supports the theory. Ultimately, the direction of nickel prices in the coming weeks and possibly more information and news will indicate which explanation can lay claim to the most truth.

It should, however, be noted that in direct reaction to the drop in nickel price, the availability of stainless steel scrap initially fell sharply. This is because large stocks had already been liquidated at attractive prices. Those who had perhaps been too greedy and had waited showed they did not have such a lucky hand and were completely caught out on the wrong foot by the development. They are now presumably waiting for a mentally acceptable price level to be reached before forcing themselves to take a decision to sell.

Shortage of vaccines comes under criticism

The Federal Minister of Health and the President of the EU Commission have

Nickel inventories London Metal Exchange & Shanghai Futures Exchange



been put under considerable pressure recently by both media and the public because of the sluggish German and European vaccine supply for COVID-19. Nevertheless there has to be a certain amount of understanding in the current situation. Bureaucratic and clumsy handling and organisation can, of course, be criticised.

Corona vaccine is a scarce commodity these days and the supply, like stainless steel scrap, cannot be just easily and quickly increased at will. It is hardly possible to increase the existing global capacities for production of the vaccines in just a few weeks and the pandemic is a global challenge. Vaccines cannot simply be moved from one continent to another when it is basically needed everywhere. That in the end, the USA and Great Britain or the vaccination testing laboratory Israel were the quickest was mainly due to economic reasons. Whoever pays more and/ or risks more, finishes with more.

In the present structure, a win-win situation which politicians prefer was just unable to be reached. The supply is fixed in the short-term and just not flexible. In this respect it is, therefore, a zero sum game. At the moment, more vaccines for the EU and Germany would mean less for the USA, Great Britain and other countries around the world. And a glance at some emerging countries shows that they have only just received their first vaccines. And who were the first to be vaccinated? Of course, generals and top politicians, who else? Therefore the vaccine industry, supported by governments, is working tirelessly to create new vaccine production sites. More cannot be done.

So it is already foreseeable that in the not too distant future, there could be more of a problem in the short-term administration of vaccines, than with the availability. This is all not very nice, but just how it is. A permanent set-up of necessary capacities to deal with a global pandemic will certainly be discussed politically later and perhaps even created. But with the considerable costs of maintenance in the background, these will probably, within a short space of time, be "dismantled" again, back to the border experiences of present, just like the intensive care beds and the inadequate amount of professional staffing in care and nursing homes were.

Also the risk of mutations increases with vaccinations and infections. In this respect it has been controversially discussed whether a broad vaccination programme when there is not enough vaccine for everyone at the same time, is actually the

best way forward. This versatile virus would of course like to carry on multiplying and not be defeated. And every mutation is like a lucky bag. Since Darwin, it is known that in nature the fittest mutation prevails in the end. Now it could be said that unfortunately mankind does not mutate as quickly as the virus, but as the evolution in this pandemic has also shown, at least some people do learn and can certainly compete with the virus on an equal footing or even a little better. It is, therefore, still better to be a person with all advantages and disadvantages rather than a foul virus.

Nornickel pay record fine

Last year the Russian mining company Nornickel caused an extremely terrible environmental catastrophe in the Russian part of the Arctic. 21,000 tons of diesel poured out of a rusty tank into the Ambarnaja river, which feeds a lake from which another river flows. The latter in turn flows into the ecologically sensitive Arctic Ocean. The dimensions of this diesel catastrophe were so great that the Kremlin head, Vladimir Putin, had to declare a state of emergency. In a video conference President Putin then even maliciously mocked the main owner, Nornickel President Vladimir Potanin who is also the richest man in Russia, in front of government representatives and ecologists.

A few weeks ago, Nornickel was sentenced by a Russian court and ordered to pay compensation in the amount of 2 billion dollars. This has, in the meantime, been paid, since the metal giant had no intention of appealing against the ruling. In 2019, Nornickel generated a turnover of 13.6 billion dollars and managed a net profit of 6 billion dollars. Therefore, the



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payment for the commodity giant should have been manageable.

China is fighting pollution in heavy industry

The Chinese government is also fighting massive pollution in its own country. A few days ago, it emerged that some Chinese steel producers are undermining anti-pollution efforts with faked production figures. During unannounced inspections, officials of the Ministry for Ecology and Environment discovered inconsistencies in four steel works in the city of Tangshan. Production records were falsified or partially deleted. The plants even warned one another about the unannounced visits.

As soon as pollution exceeds a certain level in a region, the biggest emitters in the area, such as heavy industry companies, are ordered to reduce production. The news portal Fastmarkets, in context to this, refers to a market expert who explains that, of course, a high production load makes production costs look better. China has, for some time, been battling against massive overproduction in the domestic market and is even forcing a market consolidation and the closure of old steelworks. However, the continuing increase in iron ore imports is an indicator that these measures have not yet borne fruit.

The LME discussion paper meets resistance

Due to the COVID-19 pandemic, the traditional red leather trading ring of the LME



has remained closed since March of last year. Since then the LME benchmark price for base metals, important for the industry, has been determined electronically and not, as in the past, through face to face trading activity in the ring within certain timeframes.

In January 2021 the LME published a discussion paper, in which, among other things, the suggestion was made to completely abolish the iconic trading ring, justifying this with better liquidity and transparency in the new price determination process. In the meantime, a broad front of brokers and industrialists has formed which would like to discourage the LME from taking this step.

Another suggestion from the LME is to consider changing to a different method of clearing accounting. This has also been criticised by many sides. At present, clearing is based on Discounted Contingent Variation Margin (DCVM), which only balances profits from futures on the settlement date. This method, together with the structure of forwards, is the main reason why the LME is often referred to as a forward market and not a futures market. In the discussion paper, the LME considers changing to the Realised Variation Margin (RVM) method, whereby gains would be settled on a daily basis and payments between parties would be made at short notice. This model is used by most futures markets around the world.

Although the RVM model would be technically possible for all parties, the timing of special settlement dates in conjunction with the futures structure ensures the attractiveness for brokers and industrial market participants and distinguishes the LME from other markets. The RVM method allows for futures gains to be paid out earlier, whereas the DCVM method allows for profits of one participant to be compensated with the losses of another. The constant payment of profits would lead to a liquidity drain from the brokers. In view of the decreasing number of brokers anyway, the remaining ones would be put under more pressure. Without doubt, the RVM method would be the preference of speculators, since profits could be realised more simply.

Since a large part of LME volume is still traded by industrial companies, exchange prices have a realistic link to physical prices, and are, therefore, especially suitable as a hedging instrument for industry. Should speculators one day gain the upper hand, then a question mark would have to be put on whether the prices are still representative and useful as a hedging instrument. Then speculators would, at the latest, be alone among themselves. Therefore, the LME has to decide whether it wants to remain attractive for the real economy, or whether it wants to attract casino capitalism.

