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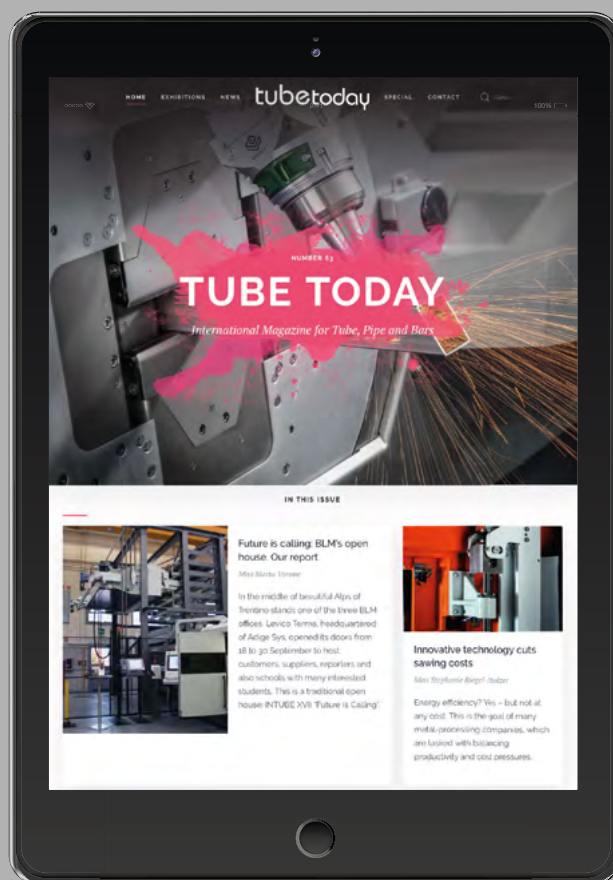
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## EDITORIAL

Alberto Manzo



What to say? There was really a need for it. After the pandemic, or perhaps it is even better to say "during a pandemic", the war. From a strictly industrial point of view, the transition to the contemporary age has caused an inversion of the role of war in development: if, up to the Second World War, wars had, as a side effect, a decisive technological progress, just think of the development of the jet or rocket engine, from the Korean War onwards the war has always been a chasm into which human lives, entire existences and also incalculable quantities of raw materials, resources and economic potential have been thrown.

The war in Ukraine fits perfectly into this vein of senseless destruction: if, according to an old definition, war is the nation-state version of aggression for the purpose of robbery, in this case, whatever the final spoils, there are strong doubts that the game is worth the candle, given the amount of lives and resources inexorably thrown into the cauldron of conflict.

According to estimates by the National Institute of Economic and Social Research, the war in Ukraine will cost the world one point of GDP, about \$ 1 trillion.

Sanctions on Russia alone will cost 22 billion of euros to Italy due to the decline in exports, especially as regards luxury items, machine tools and technological products, not to mention the difficulties due to increases in raw materials and energy. There are over 300 Italian companies that have commercial relations with Russia, the 14th trading partner in the world.

As for the European Community, the value of exported goods is 79 billion euros, while imports amount to 95.3 billion. Despite the sanctions following the war in Donbass and the annexation of Crimea in 2014, which caused a reduction in Russian exports by more than 50 billion euros per year between 2010 and 2020, the European Union remains the first trading partner of Russia.

In short, if for the whole of the nineteenth and part of the twentieth century for a large part of the industry, war could be a resource for development, increase in turnover and technology, in the twenty-first century it became a bad investment, except for the companies of the defense, and even for them up to a certain point. In fact, the costs of a war are too high for one to think that it will last long enough to make it an excellent deal: in the short term, peace is much more profitable.

Now that the worst of the pandemic seemed to be over, a conflict restricted from a military point of view but on a global scale as regards the economic consequences risks stifling in the bud the recovery which, thanks to the measures of NextGenerationEU, was taking on decidedly marked characters, with a GDP growing between 4 and 7% in the Euro area. Just over a month of conflict has caused estimates to drop to around 2%, also following the disproportionate increases in energy costs. Squeezed between the decline in exports and the increase in costs, manufacturing is struggling in search of solutions that are not yet seen on the horizon: if, on the one hand, the cost of gas had already increased for the industry in January of 423% compared to 2018, on the other hand 2021 had marked a record figure, both at European and Italian level, with a very rapid recovery compared to the black crisis of 2020. And now? Now we hold on: the contracts signed in 2021, fulfilled in the first and second quarter of 2022, will not necessarily be able to take into account the increase in production costs for machine tools. And also for the future, the adjustment of prices to the new costs, both of the raw material, steel, produced by energy-intensive companies such as steel mills, and of the energy used for production, does not appear to be a viable path, even for large competition on the market that leverages the final price. We hold on and hopefully for the best: the rows of the Tube in Dusseldorf, we are sure, will all be rumored: whoever finds the solution to this equation with too many variables will have secured a place in the market of the future.

**NEWS**

Covid and War: even companies are paying...  
Crippa acquires SMI: a new company leader in Hvacr...

6

8

**NEWS**

From the business world

10

**CURIOUS NEWS**

From the world

28

R.T.S.

1 cover

R.T.S.

2 cover

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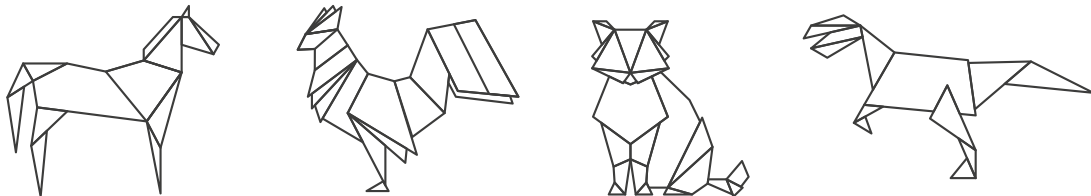
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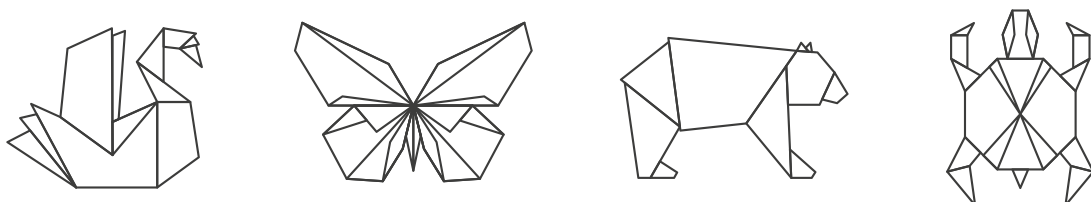
3 cover

ALPIGNANO MARCO

4 cover



# COMMUNICATION GETS A GOOD SHAPE



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# Covid and War: even companies are paying the consequences

In a long article published on Bloomberg it is explained that "Russia and Ukraine combined provide about 15% of all of the imported metal to the U.S., according to the U.S. International Trade Administration. Russia also supplies a key ingredient for welded goods, known as coupling stock". Starting from this reasoning, it's easy to understand that - due to war - it's not a good time for the worldwide pipe trade.


Bloomberg continues: "U.S. price for the pipes, known as oil-country tubular goods, or OCTG, hit \$2,400 per ton this month, up 100% from a year ago, according to data from KeyBanc Capital Markets. The increase is driven by demand and concern that Russia's invasion of Ukraine will sink pipe and tube imports from the region". To these problems must be added the shortage of steel and the global energy crisis, as well as increasingly expensive pipes and, in general, ever higher

costs for environmental policies. The largest cost increase over the past 12 months for the oil and gas industry is from tubular steel.

The reasons for this complications are: two years of pandemic and now the war, which undermines the modern model of globalization. The consequences for future could be: less interconnection across nations, necessary connection with manufacturing companies and components from Asia, search for internal solutions to achieve self-sufficiency (is an example the case of Russian's gas), customs that slow down and more regulations bureaucracy for the resources.

La Stampa, in an interview with Carlo Bonomi, President of the General Confederation of Italian Industry, reported: "According to the Association's Study Center in the first half of 2022, when the negative effects of the war will fully unfold, the economy Italian would enter into a technical re-

RTS

 Written by: Eugenio Giannetta

cession with a drop of 0.2% and 0.5% in the first two quarters. The economists have also outlined an adverse scenario, should the conflict extend until December 2022 and a third severe scenario, in the



hypothesis that the Russia-Ukraine conflict continues until end of next year".

A prolongation of the conflict, it is continued: "Would reflect above all on the prices of energy goods, in particular gas and oil, and of some agricultural commodities, but also on the correct functioning of global value chains and international trade, on the confidence of operators through the channel of uncertainty and on the financial markets. In the "adverse scenario, the growth of the Italian economy would stop at + 1.6% in 2022 and + 1% in 2023 against the 1.6% estimated today. In the severe scenario, GDP growth is limited to + 1.5% in 2022 and retreats (-0.1%) in 2023".



## FROM THE EDITORIAL

### NEWS

#### THE ECONOMIC IMPACT OF THE WAR ON BUSINESSES

Businesses are once again in trouble: after the pandemic, with its important economic consequences, they are now in trouble because of the war between Ukraine and Russia. The sanctions imposed on Moscow by Western countries are having consequences on various sectors and industries. Among the sectors most affected by the war is the steel sector, but also automotive, wood, ceramics and agro-industry. Obviously, the impact is also social: the repercussions of this state of crisis mainly affect workers, as well as the Gross Domestic Product.

