

INFORMER

THE FELBERMAYR GROUP MAGAZINE 2/2017

ALPINE

HEAVY HAULAGE
FOR STORAGE POWER PLANT

HIGH FLYER

A HOOK HEIGHT OF 189 METRES
FOR CHIMNEY DEMOLITION PROJECT

INNER CITY PROJECT

ARCHITECTURE AS A CHALLENGE
FOR BUILDING CONSTRUCTION

PHOTO: MARKUS LACKNER



Taking the fast lane

Dear Sir or Madam,

The economic forecasts are pointing to success, unemployment figures are falling rapidly – all thanks to the economy, we believe. Despite all the good intentions, our politicians have not (yet) reached the ground, and are still floating on the cloud of promises, avoiding the fast lane. Our vehicles in Germany, for instance, have been parked for up to eight weeks awaiting the necessary transport permits. This means that months of planning can sometimes be in vain – with all the consequences in terms of additional costs for transport and resulting production losses.

In short, the economy must absorb what policymakers in Europe mess up. This

requires strong companies that believe in the power of the economy, but also qualified employees who are committed to the success of projects. A special thanks also goes out to our clients in this context. It is they who keep the economy going through investment.

For a sustainable upswing, it is to be hoped that our politicians will eventually get down to earth and create the framework conditions necessary for a modern economy. For example, with regard to the flexibility of working hours in Austria. In this respect, it is high time to adapt to common EU standards. This increases productivity, and can also make a significant contribution to greater employee

satisfaction by improving the compatibility of work and family life. Why deny an employee overtime if he or she can earn more with it? Correctly applied working time flexibility means individualisation and a benefit for both sides. We stand by that.

If we are to make a wish for the new year, it is the implementation by politicians of further measures, which have been cited so often. We remain hopeful that the signs of the times will now be noticed and that governments will also switch to the fast lane.

In this sense, we wish you and your families a Merry Christmas as well as much health and success in the new year.



DI Horst Felbermayr



Horst Felbermayr

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HYDRAULIC ENGINEERING

Largest hopper barges for inland waters

In mid-July, the equipment of Felbermayr's Hydraulic Engineering Department comprising around 150 vessels, was extended by a large-capacity hopper barge with bow thruster. With a capacity of 1,800 tonnes, a length of 69 metres and a width of 11.4 metres, the hopper barge is currently the largest in-

land waterway vessel and about three times the size of conventional hopper barges. With a 580 hp bow thruster, the vehicle remains manoeuvrable in flowing waters. The machine, which is moved by motor ship, will be used primarily for dredging on the Danube. A second



large-capacity hopper barge of the same type has already been ordered. It will be delivered in a few months and will further expand the fleet of about two dozen folding barges.

PROMISING OUTLOOK

World's highest working platform deployed for logo repair

In mid-August, one of the world's highest working platforms in Felbermayr's fleet was deployed to the heart of Vienna. Its task was to repair the logo on the approximately 90-metre-high building that serves as the OMV headquarters. As an alterna-

tive to the two-day platform operation, a mobile crane with a working basket could also have been used. However, the use of the truck-mounted platform with a maximum working height of 103 metres was considerably cheaper.





AT THE TOP OF THE TREE
Treetop walk established in Slovakia

Five mobile cranes, four forklifts and telescopic forklifts as well as two crawler lifts were used to construct a treetop path in the Slovakian part of the High Tatras. Access to the construction site was via a forest road about 2.5 kilometres long. The crane drivers proved their great skills for the first time by negotiating the rough terrain. However, the challenges became almost unmanageable when it came to erecting the cranes, which weighed up to 100 tonnes, on the uneven and soft forest soil. The up to 30-metre-long wooden elements were partly lifted by means of a tandem lift with a reach of more than 40 metres. The tree top walk, which is up to 26 metres high, is 1,270 metres long and was opened at the beginning of October after only one month of construction.

BUILDING CONSTRUCTION
Industrial hall constructed for forwarding company

In May, work began on the construction of a 2,500 square metre hall for an internationally operating forwarding company located in the Upper Austrian town of Edt. The property consists mainly of a workshop with seven assembly pits, an escape tunnel, offices and sanitary facilities. The hall was built using prefabricated concrete

elements. The contract also included the construction of a cargo lift using semi-finished parts in an existing hall and the conversion of existing offices. Furthermore, the contract included the construction of outdoor facilities with 6,500 square meters of asphalt, a drainage basin as well as the concrete slabs for a gas storage

facility, a garbage compactor and a forklift maintenance area. A particular challenge for this project is to maintain the operative forwarding operation during construction work. This also applies to the integration of a lift shaft for a 20-square-metre cargo lift into an existing building. Work is scheduled for completion in February 2018.



PHOTOS: RADOSLAV ZIMKA, MATHIAS IMLINGER



LIKE IN THE MOVIES

Crane job for western movie heroes

Three locations north of Bucharest were used for a feature film, Felbermayr Crane Project Manager Daniel Istrate reports. In addition, around a dozen forklift trucks, telescopic forklifts, scissor lifts and truck-mounted platforms were on site. The devices were

mainly used for the construction of scenery and to illuminate scenes. Shooting with the help of Felbermayr lifting devices lasted from August to September. The film, titled *The Sisters Brothers*, is currently being completed and will be released in 2018.