ISSF presents production statistics for the year 2020

On the 15th March 2021, the International Stainless Steel Forum (ISSF) presented the figures for stainless steel melting production for the full year of 2020. While global decline after nine months was minus 7.8%, it could improve in a strong 4th quarter with 14.125 million tons to "only" a minus of 2.5%. In all regions, a strong final quarter was able to provide some relief. China was even able to increase its stainless steel production by 2.5% to now over 30 million tons, despite the pandemic challenges of 2020. This is equivalent to a market share of almost 60% with a total global production of 50.892 million tons.

But also the category 'other', which includes the very heterogeneous and artificial cluster of Brazil, Russia, South Africa and Indonesia, could increase by 6%, from 5.525 million tons in 2019, to 5.857 million tons in 2020. One does not have to be a prophet to assume that Indonesia, in this group, must have had the biggest share of the increase. Finally stainless steel melting production in Europe is around minus 7.1%, having fallen to 6.323 million tons, but still a clear improvement after a decrease of minus 13.1% for the first three quarters. By all accounts and also made apparent by good scrap demand, prospects for the 1st quarter 2021 are not bad: stainless steel production should stay at an appreciable level.

European ferrochrome benchmark price increased to USD 1.56/lb

Shortly before the editorial deadline, it was announced that the European ferrochrome benchmark price has been increased for the 2nd quarter 2021 to USD 1.56lb. In the 1st quarter of 2021 it had still been USD 1.175/lb. This sharp increase follows a period of unusual stability. The quarters two to four last year had had an identical price of USD 1.14/lb, and the increase for the 1st quarter was only moderate at just 3.5 US cents. The reason for the increase now is a robust demand for raw materials, especially from the stainless steel producers of China. A similar trend could already be seen in international prices for spot amounts during the previous quarter.

Oryx Stainless



Annealed free-cutting steel from Steeltec

New austenitic steel powder for medical applications from DEW

Cold-drawn or peeled free-cutting steel is softened in Steeltec's conveyor furnace by heating it to above 700°C and then holding it at that temperature for a defined period before controlled cooling (Photo: Steeltec) Whether implants, dentures, orthoses or prostheses, additive manufacturing is essential in medical technology. Deutsche Edelstahlwerke (DEW) of the Swiss Steel Group has recently produced the optimum steel powder for this area of application. Medidur is an austenitic, nickel-free powder. Steeltec, meanwhile, also a member of the Swiss Steel Group, offers an extensive portfolio of annealed free-cutting steel.

rom prosthetic legs to customized bone parts, additive manufacturing has produced revolutionary innovations in the field of medicine. Metal powders used in 3D printers are, among other things, the basis of all this. As a pioneer in additive manufacturing, Deutsche Edelstahlwerke has also placed a key focus on medical applications.

Medidur is the result of this. The use of manganese eliminates the need for nickel. The material is non-magnetic, corrosion resistant and offers a high level strength, which is particularly advantageous for medical applications.

The metal powder can be easily

rameters. Compared to typical austenitic steels, the nickel-free material features significantly increased fatigue strength, yield strength and tensile strength. The steel in additive manufacturing, but compared to Medidur it has a significantly lower hardness. The yield strength and tensile strength are also twice as high in Medidur.





printed using LPBF equipment with typical 316L processing pa-

material 316L, for example, has established itself as a standard

This makes it possible to design medical components with thinner and/or smaller walls. Furthermore, the fatigue strength is around 30% higher. Medical components made of Medidur therefore have a significantly longer service life. Last but not least, the high Pitting Resistance Equivalent Number (PREN) of 36 attests to the material's very good corrosion resistance: When printed, Medidur is corrosion resistant according to SEP 1877 II (test for resistance to pitting corrosion) and ASTM G48 E (test for resistance to intergranular corrosion).

Manganese instead of nickel

Thanks to the use of manganese instead of nickel, Medidur puts an end to the issue of nickel allergies once and for all. What's more, employees are not exposed to nickel while the powder is being processed. Safety precautions that are solely due to the proportion of nickel in a material can be dispensed with. DEW produces Medidur at its Krefeld plant. The DIN EN ISO 9001 (quality management systems) and DIN ISO 13485 (quality management for medical products) certifications confirm DEW's consistently high level of quality for all in-house powder materials.

Annealed free-cutting steel with special properties

Annealing is a heat treatment

technique that can be used to improve the material properties of steel. However, the annealing process itself is complex. Experience and expertise are required to avoid annealing errors and to control the delicate balance between heating, holding and cooling. The specialist bright steel producer Steeltec has extensive experience in the field of metal technology. At the company's advanced production facilities, annealing is carried out under a protective gas atmosphere, which not only improves the properties of the free-cutting steel, but also imparts to the material a defined coercive field strength.

Free-cutting steels are indispensable in automotive production, mechanical engineering, and in the plant and equipment construction sectors - and these steels find use in a wide range of applications.

Steeltec offers an extensive portfolio of free-cutting steels of different grades. To ensure that the properties of free-cutting steels such as 11SMnPb30 and 11SMn30 are optimized for processing on CNC machining centres, these steels are subjected to carefully controlled heat treatment under a protective gas atmosphere. Steeltec is able to influence the magnetic properties of the steel to minimize the resulting coercive field strength.

Softening and other annealing cycles

Cold-drawn or peeled free-cutting steel is softened in Steeltec's conveyor furnace at a temperature of



brushed marbled in fixed lengths and fixed widths, coils and slit strip - on request also ground or brushed. Quarto plate in standard and special grades from stock up to 8,000mm in length. Blanks (laser, shear, plasma and water jet), tubes, flats/angles and square bar, torispherical heads, semi-ellipsoidal heads, coiled half tubes, as well as tubes and sheet in titanium and nickel alloy grades. above 700°C. After maintaining the material at that temperature for a defined holding time, it is then allowed to cool in a controlled fashion. The annealing process yields a specific material microstructure and also modifies the magnetic properties of the steel. Steeltec is able to limit the coercivity to no more than 2.5 A/cm. The resulting soft annealed steel also exhibits improved machinability and is easier to

such as cold forming or machining. In the normalizing process, Steeltec heats the steel to just above the austenitizing temperature in order to achieve a homogeneous microstructure with a uniform, fine-grained ferrite/ pearlite distribution.

Focused on customer needs

Steeltec also offers its customers a number of finishing options, such as

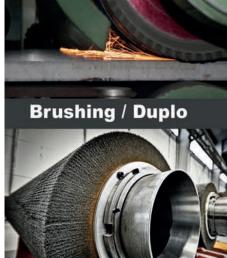
 By carefully controlling the heat treatment process,

 Steeltec can influence the magnetic properties of the free-cutting steel

 and limit the material's coercivity to 2.5 A/cm (Photo: Steeltec)

form. This premium-quality steel exhibits a bright smooth surface free of scale. Steeltec offers softening treatment for its entire range of round steel bar products with diameters between 8mm and 10mm.