The iron and steel sector in Italy counts 551 companies and about 42 thousand employees. Large numbers that highlight how problematic it can be to interrupt or slow down activities. To this problem is added the increase in energy costs, which is forcing many companies to stop production. In addition to energy, the price of nickel, indispensable for the steel industry, has also risen. To deal with this series of problems - reported Today - the European Commission has given governments the opportunity to use public money to counter the negative impact of the conflict and offer liquidity to companies as support. Government aid to help companies in difficulty could also translate into extraordinary redundancy payments and social shock absorbers, on the model already implemented during the Covid period.

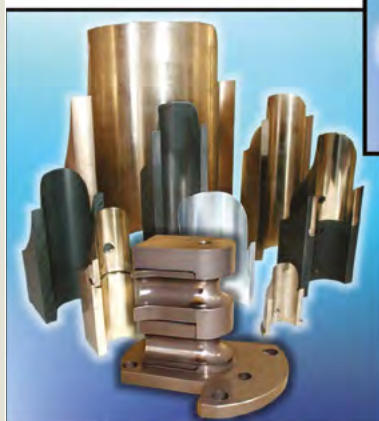
According to Ispi "in the first weeks of conflict between Russia and Ukraine, the EU economy has already lost 0.5% growth. In the worst scenarios, the slowdown could be even greater (up to 2% of GDP). Still much less than what could happen in Russia (-10%), but still a significant slowdown. Compared to the beginning of March, the shock on raw materials seems to be receding, but prices remain much higher than at the beginning of the crisis, and are part of a context of increases that have already been very sharp for at least a year. The strongest effects of the conflict will be indirect: energy costs, in

particular, are putting and will continue to put European industries in serious difficulty".

The consequences of this situation should mean an economic slowdown and rising prices, with a major impact on the overall resilience of European economic systems. According to some forecasts by the European Central Bank, the impact of the war on growth in the Eurozone will almost certainly be high: "The consequences resulting from the first week of invasion would have already reduced growth by 0.5% (from 4.2% forecast at the beginning of the year to 3.7% today)".



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# Crippa acquires SMI: a new company leader in Hvacr sector

Common goals and complementary industrial solutions. This is the meaning of an agreement, that of the acquisition of SMI srl by Crippa spa, which cannot but make noise in the world of machine tools. In fact, on March 8th, the two leading companies in the design and construction of processes for shaping metal pipes signed an investment and integration agreement for the creation of a single industrial group. SMI srl brings with it the technology and knowledge of the market in the HVACR field that Crippa spa was seeking, building a real giant in the design, construction, sale and post-sale of machinery for the processing of the tube: the goal is to create a large cohesive group that maintains the DNA of both founding companies. The collaboration, the mutual exchange of information, the production chains of Crippa S.p.A. and SMI S.r.l. they will be maintained and implemented on the territory of the two production companies, confirming the value of the current collaborators.

The new group aims to exceed 50 million euros in revenues and 10 million in gross operating margin, starting from 37.5 million in

revenues of Crippa spa in 2019 which generated an Ebitda of 8.2 million euros and over 10 million turnover of SMI srl.

As part of this operation, Crippa spa has signed a medium-long term loan agreement with Illimity Bank Spa for a total of 13 million euros.

The current top management team includes, in addition to Antonio Crippa (President), Claudio Viscardi (CEO), Enrico Mangini (COO), Claudio Spinelli (CSO), Carlo Fratini (Business Development), Domenico Fulco (CTO) and Roberta Vaghi (CFO). Sergio Campeotto will join the Crippa Board of Directors and will also hold the role of CEO of SMI in order to facilitate the integration between the two realities.

The history of SMI began in 1978 when the founding partners Giuseppe Faurlin and Sergio Campeotto set up the FCF company, which specializes in precision mechanical machining for third parties.

The history of SMI is the history of a progressive creation over the years of an integrated industrial group, capable of synergistically covering different application sectors, thus composing an over-

## CRIPPA

 Written by: Dott. Alberto Manzo

all response of solutions to the Customer.

SMI was founded in 1990: initially a commercial structure for FCF, it soon became a management and production center for the construction of CNC machines and equipment for processing pipes in all types of metals and alloys.

The third member of the family, IMEV, dedicated to light and heavy carpentry, was incorporated in 1998.

The current structure of SMI, officially established in 2009, therefore inherits an important wealth of already qualified and trained human resources, an already structured technological park, certified production processes.

The specific function and the added value of SMI's establishment therefore lies in the integration of the three companies in terms of vision and objectives, consolidating an overall position of market leadership on a vast spectrum of applications, creating CNC machines and systems for various industrial partners. :

- refrigeration, heating, air conditioning and air conditioning;
- automotive sector;
- household appliances industry;
- alternative and renewable energies.

The process of generational renewal of the business activity started with the involvement of the children of the historical owners, SMI occupies an area of 30,000 square meters, 14,000 of which are covered, and employs 120 employees, with a paid-up capital of 3 million euros





## FROM THE BUSINESS WORLD

### NEWS

Founded in 1948 as a single-member company by Agostino Crippa and which became a joint stock company in 1977, Crippa S.p.A. has been involved for over 70 years in the design and manufacture of machines and processes for the bending and processing of metal pipes using cutting-edge technological solutions.

In 2020 Astraco, an independent advisory company that organizes and structures Private Capital investments in the form of club deals, completed the acquisition of the majority stake by Crippa S.p.A. by a vehicle company set up ad hoc and capitalized by the club's investors with the aim of continuing the growth and development project already underway and achieving new goals and new successes.

The club deal formula is the same one chosen by Astraco srl to finalize the acquisition of SMI srl: the club deal is a particular private equity formula, built to give hi-

gh-value individual investors the opportunity to make investments in associated form in a to have, again in an associated form, through the management of the club deal, a voice in the strategic choices of the supported companies and to be able to aim at investments of greater depth and interest than those to which they could have aspired individually.

*"I am satisfied with the path taken together with the club deal promoted by Astraco with which we have laid the foundations for a development cycle of the company. I am proud that Sergio Campeotto has chosen to join us in order to strengthen the presence in HVACR and to further contribute to the growth of two companies of excellence on the international scene"* comments Antonio Crippa, partner and Chairman of the Board of Directors of the group Crippa.

*"The opportunity to enter a context characterized by innovation, organization and commercial su-*

*pervision represents the best goal of the work that I have always set up and conducted in SMI. I am sure that SMI and Crippa, together, will be able to face and win competitive challenges, thrive and grow"* comments Sergio Campeotto, partner and director of the Crippa group and CEO of SMI.

Claudio Viscardi, Crippa's CEO and Chairman of SMI's Board of Directors, states: *"As of today, our development plan relies on a working team able to bring competence, dedication and production references to better satisfy customers' needs. Our product range is now more complete and able to satisfy even the most sophisticated customers' requests. The new challenges posed by the electrification of vehicles and the revolution in air conditioning systems now represent an opportunity for growth and development that will allow us to prosper in the years to come".*



## NEWS

## FROM THE BUSINESS WORLD

## QFP becomes Creaform's New Strategic Partner for Automated 3D Metrology Solutions in Europe

**QFP will leverage the technological offer of Creaform's tools for automated 3D metrology in the European market**

Leinfelden-Echterdingen, Germany, February 10th, 2022 – Creaform, worldwide leader in portable and automated metrology solutions, and QFP, one of the leading Italian metrology companies, have recently announced a strategic partnership to further deploy automated quality control solutions for the European manufacturing industry.

QFP, one of the main European companies active in metrology services, reverse engineering and related design, carries out its operations from their facilities in Padua and Spoleto in Italy, and is able to offer their expertise to customers all over Europe.

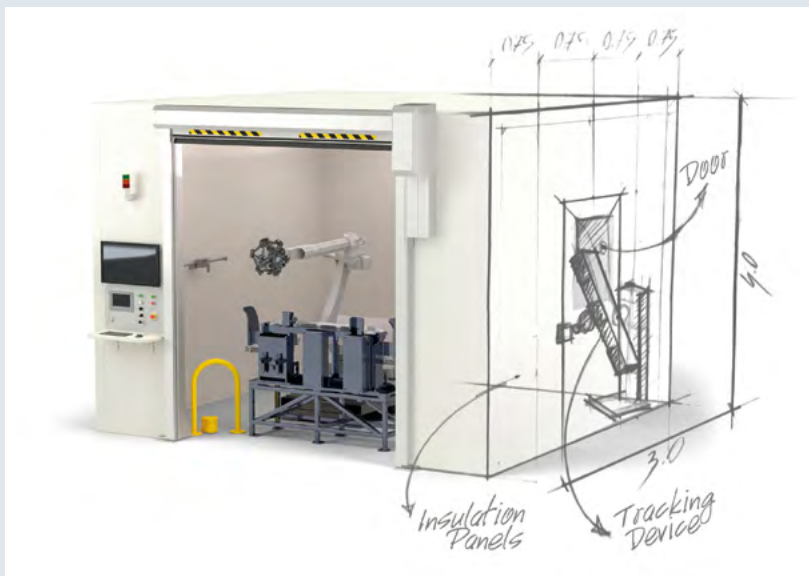
The agreement signed between Creaform and QFP defines the latter as Creaform's "strategic partner" for automation activities in Europe. This brings added value for both companies' customers, as it increases the offer of automatic QFP systems, and makes this technology available to even more Creaform customers in Europe.