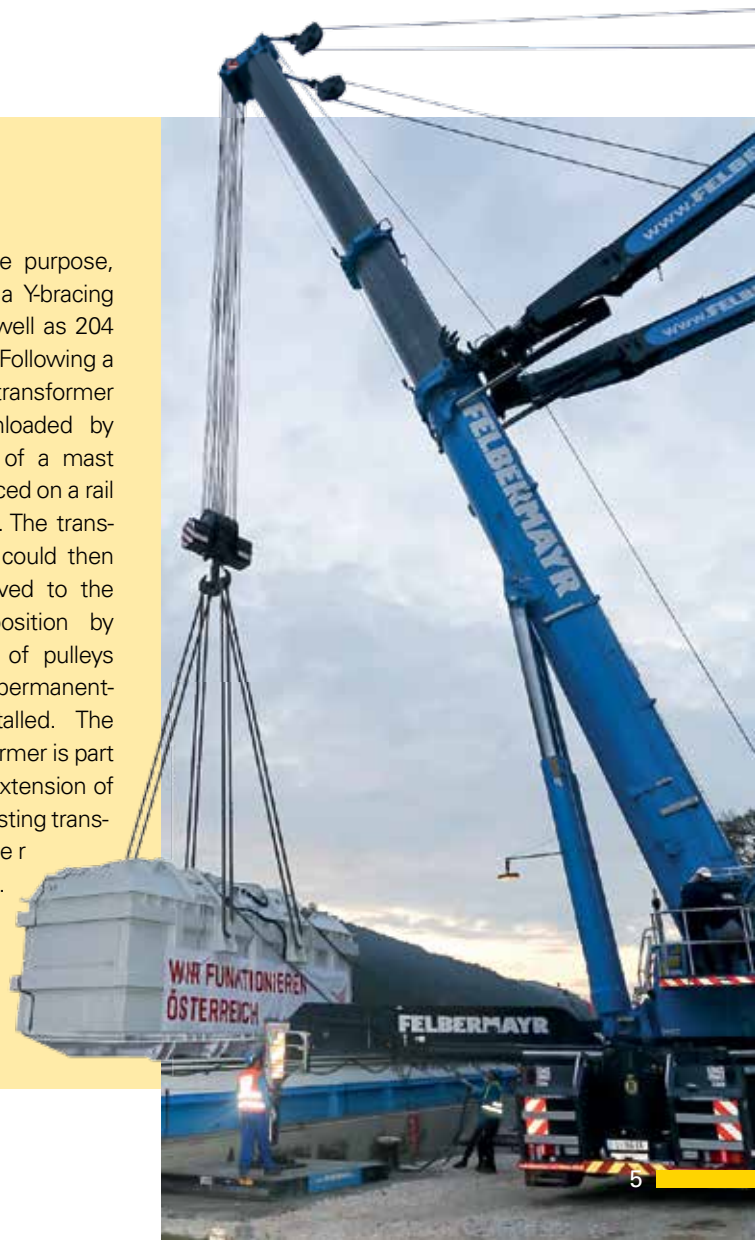
SUSPENSEFUL

Transformer station put on foundations

Departing from Felbermayr's heavy-load port in Linz, a 179-tonne transformer was transported by ship to the Jochenstein transformer station in mid-September. Afterwards, it was transhipped onto a self-propelled truck

with a 750-tonne crane. For the purpose, the crane was equipped with a Ybracing to increase its load capacity as well as 204 tonnes of superstructure ballast. Following a 500-metre load ride, the voltage transformer

was unloaded by means of a mast and placed on a rail system. The transformer could then be moved to the final position by means of pulleys and permanently installed. The transformer is part of an extension of the existing transformer station.





LINE REHABILITATION
Short pipe relining instead of expensive excavation work

Defective water and sewage pipes in the city of Salzburg necessitated extensive remediation measures covering a length of some 200 metres. In order to reduce costs and avoid noise emissions caused by truck traffic, Felbermayr's Department for Pipeline Rehabilitation opted for two innovative methods. For example, the sewer was rehabilitated using so-called short pipe relining. Profile tubes with a height and width of 875 millimetres or 500 millimetres were pulled into the existing pipe via installation pits. The installation pits remained intact after completion and were converted into maintenance shafts.

Furthermore, the old cast iron pipe running parallel to the sewer was replaced with a new pipe with the same dimension (150 mm diameter) using the so-called burst lining method. In this process, the existing pipe is destroyed by means of a cutting blade and pushed into the surrounding soil, while the new pipe is tracked simultaneously.



Six intermediate pits were necessary for the integration of house connections. Thanks to these remediation methods that minimise the need for excavation work, traffic could be kept running almost entirely, nocturnal excavation work was reduced to a minimum and the total construction time could be considerably reduced compared to conventional pipe replacement by excavation.

HAEGER & SCHMIDT LOGISTICS
Extension of railway connection

Haeger & Schmidt's site in Andernach focuses on container transport by ship and railway. Since the end of December 2016, this service has been supplemented by the Middle Rhine Flanders Express (MFE) train service, which once a week connects the MPET and DPWorld terminals in Antwerp with the Andernach region. Due to great demand and

in order to be able to guarantee a smooth operation, the scheduled service is now to be extended by a second departure. This year, an additional 44,000 square metres of indoor and outdoor space were acquired by the public utility company not far from the port. The operator is thus expanding its existing range of warehousing, rental and ser-

vices. The range of services in Andernach also includes trimodal transshipment all the way to container stripping and stuffing. The high-performance inland waterway service with the liner ships MS Aragon, MS Yemaya and MS Olimar connects Andernach with the seaports of Antwerp and Rotterdam at three to four departures per week.