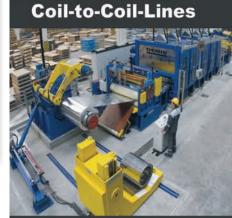
The company also offers other annealing cycles, such as stress relief annealing and normalizing. Stress relief annealing serves to reduce the residual stresses that can arise within the steel as a result of mechanical processing, grinding the heat-treated free-cutting steel product. Customers benefit from Steetec's expert technical advisers, extensive experience and a comprehensive service portfolio that covers raw material procurement and processing to final packaging - all from under one roof. The company - one of Europe's leading manufacturers of special bright steels - puts its customers at the heart of everything it does, offering steel solutions specially tailored to meet each customer's specific needs.



DEMIS

DEMIS

Grinding / Polishing





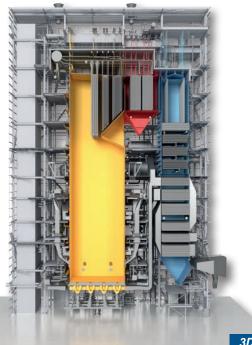


BREUER

Revenue at a new all-time high in 2020

Andritz to supply biomass boiler plant to Denmark

nternational technology Group Andritz has received an order from the Danish energy company Fjernvarme Fyn Produktion A/S to deliver a new biomass boiler plant complete with auxiliary equipment for its "Bio Blok 2" project. The plant will be located on Fjernvarme Fyn's existing combined heat and power plant site in Odense, on the island of Funen in Denmark, some 170 km west of the capital Copenhagen. This new plant will supply district heat to the Odense area and is also prepared for electricity production at a lat-



with absorption heat pump technology. Based on the Andritz EcoFluid bubbling fluidised bed design, the boiler combines high efficiency with excellent environmental performance. The flue gas condenser with heat pump technology after the boiler significantly increases the district heat output and, therefore, improves the plant efficiency.

This new plant will be fuelled by wood chips as the main fuel and wood, olive and/or sunflower shell pellets as secondary fuel. The plant is capable of supplying close to 180 MW of heat to the district heating network and reaching record efficiency of almost 120%.

This order from Fjernvarme Fyn once again demonstrates Andritz's strong global position in the supply of state-of-the-art and environmentally friendly biomass boilers.

Meanwhile, Andritz has reported solid business development in the 2020 business year in spite of the global economic crisis triggered by the Covid-19 pandemic. At Euro6.7 billion, revenue reached a new alltime high, while the operating result (EBITA) and net income increased significantly compared to the previous year. The executive board will propose a dividend of 1.00 euro per share, which is equal to a payout ratio of almost 50%.

3D model of the Andritz EcoFluid bubbling fluidised bed boiler

er stage. Start-up of the boiler is scheduled for 2023. The "Bio Blok 2" project is an important part of Fjernvarme Fyn's goal of abandoning the use of coal at its combined heat and power plants by 2022 and contributing to the national objective of a 70% reduction in CO_2 emissions by 2030. Fjernvarme Fyn delivers about 97% of the district heat requirement in Odense, providing heat for more than 100,000 households and large greenhouses.

The Andritz scope of supply includes a biomass-fired boiler with flue gas cleaning and a flue gas condenser

Wolfgang Leitner, president and CEO of Andritz AG, commenting on the past business year said: "We are very satisfied with business development in 2020. Due to the enormous flexibility and huge commitment of our employees worldwide, we succeeded in managing the economic challenges of this crisis for ourselves and for our customers well. We do not expect any major change in the overall economic conditions during most of the current year, and only expect a slight recovery in the markets we serve. So, we will continue our measures to ensure our long-term competitiveness, but also at the same time focus on investments to secure organic and external growth and on innovations".

Order intake at Euro6,108.0m reached a solid level, but it was below the record level achieved in the previous year (-16.1% compared to 2019: Euro7,282.0m), which included two large-scale orders. All business areas saw a decline in order intake compared to the previous year.

Order backlog as of the end of 2020 totalled Euro 6,774.0m, significantly lower than the value for the previous year (-12.9% compared to the end of 2019: Euro7,777.6m).

Revenue totalled Euro6,699.6m and reached a new record level, (+0.4% compared to 2019: Euro 6,673.9m). This is, above all, due to the processing of some large-scale orders in the Pulp & Paper business area and the resulting high revenue generation, which more than compensated for the decline in revenue in the other business areas.

In combination with cost discipline, this favourable development in revenue led to an increase in the operating result (EBITA) to Euro391.7m (2019: Euro 343.2m). Profitability (EBITA margin) increased to 5.8% (2019: 5.1%). This result includes capacity adjustment measures of around Euro79m, particularly in the Metals Forming and Hydro business areas. Excluding these extraordinary effects, the EBITA totalled Euro471.1m, higher than the reference figure for the previous year excluding extraordinary effects (2019: Euro456.0m). At 7.0%, the EBITA margin for 2020 ex-

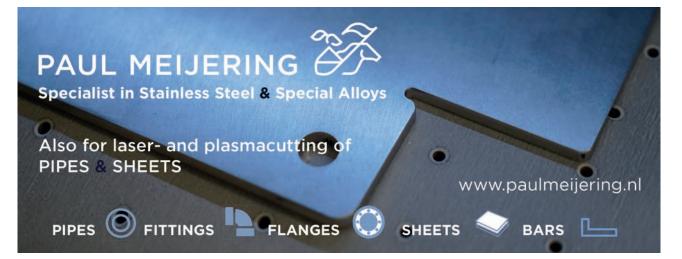
cluding these extraordinary effects was higher than the previous year (2019: EBITA margin excluding extraordinary effects: 6.8%).

The financial result improved significantly compared to the previous year and totalled Euro-34.1m (2019: Euro-57.0m). This is largely due to the reduction in interest expenses in connection with the decrease in financial liabilities and to the improvement in the other financial result (including the foreign currency valuation of intercompany loans and bank balances in foreign currencies on the balance sheet date).

Net income (including non-controlling interests) increased significantly to Euro203.7m (2019: Euro122.8m).

From today's perspective, the Andritz Group expects for the full year 2021 slightly lower revenue compared to the previous year (2020: Euro6,699.6m) due to the lower order intake in 2020 and an increase in the reported EBITA (2020: Euro391.7m). The EBITA excluding extraordinary effects should remain approximately stable compared to the previous year, depending on how revenue develops (adjusted EBITA 2020: Euro471.1m).

If the global economic recovery expected by market researchers for 2021 does not materialise or the pandemic intensifies again, this may result in negative effects on the processing of orders and on order intake and hence, a negative impact on Andritz's financial development. This could lead to additional adjustment measures in individual business areas, which could have a negative effect on the Group's earnings and require a revision of the guidance.



