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E-shops, marketplaces, trading systems

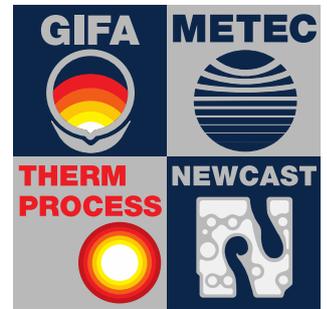
The future of metal trading is digital

The fax and telephone era in the steel and metal trading business is coming to an end. The winners will be the traders who have been quick and purposeful in the digitisation of their processes. The development will lead to fully automatic steel supply via the Internet of things – with or without steel traders.

Some outdated practices have survived in the steel community. The fax machine is one of them. While everyone nowadays has a smartphone in his pocket and social media have been an accepted feature of everyday life for a long time now, modern communication in steel trading still revolves around landline phones and fax machines.

The times are changing, however. “Digitisation of steel trading has only reached the early stages of dynamic development”, says Dr Heinz-Jürgen Büchner. The Managing Director of IKB Deutsche Industriebank in Frankfurt sees customers as the driving force. “As in other trading segments, the trend towards digitisation is in the final analysis likely to be driven by the customers here too.”

Many steel manufacturers are ahead of this. Offers to communicate with steel manufacturers digitally are already being accepted by many steel customers, as the industry expert made clear at an event organised by the steel trading association BDS. Büchner’s conclusion: “In the short or long term, it will therefore be necessary for steel traders to follow suit”.



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At the European level, more than one third of steel sales is transacted via direct sales from the steel mill to the customer. Large customers in the automotive industry in particular buy steel directly from the mill in the context of lengthy contracts. A further 37% is sold via steel service centres. These companies, which specialise in services and machining, operate between classic material traders and manufacturing industries – frequently acting as the services division of steel traders, who lengthen their added value chain via machining, i.e. rolling, sawing, drilling, welding, thread cutting, bending or finishing of steel and aluminium. What the modest word “machining” involves extends as far as the production of complex components for the automotive, construction and machine manufacturing industries.

“It is a striking fact that the percentage of direct deliveries by steel manufacturers is substantially larger with higher-quality steel”, says Büchner. More than half of coated flat steel products are supplied directly to the end-users by steel manufacturers, for example. The customer-specific solution and the need for more extensive explanation in sales transactions are apparently frequent reasons for this. The analyst concludes that this is both the risk and the opportunity for steel traders: “If the steel manufacturers can be matched via smart digital distribution channels, the loss of market share to them could be stopped”. Büchner emphasises that this is a challenge to steel traders: “Failure to tackle this challenge will be punished, however.”

Gisbert Rühl is keen to avoid this punishment. Impressed by the success of the Amazon online marketplace and in search of new business ideas, the CEO of Klöckner & Co., the steel trading company from Duisburg, began by studying current ideas in Silicon Valley and then continued with an investigation of the start-up community in Berlin. Klöckner, a company with a tradition that goes back more than one hundred years (it was established in 1906), has been



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transformed into a digitisation pioneer under Rühl's leadership. Far away from the steel heartland in the Ruhr region, Rühl set up the creative laboratory kloeckner.i in Berlin in 2014, which has been providing the corporate headquarters in Duisburg with fresh ideas from the trendy German capital since then. The steel trader went online with a new web shop in 2016, for example: a steel trading platform that contains data about suppliers and customers. The aluminium business has been expanded at the same time.

Klöckner's aim in digitising steel and metal distribution is to initiate the end of the linear supply and performance chains that are typical of the industry. It is reported that steel and metal products will be traded via three digital channels to an increasing extent in future: via propriety online shops operated by individual traders, via industry-specific, vertical platforms and via cross-sector, horizontal platforms.

What Amazon is for Klöckner CEO Gisbert Rühl is the online car marketplace Mobile.de for Ralf Niemeier. The managing partner of Montanstahl GmbH aims to network steel traders and customers neutrally with his open trading platform steel.online that was established in 2015. Steel users can submit price inquiries about practically all kinds of steel products to the portal, to which registered traders all over Germany can respond by submitting their quotations. Predefined product categories, geometries and dimensions facilitate input and the search for online quotations. Estimation is to be carried out fully automatically in real time in future. A designer could then upload his entire part list to the platform – with predefined lengths, dimensions and other general conditions – and make a national inquiry. Irrespective of the inquiry volume and complexity, he is then supposed to be able to receive his prices within seconds via dynamic automatic estimation modules and place an order with a single click.