PHOTOS: ROLAND STROMBERGER(2), HAEGER & SCHMIDT



ALTERNATIVE ENERGY Felbermayr installs wind farm in Serbia

Between August and September, Felbermayr installed four wind turbines in Alibunar, some 45 kilometres north-east of Belgrade. The tower segments and blades originated in Germany and Poland, had been temporarily stored in Linz and transported by water to Pančevo via the Danube. The hub receiving the wind blades and the nacelles was transported to Pančevo from Rotterdam via the Rhine-Main canal and the Danube. Flat-bed trailers were used to transport the equipment from the transshipment point to the construction site just a few kilometres away. The components were assembled using an LR 1600 with a maximum lifting capacity of 600 tonnes and two auxiliary cranes with a maximum lifting capacity of 130 and 90 tonnes. Various platforms and forklifts supplemented the technical equipment on site. The four plants, each with a rotor diameter of 100 metres, are scheduled to go into operation at the end of the year and will produce 23,000 megawatt hours of electricity per year. This corresponds to the electricity demand of some 7,400 households.

FROM DOOR TO DOOR Ten beer tanks on the road

The ten beer tanks were transported from Athens in Greece to the Romanian cities of Ungheni, Mures and Craiova, reports Project Manager Marius Tudose. The beer tanks weighed 18 tonnes, were 13 metres long and sported a diameter of six metres. The contract began with the tanks' dismantling in Athens. From there, the tanks were transported to the port in Piraeus over a distance of about 15 kilometres. There, the containers were transferred onto a ship to be transported onward to the Black Sea port of Constanta. Once there, the tanks were once again transferred to three barges with two different destinations. A ship with four tanks drove about 200 kilometres northwards to Braila. There the tanks were reloaded onto flatbed trailers and transported some 600 kilometres further to their

destinations in Ungheni and Mures. The remaining six tanks were transported on the River Danube approximately 600 kilometres west to Drobeta and from there by road about 100 kilometres to the Heineken brewery in Craiova. The beer tanks were unloaded at their destinations by mobile crane and placed on supports.



Latest GT-Race a resounding success

the middle of the action. And the three of them were born with a passion for everything on wheels, which they proved with outstanding lap times. Like father, like son – and daughters too. Real Felbermayrs, that's for sure.



FÜR PROFIS VON PROFIS

Working platforms for new year's concert

Ballet will again show a magnificent performance. The recordings were made at the beginning of September at Eckartsau Palace in Lower Austria. The correct lighting

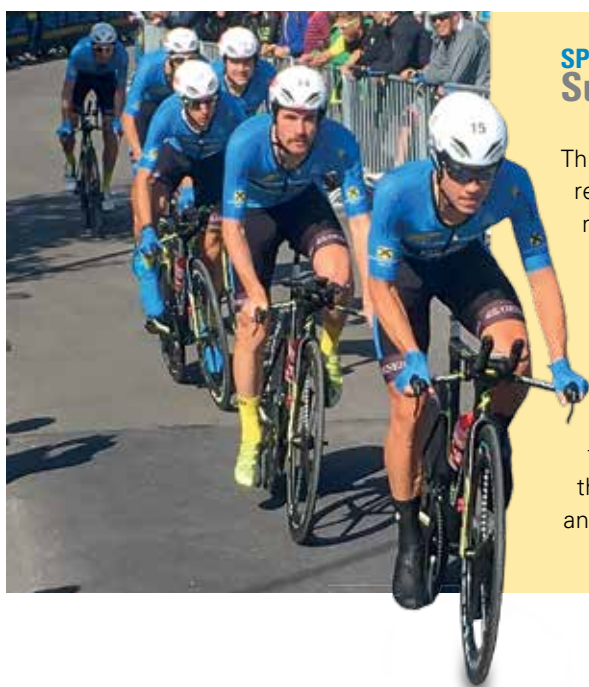
in the magnificent ballroom was created with the support of ten telescopic working platforms. For this purpose, the stages were equipped with spotlights and placed in front of the hall's windows. The maximum working height of 16 metres ensured sufficient flexibility with regard to the required beam angle. The Austrian National Broadcasting Association ORF serves as the producer





WIMMER MASCHINENTRANSPORTE 243-Tonne ship engine shifted

In Augsburg, a so-called self-propelled industrial transporter was used in mid-October to relocate a ship's engine. The two-kilometre drive from the assembly site to the test bench was interrupted for weighing. The engine was found to weigh 243 tonnes. After final assembly, this weight will increase to around 271 tonnes. Motors of this type are used for power generation in so-called transatlantic liners with lengths of up to 300 meters. One engine achieves an output of around 22,000 kW. This corresponds to the output of about 300 mid-sized cars with 100 hp each.



SPONSORING Successful cycling pros under a sky-blue flag

The Felbermayr Simplon Wels team reached 41 podium places in about 60 races in the 2017 racing season. Outstanding were Riccardo Zoidl's victory at this year's Tour Fleche du Sud in Luxembourg and Stephan Rabitsch's triumph at the International Tour of Upper Austria. Overall, the team also scored great results in three Austrian federal league cycling races, including the season-opening race in Leonding and the Grand Prix of Lower Austria. The

Tour of Austria with international participation once again marked the highlight of the domestic cycling season. Riccardo Zoidl was able to claim an excellent second place on the extremely difficult royal stage, Markus Eibegger finished a strong fourth in the prologue on Graz's Schlossberg. For a few days, Stephan Rabitsch enjoyed the honour of wearing the jersey of the best climber and only missed winning this title by a hair's breadth in the overall standings.

