

PFW AEROSPACE MORE THAN THE SUM OF ITS PARTS

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According to the credit rating agency Creditreform, the average age of German companies is around 18 years. So, it is not hard to see how PFW Aerospace, founded in 1913 to build biplanes, is exceptional.

Group.

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CEO of

PFW AEROSPACE HAS A PROUD HISTORY, BUT AS PART OF THE HUTCHINSON GROUP IT IS REACHING NEW HEIGHTS.



C t's hard to summarise a company's history of over 100 years," says Stefan Zimmermann, CEO of PFW Aerospace today.

> Indeed, the company has a long and storied history, but the latest chapter of that story began recently when PFW Aerospace was acquired by the Hutchinson

"We are now an integral part of the Hutchinson Group and look forward to growing tremendously using Hutchinson as a vehicle to make the best of the crisis we're now facing in COVID-19," Zimmermann says. "I am extremely confident that Hutchinson will help PFW to not only to weather the current crisis but become stronger as a result of it."

Zimmermann himself is a relative newcomer to the company, joining PFW six months ago, but he is not short on experience with 30 years working in the aerospace sector with firms including Airbus, Rolls Royce, Collins and now PFW Aerospace.

Still, in that short amount of time he has already seen the integral role PFW plays in the aerospace industry.

"In a way, we provide the blood vessels of the aircraft," Zimmermann says. "We connect the vital parts through tubes and ducts. This is a major portion of our product portfolio in any shape or material form. We're specialised in any metal tubes and ducts but also products made from composites, and the other big portion of our business is we provide aerostructures, flaps, fuel tanks, any aerostructure customers consider vital to the aircraft."

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SURFACE TREATMENT WITHOUT COMPROMISE

Highest quality as a benchmark, innovation as a driver, sustainability as a vision. Why a mediumsized company is the industry leader and Managing Director Hendrik Del Rosario also sees the current crisis as an opportunity.

Site visit Altlußheim at Metalux GmbH. The company is regarded as a first-class address for full service when it comes to surface treatment. And with a demanding range of customers from the aerospace industry, automotive and mechanical engineering through to environmental and energy technology, sanitary and pharmaceutical industry or electrical and medical technology, it is extremely broadly positioned. Has the coronavirus crisis left its mark here? "Of course. Even as a highly diversified company, we have experienced the transformation of the economic situation across all industry sectors. The fundamentals of our production planning have become much more uncertain," confirms Managing Director Del Rosario. "Yet we have used this time to further optimise and modernise our internal structures and to align them with the requirements of our customers and our shared future. This is a sustainable approach and will be rewarding for everyone in the end."

No question about it: What started in 1975 with a small anodising company for aluminium and 30 members of staff has today become a good example of a healthy medium-sized business with 180 employees, its own Nadcap-certified, fully-equipped laboratory and a range of services that is constantly developing in line with

the company's growth. Nevertheless, it takes more than technological progress to be able to shrug off a crisis like the pandemic reasonably unscathed. There is a call for a willingness to change and rethink across all levels. One success factor here is most certainly Del Rosario himself: The charismatic full-blooded businessman has a flair for strategic alliances and cultivates his own personal style:

..OUR LONG-STANDING AND FAITHFUL CUSTOMER RELATIONSHIPS ARE A KEY TO OUR SUCCESS. THEY QUITE SIMPLY RECOGNISE THAT WE EMBRACE EVERY INNOVATION, FIND CUSTOMISED SOLUTIONS AND ALWAYS END UP WITH CERTIFIED QUALITY.



Converting demanding customers from the world's leading industries into genuine partners who enjoy an open technology transfer not only requires indepth expertise in many different sectors, but also a reliable team. This is exactly what Del Rosario can depend on, demonstrated by a tour of the factory. He is personally acquainted with all employees, knows their strengths

and supports them wherever possible. They are highly gualified specialists who have often been working here enthusiastically for decades to achieve success. Emplovee satisfaction is accordingly high – and the willingness to go tackle every job at full throttle. An important detail, as Del Rosario also sees it.