### Cube-R & QBOX EVOLUTION:

Starting from Creaform solutions for automated quality control applications, the R-Series™ 3D scanning solutions, QFP will be able to

adapt this standard product to customized applications. The QBOX EVOLUTION is designed to meet specific needs of customers. Modification of the layout, additional axes, addition of contour elements such as automatic support devices, integration with production lines, additional control cameras, automatic loading / unloading systems and much more complete the proposal. The dozens of automated QFP installations on the market are proof that attention to the customers' needs is the most important starting point for creating that "tailored suit" that is sought after.

"The satisfaction of those who successfully use our systems is the most powerful engine to push us to invest energy and resources to perfect our skills" - comments Roberto Mazzetto Director of Sales and Marketing of QFP. "Our expertise as integrator and solution provider is what most distinguishes us from other companies in the sector and sharing these pluses with a company that focuses on the same values is what we were looking for to help our customers and our partners to grow in a healthy and structured way." Stefan Hoheisel, Director Global Business Development at Creaform, adds: "The collaboration with QFP brings the already strong proposition of Creaform's 3D metrology tools, our skills and experience to the next level. The resulting combination of standard and customized automation solutions is a highly professional and complete product offer for the whole manufacturing industry."



## NEWS

## Dango & Dienenthal: Pipe Sizing Technology for the perfect inner pipe contour

Inline laser measurement replaces “trial and error”

At TUBE, Dango & Dienenthal (D&D) will present laser-assisted calibration of large-diameter pipes for the first time. The machines of the PST series achieve unprecedented levels of precision. At the same time, they drastically reduce the time required for straightening and allow complete documentation of the inner contour.



The basic new feature of Pipe Sizing Technology (PST) is that a 360° circular laser measures the inner contour of the pipe during the straightening process, with the results being immediately incorporated into the process. The machines of the PST series are generally used for straightening. The PST-PE-EX version is also capable



of expanding the pipe ends, while the PST-FB version (full body sizing) straightens the pipes over their entire length.

The laser mounted in the measuring head projects a line onto the inner wall of the pipe. A camera, also located in the measuring head, captures the circular line with up to 3,200 measuring points over the entire circumference of the pipe. In this way, the complete image of the inner contour of the pipe is created in real time. This data is the basis for controlling the straightening tools.

For sizing, the PST-PE machines are equipped with six expanding jaws, which are precisely controlled according to the results of the laser measurement. The result: the pipe is not expanded, but instead retains its original inner circumference.

Since the Pipe Sizer combines measuring and forming, the systems drastically reduce the time required for handling the pipes. This means that considerably more pipes can be straightened per shift than with conventional systems. For example, laser contour measurement makes it possible for the first time to measure each individual pipe and document its geometry – such as inner circumference and ovality – in a short amount of time.

The first PST-PE-EX machine, currently being manufactured by D&D for a German manufacturer of large-diameter pipes, will straighten and expand the ends of pipes with diameters between 270 and 1,016 mm with wall thicknesses of up to 60 mm. Here, too, the circular laser provides the inner contour of the pipe end, which is used to control the pressure cylinder.

Denis Albayrak, Senior Sales Engineer at D&D, places great importance on precise laser measurement: “The demands on the quality of pipes – especially when it comes to optimal roundness – have grown steadily in recent years, presenting pipe manufacturers with enormous challenges. With Pipe Sizing Technology, we replace “trial and error” with exact measured values. After sizing, the finished pipes have a perfect circular shape, while the specified nominal diameter remains unchanged.”



## NEWS

## Focus on large volumes: linamar Hungary relies on production solutions from EMAG for e-mobility

High precision and rapidly growing quantities – the current success of electromobility is a challenge for production planners. The example of the supplier Linamar Technology Hungary shows how this task can be solved effectively. The specialists for e-drives have currently invested in machines from EMAG, which are used to produce shafts and gears. The number of components is expected to increase to more than 2,000,000 pieces per year in the future – up from around 300,000 pieces at present. The new production solution is optimally prepared for this increase.



E-mobility is currently approaching at top speed: According to the European manufacturers' association ACEA, the market share of electric cars in new registrations in the EU has recently more than doubled. It rose from 3.5 percent in the first quarter of 2021 to 7.5 percent in the second quarter. Conversely, this also means that the unit numbers for the various e-drive components are increasing – and this is precisely where the expertise of specialists like Linamar comes into play. The globally operating company produces a large portfolio of components related to power generation and storage, electric drive systems and structural and chassis systems for e-vehicles. Engineering and manufacturing know-how make Linamar a market leader here in terms of quality, system integration and time to market.



One of Linamar's central production sites for electric mobility is its subsidiary Linamar Technology Hungary. The specialists based in Békéscsaba manufacture and assemble, among other things, transmission components as well as aluminum housings and covers for a new e-car platform that has been on the market since last year. On board: various machines from EMAG. The decision in favor of the technology from the southern German machine manufacturer was made on the basis of intensive market research. "In the end, we chose EMAG because the company offers and masters a wide range of technologies," explains István Bíró, Project leader at Linamar Technology Hungary. "In addition, EMAG develops innovative solutions that help us streamline our production processes."

### Shortening grinding processes

Specifically, Linamar Technology Hungary uses the VL 6 and VT 2-4 vertical lathes and the VLC 200 GT vertical turning and grinding center for hard machining of gears and shafts. The company

## NEWS

also has the ELC 160 laser welding machine for welding gear wheels. The example of the VLC 200 GT turning and grinding center is an ideal illustration of the advantages of EMAG's holistic approach: the machine is loaded at a particularly high speed by the integrated pick-up spindle. After the spindle with the component has assumed its machining position, hard rough turning starts in quick succession. Only a residual allowance of a few micrometers then remains on the gear wheel. This ensures a significantly shortened grinding process with the aid of the integrated grinding spindle. At the same time, the machining quality benefits from the turning-grinding combination: If only a small allowance needs to be ground off after turning, the grinding wheel specification can be more specifically designed for the desired final quality. Overall, Linamar's production planners can therefore dispense with a further grinding operation.

#### Fast chip-to-chip times

Linamar has seen similar leaps in productivity with its VL 6 and VT 2-4 lathes, which are used for



turning operations on gears and shafts of different sizes. Depending on the size and type of component, the machining task differs. For example, the VT 2-4 automated vertical lathe provides leaps in performance for shaft machining, removing a hardened layer in the weld area. The strength of this system is particularly evident with higher quantities, because its automation solution ensures fast chip-to-chip times: workpiece grippers are used to transport the unmachined parts into the machine and remove them again after machining. Depending on the workpiece, this changeover time takes only six to eight seconds. In high-volume production, these short non-productive times add up to enormous time savings. The actual turning process also takes place in short cycles: The shaft is clamped vertically between the main spindle and the tailstock and machined from two sides. Two tool turrets with twelve places each are available for this purpose, which can be equipped with turning tools or driven tools.

The Vertical Lathe VL 6 is again used for machining several areas on gears with diameters of over 200 millimeters. The components are also part of an electric drive system. Their function is to reduce the high speed of the electric motor to the lower level of wheel rotation. The VL 6 used here is being developed by EMAG for larger workpieces, and the machine also has integrated automation. It is equipped with a workpiece storage conveyor and loads/unloads via pick-up spindle. What has Linamar's experience been with the various machines? "We are currently in the start-up phase and produce around 60,000 parts per type per year. In the future, however, we will produce around 430,000 parts per type per year," explains István Bíró. "In this respect, it is important for us that the machines ensure a stable process. This is absolutely the case. In addition, we have not yet completely exhausted the potential of the machines at present. For example, we can reduce the measuring effort if we use the integrated measuring probes. Overall, we are very satisfied with the solution."





## NEWS

## Hexagon Italia, Manufacturing Intelligence Division

The three Business Units of the Manufacturing Intelligence Division of Hexagon Italia are merged into a single entity that will operate in the national market offering products, solutions and services for the Intelligent Factory.

The Design & Engineering (CAE and Simulation Software), Production Software (CAD/CAM Software) and Metrology (Sensors, Systems and Software for Dimensional and Process Control) Business Units have formed a joint entity to provide the market with solutions to improve efficiency and productivity through all phases of the industrial product lifecycle, from design to manufacturing, metrology and process control.



As the first European country to undertake this process of aggregating the Business Units belonging to Hexagon's Manufacturing Intelligence Division, Italy will develop a new operational and organizational model.

Bruno Rolle, former General Manager of the Metrology Business Unit, will be in charge of the new grouping.

"The strategic vision of Hexagon, which in recent years has extended its portfolio of solutions for industry from dimensional control systems to engineering, simulation, production and process control software,

includes a new approach to the market," says Bruno Rolle. "In the last three years we have started to present to Italian customers not only specific products from each of our Business Units but to analyze crosswise the engineering, production and quality needs of the customer in order to propose integrated and integrable solutions able to improve the efficiency of the production system and accompany our users along the path of digitalization and data use typical of Industry 4.0. The demonstrated interest of our customers in this new way of dealing with Hexagon and the opportunities it has already generated have led the Group's European Management to entrust Italy with the task of being the first to develop the model of this new organization."

## Handling steps and inventory reduced by half

Werner Weitner GmbH, the mechanical engineering specialist, located in Bavaria, decided to centralise a large part of its pro-



duction in a newly constructed hall to streamline its production and logistics processes. The raw materials storage should also be updated in the process. With two tower storage systems from the UNITOWER series, KASTO provided a solution that not only saves time and space and but is both ergonomic and economical.