HIGH-RISERS Jacob Meringer in the ÖSV team

Following numerous successes in the past season, Austrian snowboard prodigy Jacob Meringer will start in the C squad of the Austrian Ski Association (ÖSV) for the first time in 2017/2018. Last winter, the 16-year-old from Graz won first place at the National Championships in the parallel slalom (PSL) and the parallel giant slalom (PGS). Furthermore Meringer achieved a 3rd place in the Alpe Adria Snowboard Cup (AAC) and a win in the Sparkasse Provincial Snowboard Cup. Since 2015, Meringer finished twenty out of a total of 28 ra-

ces on the podium and thirteen on the very top.

His primary goals for the upcoming season include winning international youth Fis races, defending existing championship titles and gaining experience in European Cup races. For senior boss Horst Felbermayr, it is a very special pleasure to be able to support Meringer's achievements as a sponsor: After all, it is the young athlete's job to be able to achieve such success on his own, Felbermayr says.



189-metre boom for chimney demolition job

In the coming weeks, Styria's highest building to date will be razed to the ground. A crawler crane with a maximum hook height of 187 metres is used for this purpose.

Towering 175 metres above the ground, the chimney of the Werndorf district heating power station south of Graz, had been Styria's tallest building for about 50 years. The demolition work for the striking fireplace began in mid-August. With its removal, the history of a formative building in the south of Styria's capital city comes to an end and a caterpillar crane with technical highlights is used.

An operating weight of 749 tonnes

"51 lorry transports were necessary in order to bring the crane to the place of operation," says Michael Lehner from the Felbermayr Project Department in Wels. This was mainly due to the total boom length of 189 metres. "The last time we used a crane in this configuration was in 2008 for the construction of a gas conversion station in Spain," Lehner recalls. Together with 665 tonnes of ballast, the crane has an operating weight of 749 tonnes. And so the engineers had to sol-



To the video



An LR 1750 crawler crane was used to demolish the 175-metre-tall chimney.



The demolition of the first chimney segment had already ended the tower's reign as the tallest building in Styria.



Once put on the ground the tower segments are attached to the mobile crane using a work platform.

ve the first problem. The only possible location for the crane did not meet the static requirements, and a gas pipe ran underneath the crane.

Last but not least, however, these problems could be overcome with corresponding soil improvement measures and a two-week delay.

A hook height of 187 metres

In order to bring the first larger chimney segment to the ground, the fitters had to raise the work basket countless times in order to separate welding and screw connections. The first big lifting job which was preceded by several small lifting jobs for removing ladders and railings made things truly exciting. The aim was to safely bring the top chimney segment with a height of about 20 metres and a calculated weight of 16 tonnes to the ground. Thanks to correct weight specifications and almost windless conditions, the crane lifting job was a success and the pipe safely reached the ground after about half an hour. Arriving there, the lower end was connected to a mobile crane with a maximum load capacity of 350 tonnes and moved horizontally so that it came

to rest on the ground. Afterwards it was cut into pieces with cutting torches and removed. The other chimney segments were removed in a similar way.

The demolition of the first chimney segment, however, already ended the tower's

reign as the tallest building in Styria. The chimney of the neighbouring gas and steam power plant in Mellach, which was built in 2012, is also 175 metres tall. It thus reigns supreme in Styria, followed by the Dobl transmission mast (140 metres) and RHI's chimney in Trieben (140 metres). ■



Once on the ground, the tower segments were crushed and hauled off to be recycled.

FELBERMAYR BUILDING CONSTRUCTION

In late September, employees with Felbermayr's Building Construction Department completed master builder work on their division's largest project to date. In its course, they had built an industrial construction with some 4 hectares of room area. TGW Logistics Group based in Wels had commissioned the gigantic project.





Building construction project in the centre of Wels

A large inner city project encompassing some 10,000 square metres of residential and office space is currently being implemented in Wels. Felbermayr is carrying out the carcass work as part of a consortium with Wels-based construction company Weixelbaumer.



Building technology was implemented by the Wels power station.

Wohnpark Wels Mitte has a long history. Five years ago, the first efforts were made to build a shopping centre on the approximately 4,000 square metre site. Due to insufficient demand, however, this idea was quickly discarded and planning work in favour of residential and office space was commenced. A total of three buildings with five, six and seven storeys, as well as an underground car park with two levels will be built.

In the summer of 2016, the demolition of the existing buildings marked the start of the ambitious construction project in the inner-city area. The accrued construction waste was brought to the Wels recycling plant for processing.

Structural measures for construction pit

A seven metre deep construction pit was required to build the two-level underground car park. "In order to achieve this, we had to reinforce the excavation pit perimeter with steel girders during the earthworks for structural reasons," says Felbermayr Site Manager Robert Grundner about the precautionary measure and goes on to explain that this was necessary due to the neighbouring buildings. After concreting the 1st underground car park ceiling, the reinforcements were removed. Another special feature was that the required tower



Due to spatial restrictions, the underground car park was built around the crane. The openings were only closed once construction was complete.

crane was erected in the excavation pit and an opening was left in the concrete slab for the entire period of construction to allow the lattice boom to move.

Architecture as a challenge for building construction

Building construction work proper began this spring, about one year after the start of construction site clearance. "What makes matters more difficult is the fact that some load-bearing walls are not placed on top of each other. In addition, construction work

is also challenged by projecting storeys," says Grundner, referring to complex tasks resulting from sophisticated architecture. But also cramped spatial conditions, restricted access roads and a traffic volume typical for city centres are constant companions. This requires detailed planning of construction site logistics and flexible action on site. Construction work on the shell, 95 percent of which was built with in-situ concrete, was completed in November. The keys for the low energy residential and office building are scheduled to be handed over in late 2018/early 2019. ■



The two-level underground car park.