2020 results impacted by COVID-19 and a drop in demand

Tubacex: a key player in the energy transition

ubacex recently presented its results for the 2020 financial year which, like the rest of the sector, are well below initial expectations. Without coming close to levels registered before the ongoing, sector-specific crisis, there were signs of a slight recovery at the beginning of last year. However, the pandemic caused by COVID-19 then resulted in an unprecedented global recession. Against this backdrop, Tubacex's sales reached Euro 479.6m, 21.8% less than the previous year, with EBITDA of Euro 23.81m, 43.2% lower than in 2019. The end-of-year results amounted to losses of Euro25.3m, concentrated mainly in the Basque production plants.

These results for the Tubacex Group also include extraordinary adjustments to a value of Euro 20.3m, all completed without affecting the cash position, and aimed at securing the company's balance sheet and preparing for the eventual market recovery.

As is already known, Tubacex has been forced to take some difficult decisions, adapting not only to the exceptional events of 2020, but to the crisis resulting from underlying changes in the sector. These decisions include "the need to reduce the global workforce by around 20% - 600 people by current calculations - to guarantee the continued viability of the Group. The restructuring is already at an advanced stage, pending only changes in the Spanish production plants," explained Tubacex CEO Jesús Esmorís. The process forms part of a Group-wide costcutting exercise, bringing recurrent annual savings of more than Euro30m over a base of fixed costs. The measures are also part of a crisis management plan which incorporates actions to strengthen the financial structure of the Group and increased efforts from sales teams.

More specifically, the successful financial restructuring involved diversifying lenders and obtaining significant extensions on debt maturity. "We end the year with a liquidity position, between cash position and available assets, of more than Euro240m, contributing to greater solvency for the Group in the short and mid-term, and allowing us to meet financial obligations on debt until well into 2024," indicated Esmorís.

Finally, and despite the current adverse market climate, the sales team has focused efforts on pursuing multi-year contracts with the end-users of those Tubacex products with the highest added value, thus paving the way for the Group's future growth. Thanks to this crisis management plan, implemented over recent months, the Group is better positioned to tackle the current adverse situation.

A key player in the energy transition

Just as the company has been in-

dicating for some years now, the continued decline of the oil and gas sector from 2014 onwards, combined with an excess in installed capacity for the production of its products, has forced Tubacex to rapidly diversify and redirect activities. This change in focus has featured in the Group's strategic plans for the last six years. Moreover, the pandemic has caused an underlying change in society, not just at a personal level, but through increased sensitivity to environmental issues, which will have a significant impact on the future of the business. The energy transition, towards cleaner sources of energy and more sustainable development, is an unstoppable trend. A clear sign of this are the vast amounts global customers have started to invest in clean energies (REPSOL, TOTAL, BP etc.). As part of its diversification strategy, Tubacex is already working on the development of solutions for clean energy sectors, such as the transport and storage of hydrogen and renewable energy, as well as other sectors not linked to energy, such as transport and aerospace, among others.

To that effect, Tubacex has defined a series of work streams focused on; optimising internal processes to minimise environmental impact, developing advanced solutions aimed at increasing efficiency and reducing CO_2 emissions, and increasing participation in cleaner industries and applications. Planning permission for £300m Teesside project

Waste to energy giants given greenlight

Two of the UK's leading waste to energy companies - Low Carbon Ltd and PMAC Energy – have this month announced that planning consent has been granted for a new £300m state-of-the-art waste to energy centre on the site of the former Corus Steel works.

he Redcar Energy Centre which is set for completion in 2025 - forms a cornerstone development for the UK's largest industrial zone as part of the South Tees Development Corporation's ambitious redevelopment objectives to provide heat and electricity to advanced manufacturing facilities and residential properties in the local area.

And with the site providing excellent road, rail and port facilities to both the UK and European waste markets it is expected to divert between 350,000 and 490,000 tons of refuse derived fuels per annum away from UK landfill, generate enough energy to power over 100,000 homes and deliver more than £300m of inward investment to the region.

This will include the employment of over 400 local and highly skilled workers during its 36-month construction phase with the availability of over 100 full time operational jobs.

In line with its ambitions to be a greener, more efficient and lower cost solution to landfill and export and - in partnership with the Net Zero Teesside Carbon Capture project located adjacent to the site - the plant is committed to zero emission energy from waste.

Speaking about the project Rob Lewis, managing director at PMAC

Energy said: "Redcar is the perfect site for the location of this plant. It has always been a longterm goal of PMAC Energy to develop a large-scale sustainable Energy from Waste recovery cen-

tre in the North East and we are thrilled to have the support of Low Carbon in developing the Redcar Energy Centre.

"Using our extensive experience, we have designed a smart, flexible solution for both waste management and energy recovery to support the expanding list of future developments in neighbouring areas."

Occupying a 25-acre site

within Redcar Bulk Transport, and alongside the River Tees, the Redcar Energy Centre is a joint venture between Low Carbon and PMAC Energy, both of which are vastly experienced in delivering waste to energy schemes, with Low Carbon having six assets currently in development across the UK and Europe.

Roy Bedlow, founder and chief executive of Low Carbon added: "The 49.9MW subsidy-free Redcar Energy Centre will use proven conventional technology to provide a reliable source of controllable energy for more than 100,000 homes. Not only this but it adds flexibility to the fuel and recycling supply chains and provides hundreds of jobs to an area with a proud industrial heritage.



"Low Carbon is delighted to bring forward our third consented waste project in the UK and to use our experience in developing largescale renewable and low-carbon energy projects to help deliver this project in the Tees Valley."

As part of the partnership's continued effort to communicate with local residents and stakeholders, Low Carbon and PMAC Energy have launched a website where further information on the project is available, including frequently asked questions and stakeholder communication. This is available at http://redcarenergy.com. Research in emerging hydrogen economy, low carbon emission technologies

University of Luxembourg, Paul Wurth create Chair in Energy Process Engineering

aul Wurth SA, a company of SMS group, and the University of Luxembourg have entered into an agreement to create and finance the Paul Wurth Chair in pects of carbon-neutral industrial processes. The team attached to the chair will also engage in teaching at Bachelor, Master and doctoral level. In addition, the chair will partic-

neering.



Energy Process Engineering. The five-year agreement was signed on March 4, 2021 by Yves Elsen, chairman of the board of governors of the University, Prof. Stéphane Pallage, rector of the University, Georges Rassel, CEO of Paul Wurth Group, and Hans-Jürgen Leßmann, senior vice-president, global human resources of Paul Wurth Group.

The chair will be hosted at the University's Faculty of Science, Technology and Medicine (FSTM) in the Department of Engineering. It aims to conduct cutting-edge research in the field of hydrogen processing and related as-

el. In addition, the chair will participate in outreach activities to stimulate interest in key challenges in the field of engi-

> The partnership supports Luxembourg's ambition to develop a centre of excellence in fields surrounding the emerging hydrogen economy, to stimulate industrial development in process engineering and hydrogen and low carbon emission technologies, and to increase the output of skilled engineers.

