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Dear reader,

Water, this precious element, is becoming increasingly scarce and the use of this vital resource is one of the greatest challenges of our time together with the climate change. In recent years, water pollution has increased worldwide, which engages our social responsibility. Today, 95% of the world's domestic and industrial wastewater is still not treated and flow as such in groundwater, rivers and lakes.

For more than 70 years, our company has been making a significant contribution to modern wastewater treatment and sustainable water management, including in the industry, thanks to our technical innovations, pumps and customized solutions. Our non-clogging sewage pumps are unique on the market. They are made of robust construction materials and are maintenance-free for 4 years.

For me personally, it is very important to point out that Egger is taking a very specific direction in a world that is more and more confrontational, nationalistic and complicated. We are convinced that this is the right way for the future:

Together with others but not isolated single-handedly.

The most important success factor, even in the digital age and its technological progress, remains the human. It is only through our 470 dedicated employees around the world that we will be able to support our customers and achieve sustainable, ecologically compatible goals.

I wish you a good reading.

Uwe. Kopf*

*Head of the affiliate Mannheim, which celebrates its 60th anniversary this year.

Impressum

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Egger focuses on sustainability

In recent years and months, our headquarters in Cressier have introduced numerous initiatives to reduce emissions and promote sustainability.

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Our commitment to voluntary CO₂ reduction began 10 years ago with largescale building and roof insulation for the production halls and administration buildings, as well as accompanying energy-saving measures such as the reuse of waste heat from machinery. On average, 60000 litres of heating oil can be saved annually which results in a CO₂ saving of 2000 tonnes over 10 years. In 2015 and 2016, a total of 2436 sq. metres of photovoltaic cells were installed on the roofs of the production halls. On average, Egger feeds 370000 kWh of solar power into the grid each year; this corresponds to 45% of the electricity requirement for our Cressier production site. With the commissioning of the new natural gas-fired heating system at the end of 2018, CO₂ emissions can now be reduced by a further

25% compared to the previous oil-fired system.

Thanks to systematic chip recycling of separated material types, as well as an on-site oil separation plant, Egger actively protects the environment and resources on a daily basis. And every employee also makes a personal contribution to sustainability. The e-bike purchase mobility scheme initiated and promoted by the management was well received. In the months of May and June alone Egger employees covered 4465 km of their journey to work by bicycle, as part of the «Bike to work» campaign. Not to mention all our pedestrians, cyclists and those travelling by train, whom we would like to take this opportunity to thank warmly for their daily contributions. Tb







In our workshop in Cressier, the old Scharmann boring machine from 1965 was replaced last spring by a boring machine made by Fermat, type WFC 10 CNC.



The conversion work for the new machine involved a considerable logistical effort and took place within 5 weeks in the months of April and May.

With this investment, Egger secures manufacturing at a high level at its Cressier site. Our technical requirements were very specific and we consulted several machine tool specialists. Finally, we opted for the manufacturer Fermat, who was able to fulfill the specifications completely.

The choice fell on a compact boring machine, which Egger adapted together with the manufacturer until all requirements could be met. In particular, the rigidity and performance of the machine were increased according to our specifications. We also have a U-Tronic drill head that can be fully controlled by the machine's digital control, which allows us to manufacture our RPP / RPG pump housings up to size 601 in particular. This boring mill makes our production processes more effective and improves working conditions.

The machine was put into operation by our colleague Guy Coindoz, who was also responsible for the previous machine. The conversion to the new technology could be implemented very quickly thanks to accompanying training courses and the integration of the boring mill into the production processes proceeded smoothly. Dn



The official announcement was issued a few months after reintroducing the service. Approximately 130 customers received the message about Emile Egger reopening in Wangen, Switzerland, as well as an invitation to attend the site's official presentation on Friday, August 23, 2019.

The new team of technicians, Messrs. Cvijan Miljic and Andreas Schmidle, has the latest vehicles and equipment at its disposal to provide high-quality service for our customers in Eastern Switzerland.

The event, which brought together customers from all over German-speaking Switzerland, took place in a relaxed atmosphere and allowed constructive exchanges among the participants.