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Disruption of the old business models

For the steel trading business, which is bound by tradition, digitisation is not simply a cultural upheaval – it represents disruption of the existing business models. For decades, steel was bought in large quantities as inexpensively as possible and stored. If prices increased, traders sold with high margins. It is not, however, possible to buy steel cheaply and sell it expensively at some future time any more, since structural excess capacities all over the world – particularly in China – are flooding the market and depressing prices. It is no help in the long and medium term either that steel prices increase again temporarily.

Steel trader Klöckner is supplying its approximately 130,000 customers in 12 countries digitally to an increasing extent, as Christian Prokopp, Director of kloeckner.i GmbH confirms. “We have increased the percentage of business accounted for by digital sales successively to 16% most recently in the third quarter of 2017. This corresponds to an annual volume of about one billion euros”, the digital expert stresses. He reveals that Klöckner is observing a cross-sector trend towards online ordering. It seems that ordering patterns differ according to the size of the customer, however. “Larger customers from the automotive or machine manufacturing industries like to place orders directly with us via EDI connections or via appropriate interfaces in their inventory control systems. Smaller building companies or craft businesses, on the other hand, prefer our online shops”, Prokopp explains, adding that what is particularly interesting is that not only existing customers are ordering online to an increasing extent: “Thanks to our digital sales channels, we have already obtained a substantial number of new customers in a fiercely competitive market”.

The next steps are coming up in online business. “Now that we have already achieved very good success in the digitisation of our sales



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channels and the internal processes, the focus in 2018 is on expansion of our product range that is available online. To this end, we are expanding our online shops into marketplaces, by opening them up to complementary products from third parties”, says Prokopp, who adds that Klöckner is at the same time establishing XOM – an entirely open industry platform independent from Klöckner and incorporating direct competitors.

Material expertise is required

The steel manufacturers themselves – companies like ArcelorMittal, thyssenkrupp and Salzgitter – have also recognised the opportunities offered by direct online trading and operate web shops of their own. Potential customers are, for example, the roughly 36,500 small and medium-sized metalworking companies with their 465,000 employees. The typical steel builder needs to find the next order almost as soon as he gets back from the building site. When tenders are invited for a warehouse or staircase, for instance, he should be familiar with the material costs. The traditional procedure involves the steel builder submitting an inquiry to the trader via fax or phone – not unusually including a request to be phoned back and the waiting time associated with this. He only receives an answer during normal business hours anyway. Days can as a result go by before a steel builder can submit a binding offer. In an e-shop like the one operated by Salzgitter, products needed for the design in question can be compiled online, prices can be obtained immediately and estimates can be made.

The Amazon principle of buying conveniently online whenever and wherever the customer wants – at home at half past two in the morning or on Sunday morning while on a skiing holiday – is the model in B2B business too. Not all online material traders go as far as thyssenkrupp in this context, however. The latter’s new e-shop materials4me focusses not only on professionals but also on ambitious



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DIY enthusiasts. In doing this, Germany's biggest steel manufacturer is competing with such cross-sector platforms as Amazon, Alibaba and Google, all of which offer materials like steel and aluminium, albeit only a very limited selection of standard products without any major service.

Steel is not a standard material, however; it is instead a structural material that can be put to many different uses and is available in Germany in about 2,000 flat steel or long versions. Steel products are alloyed, rolled and shaped in accordance with the customers' requirements. Users regularly expect steel mills to come up with new solutions to problems and steel manufacturers open up new markets for their customers by supplying innovative products. The business therefore requires intensive consultation, so that steel trading and service operations are very diverse.

Opportunities for newcomers to online trading

Whereas major steel traders like Klöckner or steel manufacturers like thyssenkrupp operate their own online shops, a shop of their own is often too complicated and too expensive for smaller traders. For customers, it is in addition too time-consuming to have to search different shops in order to compare offers. Newcomers to online trading establish contact between as many traders as possible, including smaller ones, and customers.