Felbermayr's Construction Engineering Department had been commissioned with the reconstruction and modernisation of the Reichraming railway station.



Primary construction was completed by late October.

Construction work for railway station offensive

Extensive modernisation measures are currently underway at the stations along the Enns Valley line. Felbermayr's Civil Engineering Department had been commissioned to carry out the construction work at the Reichraming railway station. Once completed, the new platforms and new track structures are to ensure greater comfort and safety in rail traffic.

In August we first demolished two platforms, each with a total length of 160 metres and one track at the station site," explains Felbermayr Construction Manager Alois Lüttinger from the Department of Infrastructure Buildings. The measures had been commissioned by the Austrian mobility service provider ÖBB.

Concrete construction provides more comfort

The demolition material was taken to the WBR building materials recycling plant in Wels and processed there. A total of some 400 running metres of new platforms, including rail crossings, access ramps and drainage systems, will be built. "These will be 55 centimetres higher than the rail's upper edge and will be constructed according to ÖBB's standard

planning specifications," says Lüttinger, arguing that this will make it possible to comfortably "embark and disembark" in the future.

Another essential part of the modernisation efforts was the demolition of two signal boxes, as they were no longer required due to an electronic linkage, which means that the train station can now be controlled from Linz. So-called SFE systems (combined signal, telecommunications and power supply systems) at the station are also completely new. For this purpose, cable pulling shafts are built using in-situ concrete, installed underground and connected with around 160 meters of pipe sections and wired up. Felbermayr's scope of supply also included the re-routing of existing cables and systems. In addition, foundations up

to four metres deep for catenary masts were also built.

Track construction

The construction of a new track at the station also required soil improvement measures. Lüttinger on these measures: "We have removed around 900 cubic metres of soil for this purpose. It was then replaced by a 40-centimetre-thick frost layer and an equally high base layer. Ten centimetres of levelled ground and 30 centimetres of track ballast followed. This completed the substructure for the actual track."

Work is scheduled for completion in November. By then at the latest, rail customers will be able to benefit from the modernisation measures and experience a completely new level of railway comfort along the Enns Valley line.

Exploration drilling for bridge construction

From February to October, Felbermayr's Specialist Civil Engineering Department carried out exploration drilling and geophysical tests on the A13 motorway in Tyrol. Due to the steepness of the terrain and the danger of falling rocks, the work required extensive preparation and measures to secure the slope.

A length of around 1,800 metres makes the Lueg Bridge in Gries am Brenner Austria's longest slope bridge. But this technically demanding civil engineering project on the Brenner motorway has gotten a little long in the tooth. To ensure that this important transit route can remain open to road users without interruptions, possible redevelopment measures and new construction variants are currently being investigated. These include geological-geotechnical exploration drilling.

Installation of rockfall protection nets

"We drilled a total of 45 vertical and 5 inclined rotary core boreholes," Emmerich Schießling from Felbermayr's Specialist Civil Engineering Department illustrates the core task. However, temporary protective measures were necessary in order to carry out the exploration drillings. For example, rockfall protection nets were installed at the first ten boreholes when work began in mid-February. Following the completion of the first boreholes, the rockfall protection system in question was removed and rebuilt at the next location – most of the time two teams were working in parallel. At the same time, a third squad assembled and dismantled the four drilling platforms. At least three drilling rigs were always in operation on the steep slope. "This ensured that one drilling platform was always completed when a drilling rig became available to use," says Schießling, explaining the measure aimed at preventing downtime and adds that at peak times as much as six drilling rigs were used at the same time.



2,000 running meters of drill cores

The drilling rigs had to be roped down to a depth of up to 50 metres – almost exclusively from the bridge. This work was carried out in cooperation with Felbermayr crane rentals in Wörgl. Another complicating factor was the fact that the bridge's current condition restricted the load carried by the lifting devices. Therefore, the drilling rigs had to be dismantled into several parts before being roped down and reassembled after being parked on the drilling platforms. "This way, we drilled, examined and stored some 2,000 running meters of drill cores between February and Septem-

ber," Schießling reports. Drilling depths reached up to 100 metres. Geophysical in-situ tests were also carried out to determine the mechanical properties of the subsoil. "Twelve boreholes were converted into groundwater and inclinometer wells in order to measure possible underground slope movements," says Schießling, adding that a hybrid seismic survey was also carried out on top of the compacting investigation of the existing subsoil layers.

Remaining work, such as the dismantling of the remaining rockfall protection fences and drilling platforms as well as subsequent recultivation work, was completed in October. ■

Alpine heavy haulage for storage power plant

Last summer, Bau-Trans processed a total of thirteen heavy transports with unit weights of up to 152 tonnes for the Obervermunt II storage power plant project in Vorarlberg. The most important means of transport in this context were self-propelled heavy-duty modules called PST.

The project had a lead time of two years," says project manager Josef Ammann from the Felbermayr subsidiary Bau-Trans. He has a clear answer to the question why it took so long: "Due to age-related defects, we had to structurally re-calculate more than 60 bridges in order to obtain the necessary approvals." And that is inevitably connected with a lot of effort and therefore also time and money. This primarily affected bridge structures on the Austrian side. Switzerland, for instance, has designated heavy-duty routes that make planning much easier. Ammann points out, however, that it is becoming increasingly difficult to find suitable routes in Austria and Germany.