"What we see here was not long ago distributed across several halls on our site", explains Heinz Weitner, CEO of Werner Weitner GmbH, with visible pride during a tour through the company's new production and storage hall. Everything is bright, tidy, clean and relatively calm – a pleasant working atmosphere. The hall is the gem of the "Weitner Engineering World" – expresses the specialist for mechanical engineering and workshop equipment



## NEWS

when referring to its headquarters in Eichstätt, located in Upper Bavaria. Founded in 1968 as a metal construction business, Werner Weitner has become a sought-after partner in the international automobile industry and medical technology. With around 250 employees, the company manufactures primarily special tools that are used, for instance, in authorised workshops for numerous automobile manufacturers.

### Organic growth requires logistics

To achieve this, Werner Weitner always relies on an extensive pool of machinery. However, due to spatial conditions, the machinery was located up until now in different surrounding buildings. “We grew organically and expanded our capacities gradually,” Heinz



Weitner reported. It became more and more of a logistical challenge: “The effort needed to transport the required parts and materials back and forth between the individual process steps became very cumbersome over time.” As a result, the company decided to centralise most of its process chain into a hall specially designed for this purpose.

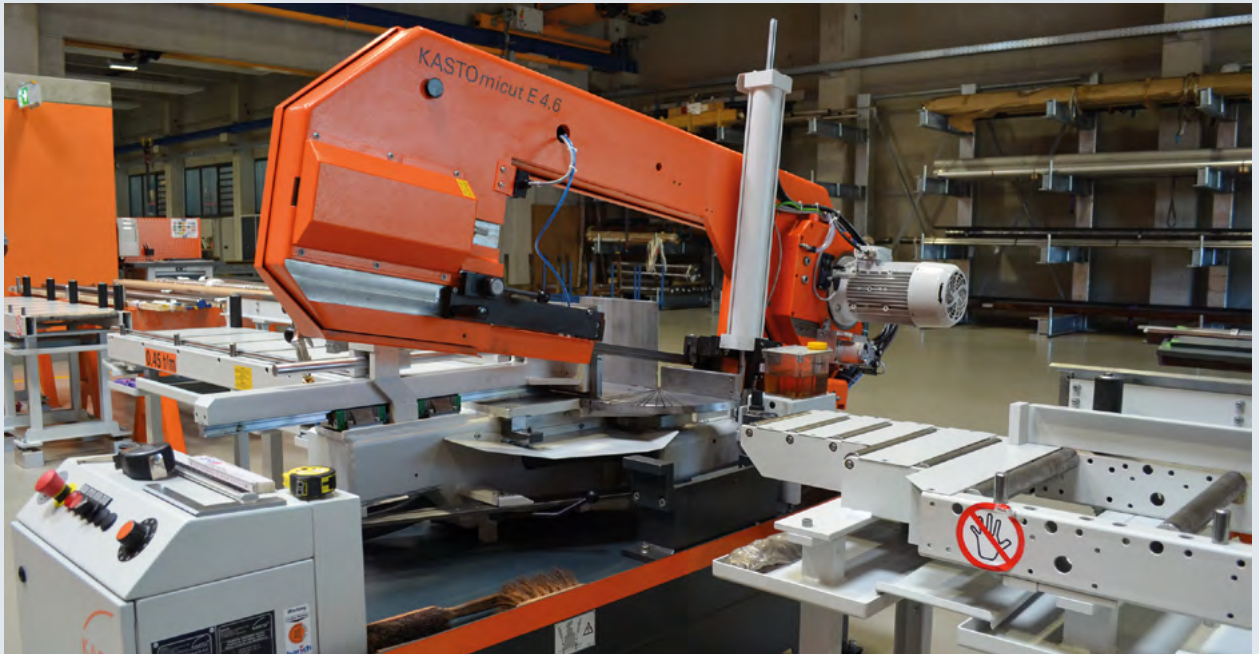
The manufacturing engineer primarily processes steel and various alloys in its production plant; however, it also works with aluminium and resins. Its portfolio ranges from prototype manufacturing through to large-scale series. “Because of this, we have a large variety of materials which requires the corresponding warehouse capacities”, stated Heinz Weitner. “After all, our customers expect short delivery times and high product availability.” To meet these expectations, the company orders many materials in larger quantities allowing it to respond quickly, if necessary.

### “Weitner 4.0”: The path to a more efficient future

In the past, Werner Weitner used various manually operated warehouse areas to store raw material – however, this led to extremely inefficient handling: “Moving goods in and out of storage and the transport to the various metal-cutting machines required a lot of time and workforce,” explains Florian Winhard, the Sawmill Department Manager. The automation of the storage technology was also to be included within the construction of the new hall. “This decision was part of our internal project, ‘Weitner 4.0’, with the objective to improve all processes within the company sustainably for the future,” added Daniel Miehling from Controlling and IT at Werner Weitner.



## NEWS



When looking for a partner for this endeavour, KASTO Maschinenbau soon became the obvious choice. Weitner supported this decision by explaining, “For many years, we have relied on this manufacturer for sawing technology and are extremely satisfied.” “We were also aware that KASTO also provides automated storage systems for bar stock and metal sheets. Therefore, we sat down together to find a solution to our requirements.”

#### **Compact tower storage systems for raw material of up to 6 meters in length**

To optimise the material flow in the new hall as efficiently as possible, KASTO recommended installing two tower storage systems from the UNITOWER series. The UNITOWER 1.0 is suitable for retrieving bar stock of up to three meters in length, whereas the UNITOWER 2.0 is ideal for retrieving materials of up to six meters in length. Both are freestanding dual towers. With 52 and respectively 41 cassettes, the storage systems provide ample space for the raw material inventories from Werner Weitner – and all that while maintaining a minimal footprint. “The tower storage systems make maximum use of the available space,” finds Florian Winhard. “Compared to our previous warehouse area, everything is now more compact, orderly and clearly arranged.”

The location of the products in the individual cassettes is electronically stored in the warehouse management system. It is connected via an individually customised standard interface to the ERP software proALPHA used at Werner Weitner. It is operated either via a control panel directly at the storage system or via a mobile hand-held unit. Based

on the principle, “materials to operator”, an operating gantry crane (OGC) supplies the necessary cassettes fully automatically to the respective output station. Weitner is pleased to report, “The workflow is now significantly more ergonomic, and assignment errors have been virtually eliminated.” The short access times of the UNITOWER enable the company to process pending orders quickly.

#### **Delivered, cut, stored**

A swivelling frame bandsaw from





## NEWS

the series KASTOmicut E 4.6 is located between the towers' two storage stations. The bandsaw is designed for crosscuts and mitre cuts of tubing, profiles, and solid material – and it mainly fulfils one task at Werner Weitner: “Our materials are generally delivered with a length of six meters”, explains Winhard. “We use this saw to cut all products that are only needed with a maximum of three meters in length and then store them in the smaller UNITOWER 1.0.” The distance saved through the sawmill pays off with the extensive range of materials from Werner Weitner and significantly increases the efficiency of the storing process.

The sawmill also received a central location in the new hall to complete all other sawing tasks quickly. The pool of machinery comprises six other models from KASTO – most of which are from the universal bandsaw machine series KASTOwin. “Before starting the new build, our saws were also distributed across the premises – which caused unnecessary distances”, recalls Winhard. “We were able to improve this situation and also replace three saws so that now we are state-of-the-art equipped and well-positioned.” The KASTOwin machines are suitable for a variety of materials and dimensions. For particular challenges, the employees also have the high-performance bandsaws KASTOwin pro at their disposal. “We have been satisfied with the saws from KASTO for many years, and we are impres-



sed again and again with each new model which offers solid performance and a high range of functions”, emphasises Heinz Weiner, CEO.

#### Storage and sawing technology from one company

Since the end of 2019, the new hall is in operation together with the storage and sawing technology. Approximately 45 cassettes per day are moved on average in the storage system; in total, around 5000 procedures took place to date. “In the past, one material runs through up to eight handling steps on the way to the finished cut piece”, calculates Weitner. “Thanks to the tower storage systems and more efficient organisation, we were able to reduce this number by half – we save a lot of time and workforce.” The company could even reduce the storage inventory of raw material by more than half due to the centralization – as a result, less capital is tied up, and more room for value-adding activities is available. “The biggest benefit of the collaboration with KASTO is that we obtained everything from one company, and we were provided competent support even with the integration of the hardware and software and saws into our production flow,” exclaimed Daniel Miehling. “Thanks to the comprehensive and easy-to-understand training, our employees did not have any reservations with the new technology and could operate it without difficulty.”

The responsible parties at Werner Weitner emphasise that virtually no malfunctions occurred with the UNITOWER storage systems since the start-up – and if malfunctions would arise, the KASTO experts from the headquarters in Achern located in Baden can service the machines remotely and eliminate errors quickly and easily. Weitner sums it up by saying, “KASTO not only provides high product quality, but the service is also excellent.” “We have more than enough reasons to collaborate in the future – and not only because we pursue a one-supplier-strategy for each type of machine. KASTO supports our endeavour to make our company efficient and secure for the future.”



## NEWS

## Magnetic Analysis Corp. Acquires TacTic™ Ultrasonic NDT Systems

Magnetic Analysis Corporation, (MAC®) a designer and producer of nondestructive test instruments and systems since 1928, is pleased to announce the asset acquisition of TacTic™, a Division of Laboratory Testing Inc. (LTI), effective February 28, 2022. Originally founded as TAC Technical Instrument Corp. in 1962, the company became part of LTI's operations in 2018. The acquisition will broaden MAC's range of NDT systems to include automated and specialized immersion, "spin the tube" ultrasonic test systems to detect surface and subsurface defects in round tube, pipe, and bar. These systems are especially applicable to metal producers who are looking for a cost-effective system to test small batches of material or frequent diameter size changes.