Our customers confirmed their satisfaction at having a reference point so close to home. This will help strengthen the company's image in the region and develop the market for services and new pumps. Mp, Pv





New Lanzatech technology reduces carbon emissions

Let's present a fantastic reference as well as the beauty of a new LanzaTech technology that reduces the carbon emissions of large industrial plants.

The core of the LanzaTech technology is gas fermentation in which microbes grow on gases rather than sugars, as in traditional fermentation. During this continuous process, carbon-rich industrial gases such as residues produced during steel manufacturing, are transformed into commodity fuel and chemical products, providing a novel approach to carbon capture and reuse.



In the steel industry, carbon is used primarily as a chemical reactant to reduce iron oxide to metallic iron. Therefore, carbon in form of CO and CO_2 is unavoidable as a byproduct of the industrial process. In order to avoid releasing it in the atmosphere, the gas is injected into a fermentation vessel in which microbes transform it into alcohol (ethanol) and other chemicals. The ethanol can be used as a fuel blend or can be converted into a drop in jet fuel or everyday consumer goods.

LanzaTech and China's Shougang Group launched the first full scale commercial production facility worldwide operating on steel mill gases.

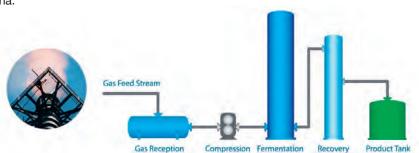
The plant, located at the Jingtang Steel Mill in Caofeidian China, deploys LanzaTech's technology with a production capacity of 46000 tons of ethanol per year. It has been operational since early May 2018 and has met all expectations. Many pumps are needed for this process to circulate the fermentation broth. The major difficulty and challenge for the centrifugal and axial pumps is the high gas content combined with the requirement of avoiding the generation of large gas bubbles and the destruction of the microbes.

A first pilot plant to validate the different needed components like pumps has been built. Our team in Shanghai was contacted two years ago and supplied one Egger pump for trial. Our special semi-open impeller EO pump performed so well that we were selected for the supply of all 25 critical large centrifugal pumps for their first industrial plant.

It is important to notice that our pumps are the only product sourced outside China. Due to the unique advantage of this solution and now the proven performance of this first industrial plant, many projects in China, in Europe, in India, in the US and in South Africa are moving forward.

This technology is not limited to steel mills and can be applied in many different industrial settings, such as refineries or ferroalloy production.

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Egger Iberica past and present.

The adventure began in January 1996 with a young team of three motivated employees who sought to confront new challenges.



U. Ayestaran, J. Garcia et T. Sanz

The first twenty years have been successful, however the economic crisis has been a challenge to which we have been forced to adapt. Since September 2016, the team has shared responsibility for all Market lines. This new strategic orientation drives the reorganization and distribution of work across the peninsula. After a few initial challenges the positive effects are already palpable. Our team consists of three people: Usue Ayestaran, head of spare parts, with Egger since 1997; Teresa Sanz, head of the subsidiary and responsible for the Market line Industry, with Egger since 1997, and Javier Garcia, head of Chemicals, with Egger since 2012. We are looking for a new recruit for the wastewater Market line.

Our challenges are manifold. Political instability and complicated economic conditions only serve to interrupt and decelerate public spending growth. Industrial companies awaiting future development in the country are thus affected. These obstacles have a major impact on the wastewater and steel markets in which we are active. Fortunately, interesting projects are emerging from Market line 1 and we hope that our efforts will be rewarded. Teamwork and interdepartmental collaboration between Cressier and Spain has awarded us two simultaneous orders between HPD USA and HPD Bilbao.

Ultimately, we supply good products and provide high-quality customer service. This puts us in a position to meet the challenges with a certain amount of confidence. Our strength is that we are a team that believes in what it does and listens to its customers. We are very much motivated by the development of the company and its contribution to the success of the Egger Group over the years. This is especially true for both myself and my colleagues, who over time have witnessed the increasing integration of women into the various company departments.



Since 1947, Egger pumps have been used in a large number of industrial companies, particularly in the paper industry. Thus, a NDP-D pump was installed at that time in Mathi (near Turin / IT) for the subsidiary of the Finnish group Ahlstrom-Munksjö, manufacturer for fiber-based materials.