.AS A STRATEGIC PARTNER. WE OFTEN SUPPORT OUR CUSTO-MERS AS EARLY AS THE DESIGN PHASE. THIS ALLOWS US TO PIN-POINT POTENTIAL SAVINGS AND RECOMMEND THE MOST SUITABLE REFINEMENT FOR EACH COMPONENT."

And this is only possible with a team that is customer-oriented. conscientious and sustainable. It is no wonder, then, that Del Rosario is feeling confident about the future. He has done his homework with Metalux GmbH and will continue to arow. This is because product quality, innovative strength, forward-looking planning and reliability get around all over the world.



FLYING THROUGH CRISIS

Of course, Zimmermann has joined PFW Aerospace in the midst of the greatest crisis ever to hit not just the company, but the industry as a whole.

"Our biggest challenge has been getting through COVID-19, not just from a purely medical perspective but also a business perspective," Zimmermann tells us. "This is the longest, deepest and most severe crisis the commercial aerospace industry has faced. It is more severe than any other situation we have collectively seen."

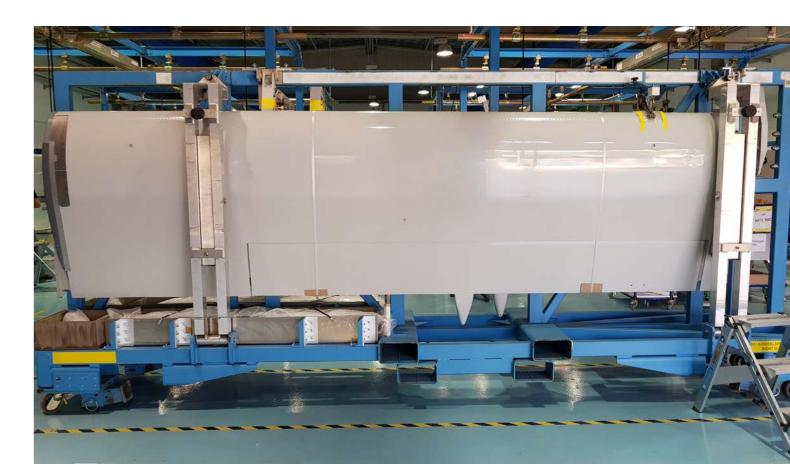
"THIS IS THE LONGEST, DEEPEST AND MOST **SEVERE CRISIS** THE COMMERCIAL **AEROSPACE** INDUSTRY HAS FACED."

However, with crisis comes opportunity, and the pandemic has opened up new markets for PFW Aerospace, and the Hutchinson Group as a whole.

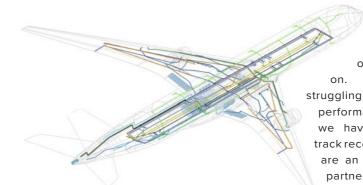
"To a certain extent, there has been an opportunity for us to benefit from the fact that some of our competitors are struggling," Zimmermann points out. "We have been able to acquire some fairly strategic new work from competitors, despite the fact that in the market for the foreseeable future there's no new bia development programme on the horizon."

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"TOGETHER WITH OUR OTHER PARTNER COMPANIES WITHIN HUTCHINSON, WE ARE CONSTANTLY **STRIVING TO REDUCE THE WEIGHT OF OUR PRODUCTS** BY APPLYING NEWLY DEVELOPED MATERIALS AND DESIGN PRINCIPLES WHICH WILL ULTIMATELY HEL TO REDUCE THE OVERALL CARBON FOOTPRINT."



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These big new developments are typically PFW's biggest source of new work, but the

company is adapting to the new market.

"There's a lot of activity going Companies are struggling for financial or performance reasons and we have a very proven track record, and the fact we are an extremely reliable partner has enabled us to acquire these new business opportunities," Zimmermann explains. "On top of that, being part of Hutchinson lets us be part of a bigger conglomerate and integrator within the Hutchinson organisation to provide more compelling product solutions to our customers, integrated through us. Together with our other partner companies within Hutchinson, we are constantly striving to reduce the weight of our products by applying newly developed materials and design principles which will ultimately help to reduce the overall carbon footprint."

While the crisis itself provides opportunities, Zimmermann is the first to admit it is going to be a marathon for the industry to overcome this ordeal. But he remains optimistic that there is a light at the end of the tunnel.