> The chair ties in with the University's strategy to develop research and an educational

offer with a focus on sustainability. Hydrogen is considered a crucial factor in future energy systems and energy transformation and in the transition to greener energy sources. One game-changing solution lies in power-toliquid applications for the production of synthetic fuels and downstream products. Hydrogen also promises to become an alternative to coal - both as a reducing agent in steelmaking and as a driver of the large-scale transformation of the steel industry, which today is a large emitter of CO_2 . This cooperation will be instrumental for Paul Wurth to become a global innovation centre for metallurgy and hydrogen within the SMS group and to continue the technology-driven initiatives already started by dedicated taskforces. By bundling their respective expertise, Paul Wurth and SMS group strive to lead the transformation of the industry towards carbonneutral production processes.

"The creation of the new chair is well aligned with the University's research strategy and will contribute to the development of the University's Department of Engineering, in particular in the area of process engineering and hydrogen processing. It will enhance our international visibility, contribute to academic excellence and make a lasting impact on the academic and industrial landscape of Luxembourg," said Prof. Stéphane Pallage, rector of the University of Luxembourg.

"The new chair builds on an existing longterm cooperation between Paul Wurth and the University, in particular in Bachelor and Master teaching as well as the Hydrogen Think-tank initiated within the Department of Engineering. It will be a catalyst for new research activities related to the future hydrogen economy which is important to industry and to the economy in Luxembourg and beyond," said Prof. Jean-Marc Schlenker, dean of the FSTM.

Prof. Hans Ferkel, CTO of SMS group said: "The Paul Wurth headquarters in Luxembourg is home to SMS group's global hydrogen competence centre. Together, we are working on the decarbonisation solutions of tomorrow, with the clear goal of enabling CO_2 -free steel production worldwide. We look forward to working closely with the University of Luxembourg and are committed to staying in the lead in the global challenge of making green steel."

Claude Meisch, Minister of Higher Education and Research, emphasised: "Climate change and its consequences call for new models of production and resource management. With its ecological and sustainable aim, this collaboration between Paul Wurth and the University of Luxembourg perfectly fits into the national priority research areas and is fully in line with the R&I ambitions of the Luxembourg government. Furthermore, with this chair and the resulting education offer we are going to take a major step towards a longterm and diverse knowledge society."

Headquartered in Luxembourg since its creation in 1870, the Paul Wurth Group can look back on 150 years of excellence, during which the firm has developed into an international engineering company and an established technology provider for the global ironmaking industry. As a company of SMS group, Paul Wurth is a leading market player for the design and construction of complete blast furnace and coke oven plants. Direct reduction plants, environmental protection solutions and recycling technologies complete Paul Wurth's product portfolio. Presently, the company is focusing on the development of innovative solutions for leading the transformation of the steel industry towards carbon-free steel production. With more than 1,500 employees, Paul Wurth is active in the main iron and steelmaking regions of the world.

The University of Luxembourg is an international research university with a multilingual and interdisciplinary character. The University was founded in 2003 and counts more than 6,700 students and more than 2,000 employees from around the world. The University's faculties and interdisciplinary centres focus on research in the areas of Computer Science and ICT Security, Materials Science, European and International Law, Finance and Financial Innovation, Education, Contemporary and Digital History. In addition, the University focuses on cross-disciplinary research in the areas of Data Modelling and Simulation as well as Health and System Biomedicine. Times Higher Education ranks the University of Luxembourg #3 worldwide for its "international outlook," #12 in the Young University Ranking 2020 and among the top 250 universities worldwide.

EWM AG expands its XQ series

The right EWM welding machine for every MIG/MAG user

Mündersbach company EWM AG is expanding its XQ series in the area of MIG/MAG welding. Following on from the Titan XQ puls, Germany's largest manufacturer of arc welding technology is now releasing its new MIG/MAG multi-process welding machines - the Phoenix XQ puls and the Taurus XQ Synergic. Users and apprentices from industry, production and trade can now find the perfect XQ welding machine for every area of application. All members of the XQ family are energy-efficient, have a long service life and can be digitally networked.

www.ith its new Phoenix XQ puls and Taurus XQ Synergic, EWM continues to expand its range of modern welding technology. Welders and companies can now choose the right XQ welding machine for

Energy-saving

Maximum operating convenience, low power consumption, a long service life and perfect weld seams when welding low to high-alloy steel and aluminium in all material thicknesses and all pochines at no extra charge, also save significant energy and material costs.

Future-proof thanks to digitalisation The MIG/MAG multi-process



every area of application and every welding task. And to make sure of this, EWM AG is offering its customers a chance to test the new welding machines in their own day-to-day work, in addition to an individual consultation. sitions. That's what makes the Titan XQ puls, Phoenix XQ puls and Taurus XQ Synergic MIG/MAG multi-process welding machines stand out from the pack. The innovative EWM welding processes, included with the purchased mawelding machines with XQ technology can be digitally networked, as standard in Industry 4.0. They are compatible with the ewm Xnet software solution to support, document and analyse a component's entire production process, from



iar to EWM customers from the Titan XQ puls are now available for the Phoenix XQ puls and Taurus XQ Synergic. "Favourites" buttons make the user's work much easier: At the push of a button, the user can save the current set operating point and reload it later by simply pressing the button again. The functions of the EWM welding torches are also available with XQ technology. Parameters such as the welding process, welding current, wire feed speed, welding program and tasks can be displayed

The LP control (available for all XQ machines) has "Favourites" buttons that allow the user to save individual welding settings and parameters

work preparation to final costing, all completely paperless - saving time and ensuring quality. Making work easier at the push of a button The control variants already familand set directly on the torch. The days of traipsing back to the wire feeder are over!





SAFETY | STORAGE | EFFICIENCY

A peerless solution for the efficient handling of high value, long and awkward loads, Combilift is a perfect fit for the steel fabrication industry. Equipped for stamina over large sites, our solutions are a practical alternative to overhead cranes even when ground conditions are poor. Indoor and outdoor operation avoids double handling and ensures efficient transfer of product from trailer to racking while eliminating damage. Narrow and guided aisle technology can double storage capacity for cost-effective operation.

Mirror-smooth weld seams in next to no time

Spain's Cevisa: supplying machines of the future

"It really is a phenomenal machine." This is what Henk van de Graaf of the Dutch cutting company Riam in Tiel, says about the panel edging machine from the Spanish manufacturer Cevisa (Castellanos y Echevarria - Vitoria, SA). This has been in operation at Riam for around two years and ensures straight and mirror-smooth welding edges. The plates are immediately ready for welding, reworking is no longer necessary.

iam - Riam Dordrecht BV - now based in Tiel, the Netherlands, is a provider of high quality cutting work. The company started out with custom cutting for shipyards in the Rijnmond region, but has expanded its scope over the years. Around



tor/owner Siem van den Berg this also has its advantages: "You don't have to search so much. And if you have a lot of space, customers think they can take all of their material with them."