In making the announcement, MAC® President and CEO Dudley Boden noted that "This is a natural fit for us as we have partnered with TacTic™ for a number of years supplying our Echomac® Ultrasonic Electronics for integration with TacTic's systems. Both companies have a long history of helping metal producers achieve reliable, high-quality inspection that meets their specific needs and many of TacTic's customers are also customers of MAC. Support will be handled through our existing field network of Engineers and experienced Representatives around the world. With MAC's wider sales and support and the synergies with our existing customer base, we expect to be able to build this into a substantial product line for MAC, bringing this technology to customers around the world."

Commenting on the acquisition, Fred Beck, who has been serving as VP Sales for TacTic™ at LTI in recent years and is a son of TacTic's co-founder, Kenneth H. Beck, said "I am very excited about the future and will continue to play an active role in this new venture. It brings with it

many opportunities as both companies have developed established products that complement each other with little overlap. MAC's instruments provide a much-needed source for ultrasonic instrumentation designed for production testing of tubular and bar products. Moreover, their domestic and international sales and



service teams will allow TacTic customers to be served more efficiently. I am also pleased that our companies share a history of family ownership."

Beck will be assisting MAC during the transition as well as sharing his technical knowledge and years of experience during future sale activities. TacTic operations in Trevose, PA will be moved to MAC's Elmsford, NY headquarters and manufacturing plant. In addition to expanding enhanced sales opportunities for TacTic systems, customers will gain the advantage of local support, service and calibration capabilities provided by MAC's global network of sales and technical staff. For many markets, MAC will also be able to offer the option of leasing, a choice that has not been available to TacTic customers previously.

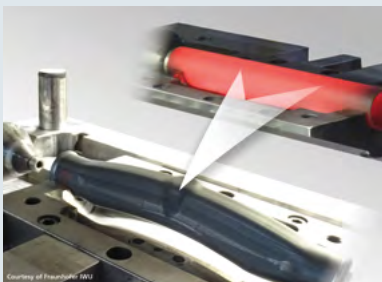


## NEWS

## AutoForm Tube - Software Solution for Successful Design and Simulation of Tubular Parts

AutoForm Engineering GmbH, the leading supplier of software solutions for stamping and Body-in-White assembly processes, presents its enhanced software solution for tubular parts. In addition to new functionalities developed in AutoForm TubeXpert, users can now further improve their tube bending processes through the application of the newly developed AutoForm-TubeBend software product.

The enhancements included in the latest AutoForm TubeXpert version are particularly beneficial for users when carrying out tube



bending, forming and hydroforming processes. This version has a completely new solver, which includes new material laws, enhanced contact between tube and tools as well as improved meshing capability. With AutoForm TubeExpert users can reach

a new level of accuracy.

The software now supports hot tube forming processes including hot metal gas forming. This rather new technology now also available in the software allows the support of both direct and indirect hot tube forming processes. The enriched material library includes aluminum, stainless steel, manganese-boron steels as well as titanium alloys applicable for hot forming processes. The software supports advanced friction modeling with TriboForm.



In addition, AutoForm TubeXpert allows for flexible process designs, which are essential for expansion joints, bellows and tube end forming. With AutoForm TubeXpert, users can quickly set up all relevant parameters necessary for such process design. AutoForm-TubeBend is specially designed for the needs of tube bending companies and supports their standard processes, such as CNC rotary draw bending, press bending and tube end forming. The software allows for the rapid design and simulation of these processes. In addition, it enables users to simulate the springback which may arise in the actual production process. Through the automatic springback compensation feature, the necessary adjustments can be made to the tool geometry, bending line, and process parameters. With this software, users can carry out comprehensive virtual tryout analyses in order to efficiently reduce the number of tryout loops. With AutoForm-TubeBend, users can successfully tackle all of the typical challenges they face during the tube bending and forming processes. Dr. Markus Thomma, CMO of the AutoForm Group, stated: "With our enhanced AutoForm Tube software solution, users are best-equipped to meet the increasing demands regarding tubular parts complexity, ever higher part quality requirements, implementation of new materials as well as increased process complexity. By applying AutoForm Tube solution, our users gain a comprehensive in-depth understanding of tube bending, forming, and hydroforming processes. AutoForm Tube is our software solution for the successful design and simulation of tubular parts. The new release will be available in April."

## NEWS

## The CAD for electrical wiring

SDProget Industrial Software presents CABLING, the ideal tool for those who design and produce electrical wiring in any industry: from automotive to railway, from shipbuilding to earthmoving machinery, from household appliances to machine tools and handling, from electronic to electromechanical.

CABLING is the CAD system that, thanks to the presence of specific functions, allows to quickly realize the constructive scheme of the electrical wiring starting from the data provided during the ideation and design phase. CABLING is ideal for the drawing and design of electrical wiring, layouts and cable bundles for various sectors.

In order to meet the different needs of design, SDProget provides CABLING both as an additional module of SPAC Automazione and as a stand-alone software.

In particular, C4S (Cabling for SPAC) is the version of Cabling specifically for SPAC Automation, SDProget's CAD/CAE solution for electrical design for industrial automation. It is an optional module that allows to integrate Cabling data directly into the SPAC bill of materials and to speed up the work, automatically realigning Cabling layouts with SPAC Automation electrical diagrams.

C4S is complementary to SPAC Automation, it dialogues directly with the data present in the electrical diagram generated by SPAC and automatically acquires the necessary information for the design of cables and wiring to generate projects rich in details. Cabling for SPAC is also able to automatically interpret the data present on the SPAC Automation diagram.



Cabling 4D (Cabling for Design), on the other hand, is the CAD software dedicated to the advanced management of complex electrical harnesses in sectors other than industrial automation. This software has a number of additional features to Cabling for SPAC and is available both as an add-on to SPAC Automation and as an application version for AutoCAD.

Cabling 4D offers two separate graphical design environments that integrate with each other: the Functional one, designed for the design of the wiring diagram, and the Constructive one, fundamental for the design of the planimetric diagram that defines the development, the dimensions of the wiring and the assembly characteristics. Finally, the 3D module (optional) allows you to draw the wiring paths on mathematical models imported in IGES or STEP format to determine the dimensions of the wiring.

## Leading Space Company Orders Two NXG XII 600s From SLM Solutions, Accelerating Its Path to Win Space Race

**“Built for space,” the NXG XII 600 surpasses the volume and speed of industry benchmark technology and brings true serial production to space components.**

Today, SLM Solutions Group AG (“SLM Solutions,” “SLM” or the “Company”) announced that a leading California-based rocket company had ordered two NXG XII 600s to make its space missions more affordable and efficient by creating lighter, faster, and more robust space components.



As space companies battle with unprecedented demand to get space-based technology into orbit, the need for solutions to



## NEWS

meet their requirements accelerates. The NXG XII 600 overcomes many challenges due to its large build envelope, ability to work with space-friendly alloys such as nickel and copper, and high-speed production rates that are crucial for the space sector's tremendous demands.

Dr. Simon Merkt-Schippers, EVP Product Management of SLM Solutions, remarked: "The NXG XII 600 is a true game-changer for the rapidly growing (New) Space industry. Here, traditional space companies and established players must cope with strong growth and an urgent need for complex parts to win the modern space race. SLM Solutions technology enables more affordable missions due to smarter designs that make rocket engines more efficient, bringing their performance to the next level. There is probably no faster and more efficient way to explore orbit and come out triumphant than utilizing the capabilities of the NXG XII 600."

Up to five times faster and featuring >40% more build volume than the industry benchmark, the NXG XII 600 is the ultimate solution for space companies looking to take advantage of its power, quality, and reliability. On top of this, premium part quality is ensured by best-in-class scanning strategies, including patented overlap technology that exceeds spaces' requirements in terms of surface quality and mechanical properties.

## TIMTOS x TMTS 2022 physical exhibition ends successfully

TIMTOS x TMTS 2022, the first co-branded machine tool mega show in Taiwan, closed today with huge success. The physical exhibition was held in Taipei Nangang Exhibition Halls 1 and 2 over six consecutive days while the online exhibition will remain open until March 21. As of now, the show has attracted more than 40,000 online and offline visitors at home and abroad. Notably, the online exhibition has reached visitors from more than 20 countries/regions.

With 950 exhibitors in 5,100 booths, TIMTOS x TMTS is not only the largest trade show in Taiwan since the outbreak of the pandemic but also the world's first machine tool mega show in 2022. In response to border controls, the show featured an array of online services for international visitors and media, including "On-site Guide for Online Visitors", "Sourcing Taiwan Machinery", "On-site Guide for Media Tour", "Live Tour @ Showground", "Media Eye on TIMTOS x TMTS", "Podcast Live", and TIMTOS x TMTS Online.