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PARTS PRODUCTION SERIE

PROOF OF CONCEPT

CO-DESIGN

ADDUP

AddUp is a joint-venture that was created by Michelin and Fives in 2016. AddUp specialises in the design and production of additive manufacturing machines for metal components, as well as providing additively manufactured metal parts as a service. AddUp is poised to become one of the key players in providing metal 3D printing solutions for industry, with its machines, parts production capacity and services along the value chain.

The Michelin Group is the world leader in the tyre industry. Michelin was one of the first manufacturers to have deployed metal additive manufacturing to produce serial parts using powder bed fusion technology (PBF, for Powder Bed Fusion). This technology has enabled Michelin to develop innovative solutions in the field of curing moulds and the associated sipes, resulting in a product performance increase unattainable using conventional technologies. (more than 100,000 sipes produced per year)

In 2016, Michelin joined forces with Fives, to create AddUp. Fives is a French industrial engineering group specializing in the development of complex <u>manufacturing machines and systems for industry</u>.

In 2018, AddUp then bought the companies Poly-Shape and BeAM. Poly-Shape is a service bureau specializing in the production of 3D metal parts, while BeAM is a leader in the design of directed energy deposition (DED) machines.

AddUp's unique offer, therefore, includes the sale of machines (FormUp®, Modulo & Magic machines) covering the two dominant AM technologies of the metal 3D printing market, as well as the manufacture of parts. These parts can be from single prototype to large scale industrial serial production and are supported by a high level of application support for the customer, that originates from the knowledge both as a machine producer, and as a parts producer.

We support manufacturers at all stages, from the design of parts, through production, to post-processing, in industries as varied as aerospace, defence, medical, energy, luxury goods, motorsports, etc.

The parts produced are designed to use less material, be considerably lighter and use fewer components compared to conventional manufacture. For example, heat exchangers are more efficient and more reliable than their conventional counterparts. Not to mention the ability to reproduce no longer manufactured parts, which makes it possible to resolve problems of obsolescence and lead time for spare parts.

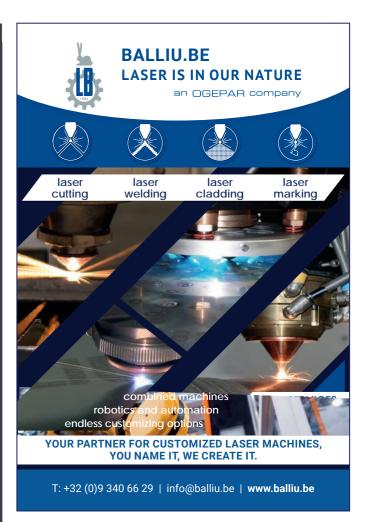
Our most exciting news this year is undoubtedly the introduction of our new FormUp® 350 machine. This completely new machine incorporates a lot of improvements, based on the feedback from the first generation of PBF machines produced since 2016.

This machine meets the production requirements of the industrial world, with its strong emphasis on reducing safety risks (HSE) with a completely autonomous powder supply module. The machine can be adapted to the functional requirements of the customer and produce parts in both fine powder and medium powder. With a variety of interfaces, the total interoperability favours the integration of this machine into the customers' existing production environment. Significant performance enhancement can be achieved by upgrading the machine monitoring systems and increasing productivity by using 4 lasers over the complete part simultaneously.

Our other big news is the acceleration of our business as a parts producer, with an installed base of 40 machines in Europe. This will be enhanced by the creation of a new workshop in Cincinnati, USA, which will initially include 6 machines, focused on North American customers.