Egger Turo Italia has been able to deliver a recent order of spares for a pump that has been in operation for more than 60 years! Thanks to the robustness of our products, but also thanks to a stock of quality spare parts, our Egger pumps can run smoothly for decades. Let's be proud of it.

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Locations where our products are installed

APPLICATIONS Turo[®] pumps for golden yellow edible oils

Whether for salads, margarine or cooking, edible oils are a staple food. Outside of the domestic kitchen, they are also used in enormous quantities in industrial food production.

Companies such as ADM, Olenex and Cargill are global players in the vegetable oil production market and are closely linked to agriculture. The daily production of huge quantities of vegetable oils requires a smooth production chain starting with the farmer who cultivates the fields. Today, soybean oil is the world's most important oil-producing plant, consuming 6% of the world's agricultural land. In addition to the food industry, vegetable oils, especially soybean oil, are also used for the production of biodiesel, and are also used to a lesser extent in the cosmetics industry. There are a multitude of processes for the extraction of vegetable oils. Industrially, however, extraction with solvents such as hexane or refining with lye is usually preferred. The soybeans are crushed, drained if necessary and pressed into flakes.

What does our Turo[®] pump have to do with the golden yellow color?

Back to the soybean oil example ... In its «native» form the oil has a light yellow color; if extracted, it looks rather brownish yellow and has a rather unpleasant taste. This is sufficient for the further processing of biodiesel. As end consumers, we are significantly guided by our food's visual appearance as well as its quality and taste. Therefore the soybean oil is bleached afterwards. A surfactant known as «bleaching earth» is mixed with the



soybean oil and absorbs the undesirable color components and particles. After a few hours the soybean oil becomes golden yellow. Now it is time to separate the bleaching earth from the soybean oil once again. For optimum filtering results, filter aids (pearlite or dicalite) are added before starting the filtration process. Some of these solids are highly abrasive and must be applied gently and with as little shearing as possible. (Capacities are 5 to 65 m³/h at pressures ranging from 2 to 8 bar (at the end of the filtration process). And this is where our Turo® pump comes into play! Standard pumps used without consideration of the special operating conditions sometimes have very short service lives of a few

days or just a some months, whereby the filtration result is unsatisfactory. Consequently, the filtration process takes much longer. A further objective of the filter chamber feed is to achieve a filter cake with good dry matter which separates well from the fabric upon opening the filter press.

With our TV series made from wear-resistant HG25.3, the service life was increased to 3 years and the resulting filtration process by 20%, i.e. shorter filtration times which implies higher throughput accompanied by energy savings. With improved overall efficiency and plant availability, personnel costs, sparepart expenditure and the number of repairs have therefore all been significantly reduced. This success story is the result of years of intensive process optimization at the customer's premises.

These good references have already influenced other international locations for vegetable oil production as well as other industries using chamber filter presses (automotive, recycling, chemical, etc.).

Additional pump applications will feature in the next edition.



Behind-the-scenes workers, really?

Servers, networks, software, data protection, viruses and storage are just a portion of the jargon employed by the IT department. But what does an IT department actually do?

Our IT technicians design, integrate and maintain computer systems and applications. Their expertise and skills provide users with the necessary support while at the same time managing software, data input, the computers, communications and processes.

The Cressier department collaborates closely with colleagues at other sites on large projects such as the installation and management of messaging services. The IT technicians play a role as facilitators in the integration of the technology and this collaborative work coupled with the sharing of knowledge, allows the company to respond to many challenges. As the first point of contact between the users and our company's organisation, the IT department manages incidents (interruptions, outages and overloads) and covers a wide range of services. Its support extends beyond borders, since nearly all subsidiaries share a single IT network that allows data to be distributed quickly and the same security rules and procedures to be applied.

As the operator of a global IT network, Egger harnesses today's technical advancements to create a standardised and innovative work environment for its employees and business partners. Top priority is given to the security and the future-proofing of the solutions developed. As the computer system evolves, new vulnerabilities are continually detected, threatening both individual users and the business as a whole. Therefore, it is important for users to be vigilant, while at the same time the IT department is employing up-to-date resources and practices to provide a stable and secure platform for business processes.