Riam cuts up to 30cm thick, and works with a partner for even thicker material. Two plasma cutters and an oxy-fuel cutting machine are set up for this. In addition, a plasma cutter is in production and a machine is kept in reserve. The company employs 23 people, working on a two shift basis.

Weld edge preparation

An important part of the service is the preparation of the weld edges. Welding edges can be made directly on the cutting machine, but reworking is then required before the plates can be welded. Milling produces much better weld edges. At Riam this has always been done manually, with a hand machine that moves along a plate over a rail. This is a labour-intensive

Setting up the edging machine is simple and user-friendly

1,500 customers from a wide variety of industries, including shipbuilding, offshore, petrochemicals, and wind turbine construction, are now supplied with both small and large quantities of products, and the company also supplies steel. "Our parts are everywhere", says Van de Graaf. "We often don't even know exactly what we're cutting. We get a sketch with the task: do it."

At the beginning of this year, Riam moved from Dordrecht to Tiel. Here the company has access to a much better and tidier production hall. It is a bit smaller than the hall in Dordrecht, but according to direceffort that generates a lot of dust and is accompanied by a lot of noise. More importantly, the processing speed is slow and the quality is not consistent. The hand-held machine is still in use, for processing round edges, for example, but there is also the Cevisa model CHP-60G plate-edge bevelling machine. This was made available by the company Th. Wortelboer BV from Heumen, which has been representing the Spanish manufacturer for 35 years. Van den Berg and Van de Graaf saw this machine at the Th.Wortelboer BV stand at the TechniShow. They rented the machine first to test it out extensively and then bought it.

Milling with inserts

The machine mills with carbide inserts, with two cutting edges. Seven inserts are inserted into a milling head with a diameter of 80mm. A bevel is milled onto a plate or part of a plate. The milling machine has a variable speed per minute and a separate drive for feeding and/or transporting the machine along the plate. The CHP-60G mills plate thicknesses up to

per minute and with steel we can even reach half a metre per minute. It's also very accurate. It mills much better than a manual machine."

Exceed limits

What Van de Graaf also likes is that he can get more out of the machine than the manufacturer and supplier promise. "You have to take it seriously and work



according to the regulations." These rules are not complicated. Setting up the edge cutter is simple and easy to use. A clear diagram shows for which material types/thicknesses, which feeds and speeds of the milling head are suitable. Setting the degrees and determining the zero point is

The Cevisa bevelling machine ensures straight and mirror-smooth welding edges. The plates are immediately ready for welding, no further processing is required

70mm, but Cevisa also supplies models for up to 100mm. The maximum bevel length is 60mm, which requires several runs. The machine can remove 28mm in one pass, regardless of the type of material. The angular position is adjustable from 15 to 70 degrees and the pneumatically adjustable working height from 750 to 950mm. The machine also has a spring-loaded chassis. This is an advantage if the plate sags. The machine adapts easily.

Processing speed

The bevelling machine is a mobile device on wheels. It weighs 800kg and can be pushed by one man. Riam placed them on three tables with a total length of 12 metres. Rollers are fitted in these tables so that one plate can be easily rotated to process the other side. "It works ideally. You adjust the machine, place it against the plate and it pulls through it. In the meantime, you can get yourself a cup of coffee", smiles Van de Graaf.

"We've improved tremendously in terms of speed. With the hand machine on a rail you can reach 180mm per minute. The Cevisa machine reaches 350-400mm

also child's play. "It has wonderful thermal protection", says Van de Graaf. "This way you can exceed the limits and get the most out of the machine without risk of damage."

Machines like these are the future, according to Van den Berg and Van de Graaf. "We're making real progress with this. If it is possible to get the job done on this machine, we will do so."

"Your next wish is a bevelling machine that can also provide the bottom edge of a plate with a welding seam. Such a model is also in the range", says Jeroen Wortelboer from supplier Th. Wortelboer BV. "Cevisa has an extensive range of chamfering machines. For example, there is also a device for milling J-chamfers. And if you are processing material that is only 10mm thick, the machine runs twice as fast. If you wish, you can also process 80 to 100mm per minute.

"Special models for stainless steel are also available, in which the steel wheels of the upper guide are coated with plastic and the rear guide is made of stainless steel. In this way you can serve each customer very specifically."

Metals Gateway, stainless vessels, and materials for seawater cooling systems

Latest Team Stainless Newsletter published

Team Stainless, an informal alliance of Eurofer, the International Chromium Development Assn, the International Molybdenum Assn, the International Nickel Study Group, the International Stainless Steel Forum, and the Nickel Institute, recently published the latest edition of the Team Stainless Newsletter. Below we describe some highlights from this issue, including information about Metals Gateway, stainless steel vessels, and a new publication on materials for seawater cooling systems.

he Metals Gateway online portal brings together a wealth of information to provide regulators and risk assessment professionals with the metals risk assessment tools they need to help protect people's wellbeing. The Metals Gateway package includes:

- Metals in the Environment factsheets on what makes metals different from other chemicals, how they interact with other substances and biological organisms under different conditions, water quality, pH etc.
- REACH Metals Gateway guidance for the EU and International Metals Industry in the implementation process of the EU REACH and CLP Regulations. The REACH Metals Gateway allows quick and structured access to relevant information from authorities and from the metals industry.
- The Metals Toolbox tools and guidelines to enable regulators and stakeholders to accommodate metal-specificities in hazard identification and risk assessments.

Developed by a group of metal commodity associations and led by Eurometaux, this free and open knowledge platform provides easy access to science-based models, data, literature, factsheets and information that are essential for understanding why the risk from metals exposures are different from other substances.

"Protection of the health and safety of consumers, workers, communities and the environment is a prerequisite of equitable and productive societies", says Violaine Verougstraete, chemicals management director, Eurometaux. "Every individual and institution has a role to play in ensuring the wellbeing of all. This objective is enshrined in the UN SDGs and is particularly acute as the world responds to the largest public health crisis in modern history.

"The metals sector understands the pressures and challenges that regulators are under with respect to chemicals and has worked with regulatory authorities to generate metal, metal compound and metal-containing material-specific hazard and risk assessment data for over two decades, investing many millions of dollars in basic and applied science.

"Metals and inorganic substances behave differently from other substances in the environment, in the bodies of humans and animals and in combination with each other and other chemicals", added Verougstraete. "The metals sector recognises that such differences are not necessarily well understood by all and nor are the data and tools required to assess metals and metal substance risks readily available. This is why we have developed the Metals Gateway, as a 'one stop shop' for those charged with regulation and risk assessment of metals."