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PART OF SOMETHING BIGGER

At the same time as the industry has by necessity been undergoing a dramatic transformation, PFW Aerospace has been undergoing changes itself as it joins the Hutchinson Group. But while the acquisition is going to necessitate some big changes in the company, Zimmermann is keen not to throw the baby out with the bathwater. "I've been personally involved in various acquisitions like this but here particularly, on one hand, we needed to ensure that we're perceived to be an integral part of Hutchinson," he tells us. "At the same time PFW has over decades been part of what is today the Airbus Group, so there is a perception in the market we have been part of Airbus and we are still closely



related to Airbus, who is our largest customer. So, we need to preserve our identity, and communicate that we are part of Hutchinson while showing that we're distinct from Airbus." Zimmermann is doing this by focusing on the unique strengths of PFW Aerospace as a company, and in doing so he hopes to achieve the best of "SO, WE NEED TO **PRESERVE OUR IDENTITY,** AND COMMUNICATE THAT WE ARE PART OF HUTCHINSON WHILE SHOWING THAT WE'RE DISTINCT FROM AIRBUS."

both worlds.

PFW AEROSPACE

"We're focusing on our local strength while reaping the benefits that being part of Hutchinson gives us access to," Zimmermann says. "That includes new technologies, capabilities, financial coverage. We need to balance maintaining a local culture while acknowledging we are an integral part of a larger game as well. It's quite an endeavour and it takes years to achieve." >>

PFW AEROSPACE



A large part of that means open communication with the people in the company.

"You have to make sure you provide clarity to the workforce in terms of what we're proud to keep in our culture and where we think there's something new to add on, without necessarily deleting things from our own culture," Zimmermann says.

A big part of that culture is the sheer talent PFW Aerospace has to offer. Zimmermann is the first to point to the vast potential in the workforce PFW has today across Europe.

"PFW as a group has sites in Germany and Turkey as well as in the UK, plus we have engineering offices in Germany, France and the UK. So, in a way we have an international footprint in microcosm already," Zimmermann says. "My primary objective is to make the best of the talent we have today. We have a lot of talent that has not been fully discovered or exploited."

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BOEING PROGRAMS

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Being part of all Boeing commercial aircrafts supply chain, Kale Aero manufactures Subassemblies, Rib Posts, Landing Gear Doors for many Boeing programs and as a Subsystem Assembly Krueger Flap for 777X.

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PARTNERSHIP WITH PFW AEROSPACE

Kale Aero has been a supplier for PFW Aerospace since 2008. Under this partnership, Kale Aero is manufacturing fuel tank parts and center fuselage tanks for the Airbus aircrafts, A319, A320, A320neo, A321, A321neo, and more recently, the A220.

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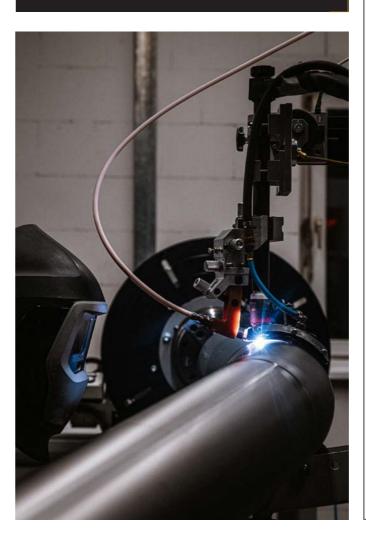
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The industry is changing, but PFW Aerospace, and Hutchinson Group as a whole, are already changing course to thrive in that new future.

"WE NEED TO BALANCE MAINTAINING A LOCAL CULTURE WHILE ACKNOWLEDGING WE ARE AN INTEGRAL PART OF A LARGER GAME AS WELL."

"We have now redefined our strategy in view of what we expect the next five or six years to look like," Zimmermann says. "We're not expecting major new aircraft developments. We're going to be facing a period where traditionally we will not be part of new programmes therefore, we have to find ways to acquire new business through other means by remaining competitive."

That strategy is going to mean becoming more competitive but also going into brand new markets.

"We're maintaining a radar screen of where we want to get involved, looking at a business that was not considered feasible for PFW just a couple of years ago," says Zimmermann. "We are one of the powerhouses when it comes to tubes and ducts. We can provide solutions for any of those, but we want to expand beyond that in view of bringing together the capabilities that Hutchinson offers already today, but far more integrated. We can





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provide a more compelling, integrated and complex solution than the individual sum of the offering. Being an integrator is our strategic aim." \Im

"WE'RE FOCUSING ON OUR LOCAL STRENGTH WHILE REAPING THE BENEFITS THAT BEING PART OF HUTCHINSON GIVES US ACCESS TO."