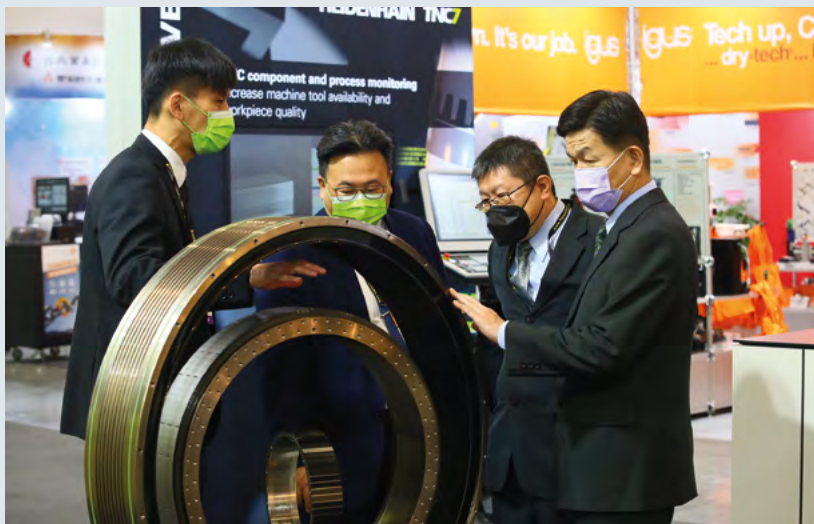
"Live Tour @ Showground", "Media Eye on TIMTOS x TMTS" and "Podcast Live" delivered daily live updates from the show floor. The videos and podcast episodes have enjoyed 25,000+ views and listens. In addition,

heavyweight attendees such as Mighty USA, EMIL Macchine, Faustino Pittori SRL, Hommel GmbH and Siemens Turkey, were guided to the showground and made real-time connections with selected exhibitors during 500 online sessions. Processing machines, multi-axis machining centers and laser cutting machines were amongst the most sought after items for foreign buyers.

Mr. Max Martinelli from Faustino Pittori in Italy gave thanks to the organizers, TAITRA, for arranging the On-site Guide service. The video guided tour created a great opportunity for him to learn about the latest products from important suppliers and discuss potential cooperation in a timely manner. Mr. Bo Jean from Mighty USA enjoyed the video guided tour as he could get a 360-degree view of each machine and converse with the exhibitors at the same time. International media was also deeply impressed by the strong R&D capabilities of Taiwan's machine tool manufacturers. Moreover, the "On-site Guide for Media Tour" proved to be very helpful for facilitating remote interviews during the pandemic.



## NEWS



The machine tool industry keeps up with the development of future trends and accelerates digital transformation and upgrades. New models and solutions have targeted emerging business in sectors such as semiconductors, green energy, electric vehicles, health care and aerospace. This year's TIMTOS x TMTS welcomed a wide spectrum of visitors from different industries. Major domestic visitors included TSMC, AIDC (Aerospace Industrial Development Corporation), Formosa Heavy Industries, Hon Hai Precision Industry, Chang Gung Medical Technology, Nan Ya Plastics, and CSMC (China Steel Machinery Corporation). Plenty of business conversations, networking and deals took place during the show. Many exhibitors were delighted with the orders placed on-site. KAO MING, the leading Taiwanese vendor of hydraulic radial drills, sold out of all of the drills on display at their booth within the first three days of the show. RONG FU, a leading band saw provider, CASTEK, an expert in EDM drilling machines, MYLAS, an outstanding lathe

maker, HEAKE, which is recognised for its 5-axis mill, and SUN FIRM, a leader in flat bed lathes, also received on-site orders. It's anticipated that many more potential business opportunities are to follow.

The online exhibition for TIMTOS x TMTS 2022 will keep on running until March 21. To date, the most popular exhibitors at TIMTOS x TMTS Online are HIWIN, VICTOR

TAICHUNG, Hartford, FANUC and SAN YUAN. Overall, exhibitors at TIMTOS x TMTS are showcasing the very best solutions they have developed over the last three years, both on-site and online.



## TRUMPF boosts 3D cutting speed

**New BrightLine Speed technology makes 3D laser cutting even more efficient // Cuts parts up to 60 percent faster // Half the gas consumption of conventional laser cutting**

High-tech company TRUMPF has developed a new technology that increases the speed and efficiency of sheet-metal cutting. Known as BrightLine Speed, this innovative solution offers particularly striking benefits for the 3D cutting of hot-formed parts – for example, those used to produ-

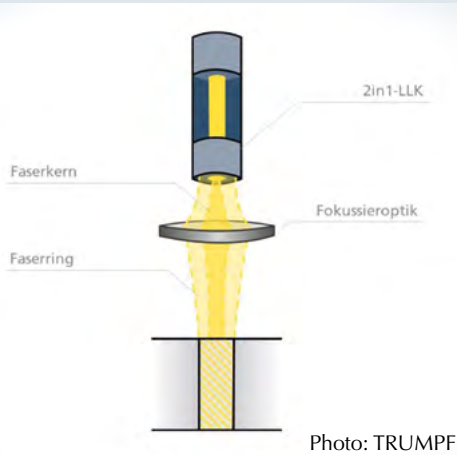
Photo: TRUMPF



ce B-pillars and door frames in auto manufacturing. "BrightLine Speed allows us to increase cutting speed by up to 60 percent for sheets up to four millimeters thick," says TRUMPF product manager Ralf Kohlöffel. But that's not all: BrightLine Speed also consumes around 50 percent less cutting gas per part than conventional laser cutting. What's more, it makes the cutting process up to 15 percent more productive with



## NEWS



the same laser power, so each part requires correspondingly less energy to fabricate. “Our new cutting technology is faster and uses less gas – and that translates into tangible cost savings and a real boost in productivity for our customers,” says Kohllöffel.

### Two fibers in a single cable

At the heart of BrightLine Speed is a new, TRUMPF patented laser light cable (LLK), a special “2-in-1” innovation with an inner and an outer fiber core. A TruDisk disk laser couples the laser light into the LLK and distributes the laser power to the inner and outer cores using a device known as a wedge switch. This allows users to adapt the laser power and beam profile more precisely and flexibly to the thickness of the sheet currently being processed.



## Wire and Tube 2022 in June in Düsseldorf: The stuff that drives the car industry

Hydrogen-powered vehicles have already tackled the first stretches. And some experts are sure that many more will follow. For them, fuel cell vehicles are the future of the automotive industry. But still H<sub>2</sub>-cars are a long way from conquering the roads of the world. It is clear, however, that hydrogen cars need powerful cables and tubes. The industry has to prepare for this development now in order to be able to pick up speed in time.

Emission-free driving without having to change over in everyday life - that sounds promising. Because the H<sub>2</sub>-car can be refuelled within minutes and has a range of over 500 kilometres. Impressive arguments that could make battery-based electric cars only see the taillights. Mind you, “could”, because there are still only a few hydrogen filling stations and the purchase prices are significantly higher compared to other cars.

### Hydrogen-driven buses

Some auto manufacturers are already on course when it comes to using H<sub>2</sub>-powered engines. For example, a hydrogen express bus is already on the road in Pau, France. 125 people can take a seat to cover a six-kilometre stretch between a station in the south and the north of the city. A direction that some car manufacturers also want to take. The BMW Group’s view is that hydrogen vehicles are an important alternative and supplement to electric battery engines. “From 2025 at the earliest, and depending on market requirements and general conditions, the BMW Group will offer vehicles with fuel cells to customers,” the car

photo: Messe Düsseldorf/ctilmann





## NEWS

photo: Messe Düsseldorf/ctillmann



manufacturer announced. Mercedes already has a pre-series model on the road. Other companies also have produced the first fuel cell vehicles. It's just a start, because so far only a few hundred of them are on German roads.

#### High quality cables

The change towards electric and hydrogen cars has consequences for the cable industry. This is because, unlike the internal combustion engine car, there are no cables in connection with the fuel system. In terms of wiring, the hydrogen car is more similar to the electric car - but the main difference is the origin of energy production. In the fuel cell - instead of in the battery as in the

electric car - the hydrogen is converted into electrical energy. In both electrically powered vehicles, the electrical energy finally finds the engine and drives it. So H<sub>2</sub>-powered cars and electric cars have an electric engine. Both in the case of pure battery technology and a hydrogen system with fuel cells, the functional units must be connected with cables. Electric cars and hydrogen cars needed more cables and wires in total than a car with an internal combustion engine.

The development of fuel cell vehicles is challenging the cable industry not only in terms of quantity, but also in terms of quality, as higher quality cables are needed. Because hydrogen is extremely flammable. The drive components including cables and tubes must be designed and protected accordingly.

#### Standards as a central theme

For tank systems installed in hydrogen-powered vehicles, the subject of standards is of fundamental importance. Railway example: "For hydrogen fuel cell operation, we use rail-approved cables," explains Wolfgang Wolter, Chief Executive Officer

Operations + Sales of Wystrach, a manufacturer of hydrogen tank depots for buses and local trains. Depending on the connection and linking technology under consideration, the base materials used would have to exhibit not only conformity to standards but also properties such as good connection and cross-linking properties, if, for example, connector housings were to be moulded on. "In addition, the different installation types, including demands on cable protection, must be taken into

account," Wolter emphasises.

#### Cutting CO<sub>2</sub> emissions

The network of filling stations is still extremely lacking. Another shortcoming: The tanks must be considerably larger. Experts therefore currently see a greater possibility of getting H<sub>2</sub> technology on the road with trucks.

Ecological aspects favour the hydrogen car, because it only blows water vapour into the environment via the exhaust. According to a Shell study, by 2050, around 113 million fuel cell cars could cut up to 68 million tonnes of fuel usage and save almost 200 million tonnes of CO<sub>2</sub>-emissions. "In this way they could make an important contribution to energy saving and greenhouse gas reduction in the transport sector," the Shell study states.