"Eco friendly waves?

Highlighting a recent item from the Molybdenum Assn, the latest Team Stainless Newsletter also included an excerpt from MolyReview 2/2020 looking at the use of stainless steel for vessels. Here we briefly summarize the content of the excerpt.

Typically, the item states, stainless steel is not even under consideration for ship construction but, it says, that may be changing. Governments and businesses, the article says, are starting to take an interest in a new, low-maintenance and environmentally friendly ship hull, built entirely from high-strength, molybdenum-containing super- and hyper-duplex stainless steel, at no additional cost.

While ships, the article states, are most commonly made of steel, aluminium or fiber reinforced plastic, stainless steel, it indicates, can be a viable alternative for a number of reasons. Super- and hyper-duplex stainless steels combine high-strength and outstanding corrosion resistance, as was realised by the entrepreneurs Håkan, Petra, and Alistair Rosén of SSY, which would allow a significant reduction in the thickness of the hull, and hence the weight of the vessel, improving fuel efficiency. By using a special construction technique, buckling under wave load can be avoided despite the use of thin sheet, thus making duplex stainless a viable alternative.

Whilst weight reduction is a primary driver for using duplex stainless steels, a further advantage is their ability to resist the severely corrosive nature of seawater without protective coating. Both duplex stainless steel alloys used in the design contain more than the 2% molybdenum found in grade 316. Superduplex 2507 contains around 4% molybdenum and 3207 hyper-duplex contains around 3.5%. These levels of molybdenum significantly increase the corrosion resistance of the material.

A first 10.8 metre prototype vessel successfully set sail on its maiden voyage in 2014, the article says. Two more prototypes, 7.5 metres and 17.5 metres in length followed, with plans to build another six in the near future.

The article concludes that there are numerous other opportunities for marine applications that can benefit from the durable, lightweight design developed by the company, such as, for example, static floating hulls for solar and wave power generation, and potential applications include the building of much larger ships such as super and mega yachts of more than 100 metres in length, and even perhaps the development of giant vessels such as container ships and cruise liners.

For further details of this item, readers should consult

MolyReview 2/2020 published by the International Molybdenum Assn.

New publication on "Materials for Seawater Cooling Systems"

Both high alloyed nickel-containing stainless steels and nickel-containing copper alloys are used in seawater systems, but each family finds its particular application area, which is not adequately covered in the existing literature. A totally new publication, written by Nickel Institute consultant Dr. Roger Francis, addresses this issue based on his long experience in this field.

The copper alloys assessed include copper-nickel alloys (one with 10% and another with 30% nickel) and nickel aluminium bronze (4.5% nickel). The stainless steels assessed include the 6%Mo family (18-25% nickel) and duplex alloys (6-7% nickel). The publication, available on-line, is expected to be of particular use in countries in Asia and the Middle East where seawater is commonly used in chemical and petrochemical plants.

The paper discusses the properties and corrosion resistance of both alloy classes and points out where one alloy option might be preferred. Provided the recognized limits of use of these alloys are observed in design, both options can give a long and successful life. Some case histories are presented to demonstrate both successes and premature failures.

This highly detailed publication is divided into a number of sections, covering alloys; fabrication; corrosion, including pitting, crevice corrosion, erosion corrosion, and stress corrosion cracking; chemical additions and pollutants; and service experience.

The paper concludes that there are both advantages and disadvantages to the use of copper alloys or high alloy stainless steels for seawater cooling systems. When selecting materials for a specific plant, it is important to consider a range of factors to determine the most cost effective option. For a single plant not all the systems need be in the same alloy and examples have been quoted where this has been effective.

Group shows good resilience in 2020

Eramet Marketing Services: new entity to focus on marketing

Resulting from the merger on January 1, 2021 of Eramet Comilog and Eramet Nickel, Eramet Marketing Services brings together all the support departments (purchasing, human resources, etc) for the various operational entities and businesses of the Eramet Group's Mining and Metals Division. As such, it is a vital link between the operational teams in the mines and processing plants and the customers.

The full spectrum of the Group's products - from manganese to nickel and mineral sands - is now being marketed via this single point of entry. The aims?

- Streamlining the sales process as well as management and invoicing
- Responding to market needs as effectively as possible, via:
 - o a network of international sales offices, located as close as possible to customers;
 - a global and integrated supply chain management system to ensure competitive transport costs; and
 - regular cooperation with customers to ensure optimal use of Eramet products in their manufacturing process.

Paul Desportes, sales director of the Mining and Metals Division said: "Eramet Marketing Services will enable us to further enhance our business performance. We are gaining in efficiency and performance, which is a major factor in increasing customer satisfaction." Meanwhile, commenting on the results for 2020, Christel Bories, Eramet Group Chair and CEO said: "In 2020, the pandemic brutally disrupted our ecosystem. In particular it resulted in a major economic crisis in the aerospace sector, the main end-market for our Aubert & Duval subsidiary.

"Thanks to our demanding roadmap, the mobilisation and agility of our teams, as well as a responsible crisis management, we have recorded remarkable successes in our mining activities and succeeded in seizing opportunities, despite the disruptions. We were also able to control cash consumption, particularly in our High-Performance Alloys division whose responsiveness was exceptional in the second half of the year, and our debt was substantially reduced at end-2020 compared to end-June.

"2021 starts off with good momentum in the raw material sector. We will continue to develop our manganese production in Gabon, grow our nickel ore production in Indonesia, and optimise our mineral sands activity in Senegal. We are also paying close attention to the set-up of all conditions necessary to properly implement SLN's rescue plan in order to ensure a future to this subsidiary.

"In the High-Performance Alloys division, our priority remains to adapt costs to production levels within a depressed aerospace market. In parallel, we are working on the terms for a possible divestment of Aubert & Duval, to bring out a satisfactory offer and ensure the future of this strategic activity for the sector.

"Eramet's transformation started almost four years ago is demonstrating its relevance, with a new agile and sustainable business model, thereby strengthening the Group to create value and take full advantage of the post-crisis period."

The Group's turnover totalled Euro3,553m in 2020, down slightly by -3% (-2% at constant scope and exchange rates). The strong growth in manganese ore sales volumes (+37%) and nickel ore exports (+55%) offset the significant decline in manganese ore prices (-19%), as well as the decline in aerospace sales at Aubert & Duval.

Group EBITDA totalled Euro398m. The Group made major intrinsic progress, particularly in the second half, strengthened by the favourable seasonality. However, external factors weighed very heavily on performance, owing to the impact of the pandemic.

Current operating income came to Euro 106m, mainly after booking a depreciation expense on fixed assets of Euro -281m.