Road and rail transport

The thirteen heavy load components originated in Austria, Switzerland and Italy. The energy provider's premises, about ten kilometres south-east of Bludenz, served as a transshipment point and for the final assembly of some components. The three transformers, two of which weighed 152 tonnes and one 77.5 tonnes were produced in an Upper-Austrian transformer factory. The heavier voltage transformers were delivered by rail to the Montafon region. The lighter of the two could be delivered by road due to its lower weight.

The four butterfly valves weighing in at between 120 to 145 tonnes each originated in Germany, Switzerland and Italy. Due to the inadequate load-bearing capacity of many bridges, these oversized 'water taps' with a length and width of about five meters and a height of about four meters were delivered in disassembled condition. Final assembly was carried out at the recipient's.

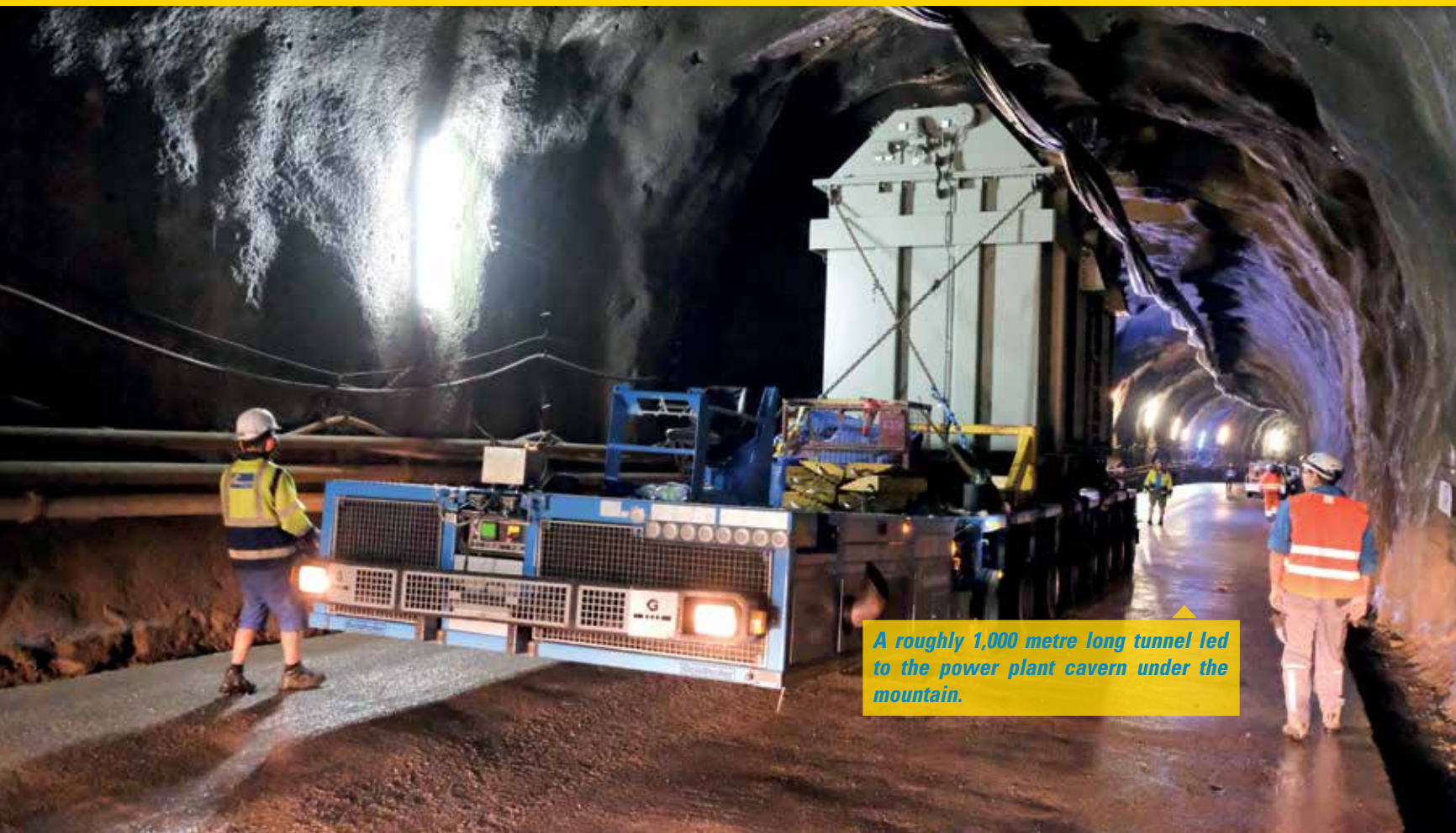
The generator's four stator parts originated in Switzerland. A lifting lever bridge was used as a means of transport.



The generator's stator parts were transported using a lifting lever bridge.

The transport to the power plant tunnel 1,700 metres above sea level used the Silvretta-Hochalpenstraße.





A roughly 1,000 metre long tunnel led to the power plant cavern under the mountain.

Ammann explains the advantages of this special vehicle: "It enables us to lift the load so that we can, for example, negotiate roundabouts or guide rails with narrow curve radii." The two lower stator parts are 9.5 meters long, 3.9 meters wide and 4.1 meters high and weigh 128 tonnes. The two upper parts of the stator weigh in at 114 tonnes and, eight meters long and 4.1 meters wide as well as high. "Due to the excessive weights involved, some bridges had to be crossed using crab steering," says Ammann, explaining that the front and rear axles, which are separated by the contact surface, are offset and roll along the left and right lane, respectively. Like that, the load is distributed over the two lanes of the road, which means that more weight can be transported. The central rotor body delivered from Italy could not be delivered directly to the Montafon region due to some bridges' insufficient load-bearing capacity. Instead, the route had to reach the component's destination via a large detour. This meant the heavy haulage transport had to take a detour of about 600 kilometres.