#### Billions of euros for hydrogen

The still young industry is very promising. With the National Hydrogen Strategy, Germany aims to become the world's leading supplier of modern hydrogen technologies. The Federal Government wants to use a total of nine billion euros to make the energy source marketable. The funds are flowing into the steel and chemical industries, into the heating sector and also into the transport sector. And in doing so, the H<sub>2</sub>-vehicle is also slowly coming onto the road and revolutionising the industry. In any case, the next stage of vehicle development is already beginning.

## NEWS

## Lamiera 2022 anticipates by a week its development

LAMIERA 2022, the international exhibition dedicated to the industry of machine tools for sheet metal forming and innovative technologies related to the sector, will be held a week earlier: the appointment is therefore set at fieramilano Rho from 18 to 21 May 2022.

The move is due to the need to re-organize the exhibition calendar of the events hosted by fieramilano, after the sanitary conditions imposed the postponement of all the events located in the first quarter of the year.

The presence, in May and June, of previously unplanned events, characterized, among other things, by extensive occupation of exhibition spaces and very long set-up times, has forced fieramilano to ask all the organizing bodies involved to think about new "fits" to allow the proper conduct of each of the events on the new agenda.

LAMIERA will therefore be held seven days earlier than usual to ensure exhibitors the correct organizational schedule for the event, which is followed by the Salone del Mobile, to be held at the beginning of June and which has equally long set-up times.

Promoted by UCIMU-SISTEMI PER PRODURRE, the association of Italian manufacturers of



machine tools, robots and automation, and organized by CEU-CENTRO ESPOSIZIONI UCIMU, LAMIERA will still be held in May and, with over 200 registrations already collected, aims to reconfirm the success of the previous two Lombardy editions.

"In agreement with fieramilano - said Alfredo Mariotti, general manager of UCIMU-SISTEMI PER PRODURRE - given the importance of the event, we deemed it necessary to keep the event in the same period, i.e. the second half of May. Considering the rapid return to normal standards that we have been witnessing in recent weeks, the increasingly widespread distribution of vaccines and the experience we have now gained from these two years of pandemic, we know that LAMIERA will take place at a safe time for the health emergency".

"Let's not forget, then, that our staff and that of fieramilano now have solid experience, gained in the field of the many events organized during the covid era, in defining the safety standards and procedures to be adopted to make the stay inside the exhibition center safe and comfortable."

"The decision to bring LAMIERA forward by a week - added Alfredo Mariotti - entails a major investment in terms of communication and promotion by us organizers to the entire audience involved: exhibitors, visitors, journalists. An investment that we are very happy to make, certain that our activity will be able to minimize, if not completely eliminate, any inconvenience caused to the operators involved. The companies exhibiting at LAMIERA will be able to count on an event rich in content, ideas and, therefore, visitors".

"On the other hand - concluded Alfredo Mariotti - this decision to meet the needs of the district that hosts us and of the organizers of other exhibition events accredits the sector represented at LAMIERA among those who, understanding the problems induced by the health crisis on the trade fair sector, contribute to its relaunch and development, aware of the decisive and irreplaceable role of trade fairs in favour of the business activities of manufacturing companies".

## NEWS

## Phillips Federal appoints Unison ltd as its exclusive supplier of tube bending machinery to us federal government

Unison Ltd, the leading name in all-electric CNC tube bending technologies, has signed an exclusive distributor agreement with Phillips Corporation – Federal Division (Phillips Federal) of Maryland USA.

Phillips Federal is the principal service provider and manufacturing partner to the United States Federal Government. The agreement means that all US Federal Government requirements for tube bending, pipe bending and end forming machines, that are received by Phillips Federal, will be built by Unison Ltd in the UK and supplied by Unison's Virginia-based North American division.

"Phillips Corporation - Federal Division is proud to partner with Unison Ltd," comments John 'JD' Murray, Phillips Corporation Product Manager. "Partnering with Unison Ltd allows us to provide our customers with the finest options available in the tube and pipe bending market. Their capability and track record with our European allies and international markets make them an integral part of our comprehensive machine tool offering to the US Department of Defense and US Government agencies. With right-first-time bending technologies, user-friendly dedicated controls and outstanding customer service, Unison Ltd demonstrated the uncompromising standards we demand. Additionally, thanks to their all-electric operation, Unison machines offer the highest levels of clean manufacturing, something that is exceptionally important to our customer base." "We are delighted to have been chosen by Phillips Corporation - Federal Division as their official provider of tube bending, pipe bending and end forming machinery for US Federal Government civil, military and aerospace applications," adds Unison Ltd joint managing director, Alan Pickering. "Our reputation as inventors of ultra-precise, all-electric tube bending machines was a major factor in Phillips Federal appointing us, as was our ability to purpose-build tube and pipe manipulation technologies for many of the world's most demanding manufacturing applications. We are honoured that Phillips Corporation – Federal Division recognises the quality and capabilities of Unison machines and look forward to supplying the US Federal sector."

Unison's immensely powerful tube and pipe bending machines offer rapid setup, fast tooling changes, rigid mechanical design and clean, all-electric operation for right-first-time repeat bending, or immediately after producing a trial part. These attributes make them ideally suited to specialist requirements for shipbuilding, aerospace (including traditionally difficult-to-bend exotic alloys), construction, agriculture, oil and gas extraction, food and chemical processing, mining, rail and transport applications.

## Grinding technology manufacturers showing strong commitment to Stuttgart as new hub for sector - UGOs causing a stir among visitors

GrindingHub, the new trade show for grinding technology, is set to premiere from 17 to 22 May in Stuttgart. About 340 well-known exhibitors from more than 20 countries have already signed up for the first event. This will underpin GrindingHub's declared intention to become a major international hub for the



sector. "There is a great sense of anticipation," says Dr. Wilfried Schäfer, Executive Director of the GrindingHub organizer VDW (German Machine Tool Builders' Association), Frankfurt am Main. "Most trade shows have been forced to take a break over the last two years, and all participants cannot wait now to meet everyo-



## NEWS

ne again in person,” Schäfer continues. “Digital events simply don’t have the same quality and reach as their face-to-face counterparts.”

### Exhibitors showcasing world premieres at the GrindingHub

For their part, exhibitors are strongly committed to the GrindingHub. “It feels like the GrindingHub has already started: our team, our customers and partners sense that this new leading tradeshow will be a driver for our entire industry. Consequently, we are preparing the most comprehensive, innovative, and exciting display in the history of ANCA, including world premieres, six machines and automation highlights. Get a glimpse at the web sessions and press preview,” says Edmund Boland, General Manager of Anca Europe GmbH, Weinheim.

Oskar Olai, CEO of 3nine, Hochheim, is full of anticipation: “We’re very much looking forward to meeting with our partners, distributors, customers and potential customers again after the long and isolated time during the pandemic. GrindingHub is our first trade show in Germany since 2019 and I know that all my colleagues at 3nine are super excited.”

Jürgen Hauger, Managing Director of the Biberach-based Vollmer Group, also believes the new trade show for grinding technology has a bright future. “The organizers have succeeded in putting together an attractive trade show in an ideal location that is geared to the needs of our global customers. We are convinced that

GrindingHub will become the new leading trade show for grinding technology. Vollmer will be unveiling no less than five world firsts at the first GrindingHub in May 2022.”

### UGO\* – a visitor promotion campaign designed to cause a stir

Launch of the visitor promotion campaign for GrindingHub. “UGOs – Unknown Grinding Objects – are unidentified flying objects that will be landing in Stuttgart in the future,” says VDW Executive Director Schäfer. They are designed to arouse curiosity, just as UFOs did in the past. Headlines such as “UGO\* bringing expertise to Stuttgart.” or “UGO\* making digital impact” are being used as teasers. “Anyone wishing to find out more must come along to Stuttgart in May,” says Schäfer, addressing the international grinding community.

Exhibitors and visitors can take part in the #ShowYourUGO challenge and showcase their UGOs. “The best UGOs can then be viewed at first hand in Stuttgart in May,” Schäfer concludes.

Author: Tobias Beckmann, VDW Press and Public Relations



### Background GrindingHub 2022 in Stuttgart

The first ever GrindingHub will be held in Stuttgart from 17 to 20 May 2022. It is the new trade fair and the new center for grinding technology. It is scheduled to be run every two years by the VDW (German Machine Tool Builders’ Association), Frankfurt am Main, in cooperation with Messe Stuttgart and the “Machine Tools” industry sector of Swissmem (Association of the Swiss Mechanical, Electrical and Metal Industries) as institutional patron. Grinding is one of the top 4 manufacturing processes within the machine tool industry in Germany. In 2021, the sector produced machines to the value of 805 million euros, according to VDW estimates. Just over 80 per cent were exported, with about half going to Europe. The largest sales markets are China, the USA and Italy. The VDW has world market data up to and including 2020. China, Germany and Switzerland head the list of top global producers. The grinding technology sector produced 4.3 billion euros worth of machines in 2020.