Some figures

Our monitoring system proactively checks more than 1 280 services operating on about 220 peripherals (servers, firewalls, network and data transfer devices). The monitoring system operates 24/7 and sends warning and error alerts to the IT team.

Interviewed by PVa

588 000 EMAIL EXCHANGES IN 2018



In 2018, **2.1 terabytes** of data were transferred over the Internet.

588000 emails were exchanged via our messaging server.

46% of messages were legitimate, while the rest were blocked by our firewall.

222 intentional attacks and 10 million unauthorised connections were stopped by our firewall.

75 viruses were blocked on workstations, originating from USB memory sticks or inappropriate downloads.



Some tips

a) Keep your computers and smartphones updated with the latest updates.b) Be careful when clicking on links or opening websites or attachments, even if the sender appears to be known.

c) Protect your data by checking the security of websites (green padlock in the https address bar) and before submitting

sensitive data (username, payments or personal data).

d) Always use the Egger VPN connection to guarantee secure transmission of data to the company.

e) Avoid public Wi-Fi. Unsecured Wi-Fi allows hackers to intercept your device's network traffic.

Egger Mannheim has celebrated its 60th anniversary

It all started 60 years ago when Messrs. Emile Egger and Arthur Henschel first established a branch in Heiligenhaus in Germany. But a few months later in November 1959, the company headguarters was relocated to Mannheim because of the great distance to the parent company.

The subsidiary with today 45 employees - including a small part in Schwedt - celebrates its anniversary this year. The



celebrations in May commemorated 60 years of creativity and technological innovation.

On this occasion, there was a celebration with 130 guests. Customers, business partners and employees were able to visit a 60-year retrospective exhibition. After a warm welcome and a formal meal, good discussions took place. Various scientific slam were recited and broadcasted until late in the evening.

The team of Emile Egger & Co. GmbH from Mannheim is contributing to the success of the Group by developing its activities in Germany, Luxembourg and Eastern Europe and up until now is the subsidiary with the highest turnover of the group. Congratulations.

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Egger Cressier







Yannick Lüthi

Coordinato

tome

Philippe L'Eplattenier CN Turne



Nicolas Schwab



Enrico Bertolino oresentativ Western Switzerland









Marc Andenmatten technician



Mathieu Seignert Project Engin

Egger Wangen

Nathan Fehlman

Apprentice



Filimon Abraha

ntice



Andreas Schmidle Service technician



CONGRATULATIONS TO...

Egger India



Marimuthu Raman



Jebaraj Samuvel ion Help



Egger

Mann-

heim

Gowtham Kanagaraj Quality Control Asst. Engineer





Arumugam Karuppusamy

Vinay Mukundbhai Patel



Bakkiyaraj Keshavan

Egger



Aishwarya Sasikumar

Jr Officer

Inventor

Don Poul KP José

Engineer

Hariprakash Devaraj

Harish Nandakumar



Rajasekaran Inventory Control Office



30 years - Turo Gold

- Gianfreda Daniela
- Grimm Michel
- Menezes Diamantino
- Ramos Antonio
- Strausack Nelly
- Valverde Manuel

- Borges Alves José

- Rüfenacht Pierre-André
- Silva Afonso
- Stätzler Isabelle
- Tortella Gian-Mauro
- Zaugg Raymond
- Horvat Rudolf

25 years - Turo Silver

- Bichsel Vincent
- Morales Benito



Yvonne Rösner Orders Despatch





Burkhard Krüger Sales Service





Our apprentices Emile Egger & Cie SA in Cressier for the success of their CFC and Maturity.

We thank the trainers and all the people who contributed to their success

- Commercial specialists Services and Administration: Marigona Krasniqi
- Polymecanics: **Kyle Acquadro Michael Giudice**
- Industrial Designer: **Kevin Dinis Ferreira**

and wish them every success in their professional and personal challenges.



Jubilees April - December 2019



- **10 years Turo Bronze**
- Reto Steiner Christine Vuille

20 years - Turo Silver

- Fux Kilian
- Nadalin Claudio
- Rodrigues Paulo







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