PST achieves nineteen per cent transverse tilt

Things really got down to business on the last thirteen kilometres on the Silvretta-Hochalpenstraße. "We had to cope with gradients of twelve percent. But that was not the real problem," says Ammann. Even

more demanding were transverse tilts of up to nineteen percent and narrow curve radii. That was also the reason for using the PST. At 2.5 metres other vehicles would have simply been too wide. Ammann adds: "That would not have been enough for the high centre of gravity during transport and would have massively increased the risk of tipping over." That's why the decision was made to opt for the three-metre-wide PST. More stability could thus be achieved. At turn 24, the transports left the high alpine road, which is also appreciated by tourism. What followed was the entrance to the cavern and about 1,000 metres of tunnel ride to the power house. Gradients of up to 15 percent had to be overcome in the process.

The components were then unloaded in the machine cavern using a gantry crane. The transformers were then put onto their foundations by Bau-Trans employees. The voltage transducers were moved into the transformer cavern by means of so-called gripper pulleys on a rail system, laterally, about 60 metres, and then fixed.

With the exception of special transports with unit weights of up to 42 tonnes, the main transport and heavy assembly work was completed in mid-October. Commissioning of the power plant extension is scheduled for 2018. From then onwards, Obervermuntwerk II will significantly contribute to meeting power demands during

peak hours, when wind and solar power systems are incapable of producing enough power. For the fact that one always needs to produce the same amount of electricity that is consumed will remain a decisive criterion for the required energy mix. ■



Bau-Trans' Installation Logistics Department placed the components on their foundations.

Special transport for Power Tower

In late September, Felbermayr transported two 30-metre tanks from Wels to Graz. Their destination was the Power Tower in Graz's Reininghaus district. Once they had arrived there, the 37-tonnes hot water storage containers were lifted into place by a mobile crane.

Supported by an LTM 1100 as the tracking crane, an LTM 1750 was used as the main crane to lift the two hot water storage containers into place.



The start of the provincial capital of Graz's supply with district heating dates back to the 1960s. Currently, some 30 per cent of the demand are met by ecological waste heat and solar heat.

For some time, one of the major contributors to heat generation has been the Marienhütte steel and rolling mill in the Reininghaus district. There, heat extraction systems and highly efficient high-capacity heat pumps have previously been used to process industrial waste heat and feed it into the district heating grid of Graz. By partnering with Energie Graz, the company has set another important milestone by creating the so-called Power Tower. It is supposed to supply alternative district heat to some 12,000 residents of a new urban development area in Reininghaus. Two 30-metre district heating storage systems with a capacity of some 600 cubic metres are one prerequisite. The Wels-based equipment manufacturer Bilfinger VAM Anlagentechnik had been commissioned with their production.

30-metre load on fixed vessel bed trailer

"It was some challenge," Clemens Felbermayr from Felbermayr's Heavy Haulage Department says about the job and emphasises the use of the fixed vessel bed trailer. Loaded with the 30-metre-long and 4.5-metre-wide components, space was at a premium, especially in the urban area of Graz. After all, the vehicle combination including tractor unit, vessel bed trailer and seven-axle flatbed configuration achieved a length of more than 52 metres. "Due to spatial cons-

traints, the last kilometre had to be negotiated with a self-propelled modular transporter (SPMT)," says Felbermayr, who regarded entering the works premises as particularly difficult. In the end, however, the two district heating storage systems safely reached their destination at the premises of Marienhütte.

Truck-mounted cranes deployed into lighthouse project

Supported by an LTM 1100 as the tracking crane, an LTM 1750 was used as the main crane to lift the two tanks into place. "First, we attached the main crane's bottom hook block to the tank cover, after which the tracking crane was connected to the tank's floor," Felbermayr illustrates the crane job's preparation. Subsequently, the district heating systems were lifted using the main crane, and the tank floor with the LTM 1100 tracking crane. Once the tank had reached its vertical position, the tracking crane was disconnected. "The main crane was then used to lift the tanks into position," says Felbermayr, glad that almost no wind threatened the crane job at the time. Thus, the two tanks could be



The Felbermayr vehicle combination including tractor unit, vessel bed trailer and seven-axle flatbed configuration reached a length of more than 52 metres.



An LTM 1100 served as a tracing crane to roll the containers upright.



The transport took off from the Wels-based equipment manufacturer Bilfinger VAM Anlagentechnik which had been commissioned with the heat storage systems' production.

lifted into place in less than seven hours. By the end of the year, the two district heating storage systems are supposed to be connected to the grid and supply surrounding households with 97 degrees Celsius. This will, on the one hand, conclude a lighthouse energy project and, on the other, set another milestone in the 20-year energy partnership between Marienhütte and Energie Graz

Following some eight months of construction, the employees moved into their new offices in September.

Good things come to those who wait.

After years of struggling for a new building on the greenfield site, a compromise expansion has now been completed on the premises of the company's headquarters in Wels. But there is another reason to be happy. The 2,500 square metres of newly acquired space for office and social rooms will yield a considerable relief for the teams of all divisions.

The completion of a seven-storey multi-storey car park with 384 parking spaces in December of the previ-

ous year was a milestone at the Wels site. This enabled the use of the multi-storey car park to free up urgently needed space for transport and construction vehicles.