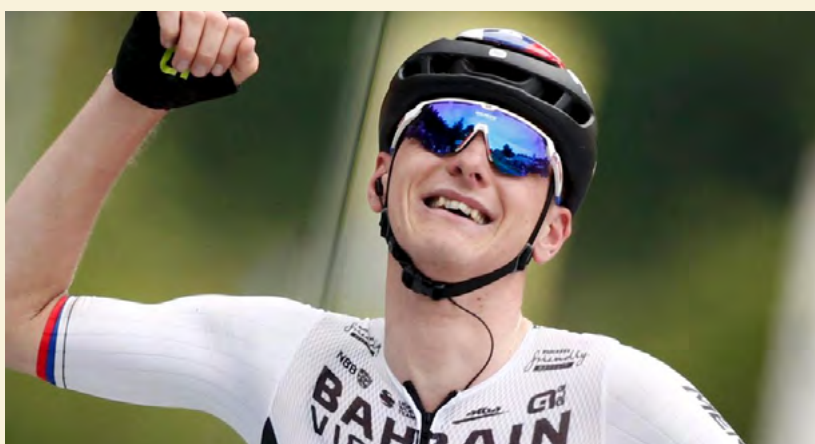
## CURIOUS NEWS

## FROM THE WORLD

## The secret of the mohoric cyclist? The seatpost that lifts and lowers

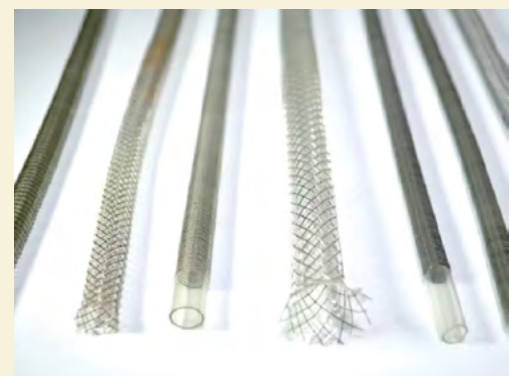
The “seatpost dropper” mounted on the seat tube of Matej Mohoric’s bicycle was the secret - by the Slovenian cyclist’s own admission - of his victory at Milan-Sanremo 2022. A magic button, a lever on the handlebars that raises and lowers the saddle, a technological component that is absolutely regular and within everyone’s reach, even if Mohoric was the only one out of 200 riders to use it in the race.

The bicycle saddle is adjustable, with a lever on amateur bikes, with a screw that ensures maximum stability for professionals. The right position for a racing bike is the one where the tips of the feet touch the ground: it allows maximum thrust power combined with a minimum of comfort. But the most effective position on the flat and uphill is not the same as on the downhill, where the saddle should be noticeably lower to steer the bike with more precision. This is where the “seatpost dropper” comes in, an accessory initially developed for mountain bikes that allows the saddle to be raised and lowered while pedaling thanks to an oleodynamic mechanism. The problem, for the speed races, is the weight of this contraption, but Mohoric has decided to try it the same in race, choosing a model (purchased on Internet for about 350 euro) that weighs less than 400 grams and has a “run” of only six centimeters. Result? Ascent behind the best, descent - his specialty - as a phenomenon, after having put his hand to the manettino on the handlebars and lowered the saddle. Arrived first in plain, Mohoric has raised again the saddle and produced an effort from cronoman in the last 1500 meters, winning the race that changes a life and a career. “From today,” he explained, “cycling has changed. We will be faster and safer.” To the delight, by the way, of seatpost dropper manufacturers.



## Pvc-free tubes, balloons and catheters

New technologies to make tubes, balloons and catheters with polymers alternative to PVC, which improve performance, decrease the traumaticity of interventions and limit the environmental impact. This is what has been developed by the Brescia-based company Product, led by physicist-researcher Emanuele Guerra and Luca Facconi, a software en-



gineer specialized in automation. For decades, in fact, people have been working to abandon PVC, but the low cost of this material compared to other polymers means that it is always the first choice even in the medical sector, which should instead reward more noble, safe and clean materials. In this market, several PVC semi-finished products can be replaced by both thermoplastic and thermoset polymers, such as latex and polyurethane, polyamide and polycarbonate.

The company Product srl of Brescia offers tubes, flasks and catheters of new conception, made

## CURIOUS NEWS



with TPU (thermoplastic polyurethane) or SEBS polymers that avoid the release of dangerous substances into the body, limit the problems related to disposal with consequent cost savings and lower environmental impact, as well as being less invasive and traumatic during use.

The project comes from the studies of the young environmental physicist and researcher Emanuele Guerra from Brescia: "In some applications - he explains - the medical sector is still stuck in the Middle Ages. In order to advance, it is necessary to give space to materials and technologies adequate to the new social instances, even if generally more expensive. In the medical field, not much attention is paid to the patient, let alone to the environment. Compared to PVC, polyurethane costs little more, but it pollutes less, is more biocompatible and allows for incredible technical performance. Our goal in the medical field is to create a 'clean', PVCfree line of products that are possibly better than the current state of the art. We want to go beyond the limits of current technologies to provide products that are more respectful of people and at the same time of the environment".

## Sewer Pipes: which materials are they made of?

What goes into sewer pipes is clear to everyone. But how are sewer pipes made, out of what materials? The answer to this question is much more complex.

Every Italian home is connected to the sewer, an underground network completely piped that allows the collection of wastewater used in the home, in companies, in production and commercial premises. Sewer pipes have changed a lot in recent years, especially with regard to the material of which they are composed: if once they were mainly made of metal, often lead, for decades now plastic materials of various kinds are preferred.

**Plastic Pipes** - In most cases, sewer pipes are single-wall, PVC. This is a relatively inexpensive material that is easy to manufacture and obtain commercially. It is quite durable when used in pipes where there is no pressure, thus in gravity sewer systems. In the case of pressure pipelines, internal or external, it is instead important to use polyethylene pipes or other materials other than PVC, which is not sufficiently elastic and could, in some situations but also due to wear, be subject to fractures and breaks. With obvious damage to those living in that building and the environment. **Polyethylene pipes** - In order to create strong and resistant sewers, with pipes that can withstand strong slopes but also possible movements of the ground, today corrugated pipes produced using high density polyethylene or polyethylene with high elastic modulus are used. Ecopal pipe in particular is a double-wall pipe and can be effectively used for non-pressure underground sewer pipelines. This type of sewer pipe can resist deformation, as well as chemical agents, present in wastewater from industrial processing residues and detergents also used at home. Double-wall sewer pipes are also available, allowing for the best management of sewage in environmentally protected locations and near aquifers.





## CURIOUS NEWS

## Drip irrigation pipes in China

Grow watermelon and melon while saving 60% of water compared to the traditional method of irrigation by submersion. This is what they have managed to do in China, in the fruit and vegetable greenhouses



of the Dehu Crop Planting cooperative in the city of Shuangjie, thanks to the installation of a system of drip irrigation pipes. We are talking about an agricultural complex of 445 hectares of land, where 850 greenhouses have been built,

employing more than 100 workers. The irrigation pipes reach each shed, allowing to improve the efficiency of water use and also to save in labor: as soon as you open the tap, the irrigation starts directly and reaches all the plants.

## Tubular bells

Tubular bells are a direct-percussion, determined-sounding idiophonic musical instrument.

It consists of a series of "bells," long hollow metal bars (usually brass or other metal tubes hung vertically about one to two feet high) that are tuned by changing their length. They are normally played by striking them with a special hammer, with a rough leather or plastic head, at the top of the tube, which may necessitate a piano for the percussionist.

In symphony orchestras they simulate the sound of church bells. They are used in symphonic compositions, such as Berlioz's *Fantastic Symphony*, Tchaikovsky's *1812 Overture*, or Mahler's *Ninth Symphony*, but also in contemporary and popular music.



## Ferrets love tubes

Cute, snappy and fun, ferrets - when not eating or sleeping - spend most of their time playing. A plush toy to nibble on is fine, but their true passion is tubes. The motivation is in the animal's instinct, which in nature uses burrows as a shelter, where they sleep, store food and leave their pups. Unlike moles, however, ferrets do not dig their own burrows, but use those of the prairie dog. In their home life, these small mammals need a tube to replicate natural behavior in the home as well.

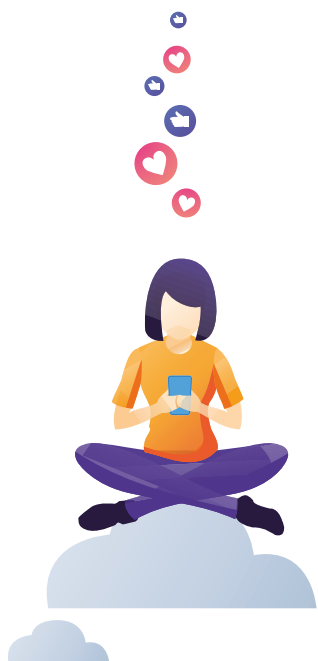
Different types of pet ferret tubes are available for purchase, made of hard plastic or flexible, to be attached to the cage or placed on the floor in a sort of playground. The important thing is that they have a sufficiently large diameter and are made of a material that can be easily washed. On the market there are also some real gems, such as the suspended tunnel that acts as a hammock for the ferret, or the three-way tunnel of plush.





# YOUR EVENTS ARE NOW ONLINE

The pandemic and consequent lockdown pushed many remarkable changes in the world of communication: it is possible to see these changes as **opportunities**. One of them is that **events, presentations, lectures** and even **press conferences** are **played on-line**, directly via **web-streaming**. The keystone is managing them in a professional way: interruptions, unstable connection and other problems can push away your audience; otherwise, if your event goes smoothly, it can be the right way to reach your public. Do you want to know how you can achieve this goal? **Download the free quick guide written by the Inspire Communication's experts** that will help you in leading your online event to success.



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