"There are in general surprisingly many successful entrepreneurs in the steel trading business who are open to change and are looking for new opportunities for pioneering activities", says Stefan Grethe. Before the young entrepreneur established an online marketplace for steel in 2014 with the start-up company Mapudo in Düsseldorf, he worked for the thyssenkrupp steel trading operations. "As project manager, I analysed the customer and order portfolios of nine sales



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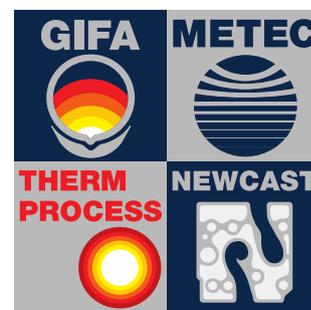


companies in Europe, the USA and Asia and discovered: the situation is the same all over the world and there is considerable digitisation potential in stock-holding steel trading.”

The response to Grethe’s answer from the steel industry varied. “Many found the approach very good, while others thought it came too early or rejected the concept categorically.” Even large market players like the global steel pipe manufacturer Vallourec are among the partners in the online marketplace for materials today. “It is very evident on the supplier side that steel and non-ferrous metal traders have become much more open to the idea of selling via online marketplaces”, Grethe is pleased to report. The customers come from many different industries, from fitters to steel and metal builders and from medium-sized industrial companies to large industrial maintenance groups. “What they all have in common is that they need to procure materials quickly and simply, in order to have more time for activities that add value”, the Mapudo founder says and points out that developments in the second half of 2017 in particular were very encouraging; the total transaction volume was higher than expected. Further services like machining are to be added in future. “The initial steps in this direction have been taken with mitre cutting and sheeting with customised dimensions, but a great deal still needs to be done”, Grethe admits. To him, the fundamental rule is: „Where we can create added value, we will develop new functions in liaison with suppliers and buyers.”

Jürgen Wixler, Director of alloys2b GmbH in Munich, has modelled his operations on the way social media work. Alloys2b has focussed on steel mills and foundries that need master alloys, alloys and non-alloyed material.

“We started with a marketplace and very quickly developed into a software-as-a-service (SaaS) solution”, explains Wixler. Alloys2b operates on the basis of the principles of a private tendering platform: buyers compile their own supplier pool, with whom they trade,



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and the invitations to tender go only to these suppliers. Comparable to a friendship request on Facebook, customers can invite new suppliers by e-mail and thus test the first stage of future co-operation, before expensive background checks are made. In this context, the system acts as a fast, digital communication channel between the participants. “The special features of alloys2b are simple operation and product customisation – an in-house development”, Wixler promises. “This enables standard products to be found and, if necessary, be adapted to individual requirements or complex products can be created – all without the need for familiarisation or prior workshops.”

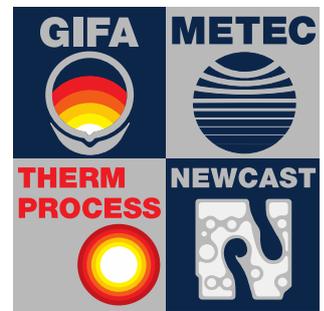
Wixler has developed the system into a kind of social media platform for business customers. The extended platform is already online as a trading system for agricultural buying and selling. “At the moment, we are looking for partners to introduce the new trading system in the metal industry.” Wixler is convinced: “We believe that the future of metal trading lies in an open platform and not in isolated solutions.”

The machine orders steel

What will the future of steel trading be like? Everyone agrees: “The future of steel trading is digital”. While there is further agreement that the winners will be the traders who have who have been quick and purposeful in the digitisation of their processes.

It is, however, also possible that many steel traders will no longer be needed at all in future.

In the Industry 4.0 era, developments will lead to digitisation of the entire supply and added value chain. In smart factories, stocks and machines are connected to each other directly via the Internet of things (IoT). If the system identifies that the steel available on the production machine is running out, an order is placed – with the steel trader or directly with the steel mill. What sounds futuristic



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could soon become reality. That at least is what the start-up company Axoom thinks, that has created a complex Industry 4.0 ecosystem. The company from Karlsruhe has been established by the machine tool manufacturer Trumpf. Its partner in this venture: the steel trader Klöckner.

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