Office space extended

Extending the existing building has provided some 200 new office workstations to the company headquarters. "We have created something that pleases all sides," comments senior boss Horst Felbermayr. "But this does not mean that the original plan to erect a new building on the greenfield site, has been abandoned," adds son Horst Felbermayr and continues to aim for a new building with the necessary transport infrastructure for a transport company. However, this interim step had become necessary due to delayed permits and approval notices. So far so good: Senior boss

Horst Felbermayr and his son of the same name and managing director of the holding company are in agreement that "in any case, we have made every effort to make the best of the available opportunities for our employees and the company."

Together with the two existing buildings, there is currently around 5,200 square metres of office space on the seven hectare site in Wels. The employees are happy too. In addition to the additional space available, they can also reach their workplaces cosy and dry, courtesy of the directly attached multi-storey car park.

In addition, ice scraping in wintry conditions is a thing of the past due to the covered car parking spaces. Everything else is in the hands of the politicians and the authorities.



Technically sophisticated: Since the old stock would not have withstood the three-storey extension structurally, it had to be raised on columns.

SPORTING TEAM SPIRIT IN A RUNNING JERSEY

Once again this year, Felbermayr employees from a wide range of different areas were united by their passion for sports. After more or less intensive training, they swapped the equipment for running shoes at the "1st airport night run" this August. The venue for this unusual running event was the runway of Linz Airport. But that's not all. The Business Run staged by the Upper Austrian Chamber of Commerce was another occasion on which our employees demonstrated their stamina and power. Company directors Horst and Andrea Felbermayr also took part.



EMPLOYEE JUBILEES A BIG THANKS TO LONG SERVING EMPLOYEES

15 Years

Peter Wageneder – Platforms Linz · Carina Claudia Egger – Platforms Thaur · Gabriela Dorner – ITB Lanzendorf · Clemens Felbermayr – Heavy Haulage Wels · Ulrike Moser – MTA Wels · Alfred Kirchmeier – Cranes Linz · Anton Radosek – Transfer Lanzendorf · Dragan Pasic – Cranes Lanzendorf · Alois Kaltenböck – MTA Wels · Thomas Mössler – FST Salzburg · Sinisa Jerinic – Port Transshipment Linz · Christian Höllmüller – Projects Wels · Ismail Imre – Cranes Wels · Josef Steiner – Transport Lanzendorf · Hermann Hans – Waste Management Wels · Ismeta Samardzic – Administration Wels · Petra Moser – Sareno Ulrichsberg · Wolfgang Abraham – Felbermayr Krefeld · Sasa Zivanovic – Reinhold Meister Wasserbau · Ivan Stanojevic – Reinhold Meister Wasserbau · Vujadin Rakic – Reinhold Meister Wasserbau · Teresa Dettling – Reinhold Meister Wasserbau · Sahin Horuz – Haeger & Schmidt Logistics · Jeton Jusufi – Haeger & Schmidt Logistics · Peter Hansen – Haeger & Schmidt Logistics · Jens Möller – Haeger & Schmidt Logistics · Hansjörg Günther – Bau-Trans Lauterach · Johann Hoffellner – Bau-Trans Lauterach

20 Years

Christian Rotschopf – MTA Wels · Hildegard Hellein – Cranes Wels · Mag. Markus Dorninger – Administration Wels · Christa Holzinger – Administration Wels · Gabriele Silber – Administration Wels · Werner

Helperstorfer – Workshop Wels · Peter Kaltenböck – MTA Wels · Gerhard Übleis – MTA Wels · Friedrich Stöckelmayer – MTA Wels · Vinzenz Schnabl – Cranes Graz · Arthur Adleff – Cranes Wels · Ferid Habibovic – Cranes Linz · Herbert Kemetner – Cranes Linz · Norbert Weishäupl – Cranes Linz · Harald Leitner – General Cargo Wels · Elmar Gsaller – Cranes Thaur · Gottfried Ganglmayr – Workshop Wels · Franz Kornfellner – Workshop Wels · Manfred Gruber – Cranes Wörgl · Michael Kernescha – Bau-Trans Lauterach · Elvis Bilgeri – Bau-Trans Lauterach

25 Years

Franz Brunbauer – Transfer Linz · Wolfgang Mayr – Heavy Haulage Wels · Herbert Wiesinger – Cranes Wörgl · Razim Harcevic – Civil Engineering Wels · Walter Zitzler – MTA Wels · Zlatka Prosic – Administration Wels · Thomas Fasching – Workshop Wels · Helmut Geismayr – Bau-Trans Lauterach

30 Years

Franz Rossenegger – Wels · Franz Hobetseder – Civil Engineering Wels · Kurt Gmeilbauer – Cranes Wels · Thomas Teply – Transfer Lanzendorf · Miroslav Bijelic – MTA Wels · Karlheinz Braumann – MTA Wels · Manfred Kapeller – Projects Wels · Karl Obermayr – Heavy Haulage Wels

35 Years

Günther Kaiser – Waste Management Wels

45 Years

Franz Stöttinger – Cranes Wels

PRIZE QUESTION READ AND WIN

Prize question: Name the most important transport equipment used in the course of the heavy load transport for the Obervermunt II storage power plant project in Vorarlberg?

You can find the answer in this issue. From all those sending in the correct answer, we draw 15 winners who will receive non-cash prizes. Please send the correct answer to us via e-mail to informer@felbermayr.cc or fax to +43 7242 695-144. The entry deadline is March 31, 2018. All decisions are final and not subject to legal appeal.



1st prize:

A Magirus Uranus KW16 salvage crane, scale 1 : 50. This model is a limited edition from the GMTS Golden Oldies series.

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