Net income, Group share recovered sharply in the second half (Euro-52m). It ended at Euro-675m for the year, reflecting asset impairments linked to the crisis (Euro-498m), notably A&D (Euro-197m), the mothballing of the lithium project (Euro-113m) and the closure of the metal manganese business in Gabon (Euro -83m, booked in the second half). The share of income in the Weda Bay Nickel joint venture in Indonesia contributed Euro79m to net income, Group share in 2020.



Nickel BU

Nickel BU markets were hard hit by the sharp fallback of the stainless steel sector in 2020, despite a strong recovery in China in the second half. As a result, ferronickel prices were at a strong discount compared to the LME for the year, which impacted the financial performance of SLN. However, strong growth in nickel ore prices and exports, combined with an increase in LME prices in the fourth quarter enabled SLN to post a turnover of Euro 727m (+9% compared to 2019), and EBITDA at Euro48m, in an unstable local context.

The Sandouville refinery recorded a loss of EBITDA of Euro-31m, in sharply declining markets due to the effects of the pandemic.

The Nickel BU posted a turnover growing by 16% in 2020 to Euro905m, including Euro75m linked to the offtake agreement at Weda Bay Nickel, where metallurgical production started successfully in the spring. The BU's EBITDA totalled Euro 21m, down 45%.

High-Performance Alloys

The unprecedented collapse of the aerospace sector, coupled with a steep downturn in the automotive sector strongly affected the performances of the High-Performance Alloys division from the second quarter 2020. Turnover for the division was down -20% to Euro680m, with EBITDA of Euro-119m.

Aubert & Duval's (A&D) turnover decreased by -16% to Euro539m, with EBITDA of Euro-87m and negative FCF at Euro-153m for the period, in clear recovery in the second half (+Euro3m).

Erasteel saw its sales fall by -31% to Euro142m in 2020, and recorded EBITDA of Euro-32m.

Outlook

The markets of the Mining and Metals division remain well-oriented at the start of 2021, mainly thanks to the momentum of the Chinese economy, with an improved short-term outlook in Europe and the United States. However, the overall economic context for raw materials remains uncertain for the year.

The High-Performance Alloys division is suffering in its main market from the crisis in the aerospace sector, which is expected to take several years to resolve. However, it benefits from a solid outlook in the national sovereignty and energy markets as well as the expected recovery in the automotive sector.

In 2021, the Group continues to implement its strategic roadmap with further significant intrinsic progress expected. Group capital expenditure could total around Euro300m in current capex and around Euro200m in growth capex to support organic development, mainly in manganese.

Based on a consensus of average manganese ore prices at \$4.5/dmtu and LME nickel prices at \$7.5/lb for 2021, forecast EBITDA of approximately Euro600m is expected in 2021, significantly higher than in 2020, with a considerably more favourable seasonality in the second half.

This outlook is in line with the momentum of the start of this year, without an economic setback linked to the pandemic. It is in line with the Group's strategic roadmap, and aim to make Eramet's business model even more robust, in order to strengthen the Group and take full advantage of the post-crisis period.

Market/Trader Prices for Stainless Steel

Prices quoted are distributor selling prices for larger quantities including surcharges eg 1-tonne parcel. Extras are payable for smaller quantities. In Germany, for example, the following extras typically apply:

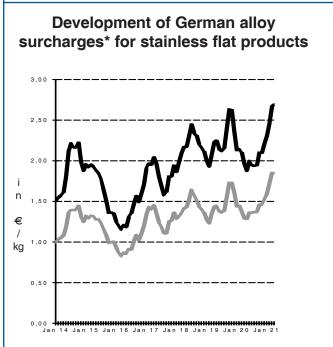
Under 1,000 kg to 500 kg Under 500 kg to 250 kg Under 100 kg to 50 kg	€ 0.10 € 0.25 € 1.20	Under 250 kg to 100 kg€ 0.55Under 50 kg/single sheets€ 1.70		
		Date	1.4301	1.4571
			/kg	/kg
■ Germany		30.03.2021	€ 3.00-3.20	4.50-4.70

RAW MATERIALS				
	Date	US\$/lb	£/kg	€/kg
Nickel (LME) NB: LME nickel prices are quoted in dollars. Euro and £ prices are given here for guidance only	30.03.2021 29.03.2021 26.03.2021 25.03.2021 24.03.2021 23.03.2021 22.03.2021 19.03.2021 18.03.2021 17.03.2021 16.03.2021 15.03.2021	cash3 mths7.417.427.377.397.377.407.257.267.327.347.507.527.457.477.317.347.267.287.327.347.337.36	cash3 mths11.8811.9011.8211.8511.8211.8711.6311.6411.7411.7712.0312.0611.9511.9811.7211.7711.6411.6711.6311.6711.7411.7711.7511.80	cash3 mths13.9213.9413.8513.8913.8513.9013.6213.6413.7513.7914.0914.1314.0014.0413.7413.7913.6413.6813.6213.6813.7513.7913.7713.83
Ferro-chrome				
■ charge chrome (net price)*	Quarter 2/21 Quarter 1/21 Quarter 4/20 Quarter 3/20	1.56 1.18 1.14 1.14	2.50 1.89 1.83 1.83	2.93 2.22 2.14 2.14
■ spot market (high carbon)	16.01.2012	1.15	1.84	2.16
Molybdenum (LME)				
3 months	30.03.2021	10.95	17.56	20.57
Stainless Steel Scrap major dealer buying prices ■ Germany (sheet cuttings, 18 % Cr, 9 % Ni)	18.03.2021			1.27

	Sheet	Welded tube	Bar	Bright bar	Wire rod			
		in €/t						
February 2021								
1.4016	701	806						
1.4301	1,720	1,978						
1.4571	2,462	2,831						
March 2021								
1.4016	758	872						
1.4301	1,851	2,129						
1.4571	2,666	3,066						
April 2021								
1.4016	823	946						
1.4301	1,853	2,131						
1.4571	2,693	3,097						

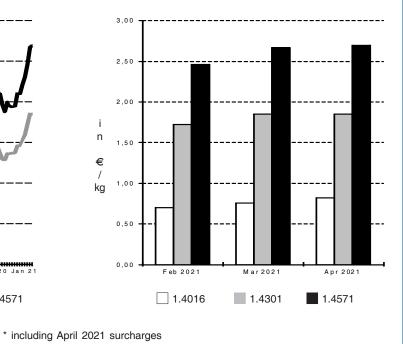
Development of German alloy surcharges for selected

February - April 2021



1.4571

Surcharge development* 3 months comparison



1.4301

We want your scrap

Maximisation of scrap return

Optimisation of logistics process

Consultancy in risk management and commodity prices













Oryx Stainless is one of the leading companies in the trade and processing of raw materials for stainless steel production. We offer our business partners an ideal combination of diverse strengths: price leadership, competence and individual consultation as well as an international network and a strong balance sheet. Together with us, you remain at the top of your industry. Do you have an interest in our spectrum of service?

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