

INFORMER

THE MAGAZINE OF THE FELBERMAYR GROUP 2/2012



WATER ON THE MOVE
CLOSING THE GAP WITH
THE HORST FELIX HEAVY GOODS VESSEL

CLEARING THE WAY
RAILWAY BRIDGE LIFTED INTO PLACE WITH MOBILE CRANE

MASTERLY
EROSION PROTECTION FOR THE DANUBE DELTA IN ROMANIA



As free as a bird!

Dear readers,

while economic barometers are tumbling all around, we are still growing. It almost seems as if we have invented the »magic ingredient«, that you only need to sprinkle around the construction site and everything else sorts itself out. But behind our successful work a great deal more is concealed: several decades of history of a company that has developed, thanks to its employees and business partners, into an environmentally conscious and responsible company with a comprehensive capability.

Although in a development phase, we have been held back due to insufficient capacity at the company headquarters in Wels. We

have quickly found an alternative and well suited site, next to the motorway with a direct rail connection. However, it has been necessary to reach a very worthy compromise, in terms of conservation, with the relevant regional economic and nature conservation offices on behalf of the curlews that were found there, in order to pave the way for further planning. This would have meant that 25 out of the total 110 hectares are set aside for conservation. However, this proposal has been dismissed by the Environmental Ombudsman as a »bad compromise«. The Ombudsman is demanding conservation of one hundred per cent and has filed an appeal for breach of the EU Birds Directive. It would ap-

pear for some that »killing the goose that lays the golden egg« is justified to ensure that the curlew remains on paper rather than in fact, Cas free as a bird«. For the company that is affected, such action makes the already rough times even more difficult. We are confident, however, that »bird lovers« also recognise the common denominators between nature and economy, because when the money runs out any talk of nature conservation is soon forgotten.

With these thoughts in mind, we thank our customers, employees and suppliers for their cooperation and wish you and your families a Merry Christmas and a Happy New Year.

Best regards,

Horst Felbermayr

Horst Felbermayr, DI

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From September to October, the motor goods vessel, the Horst Felix, was being used for wet excavation in the Wachau area. The task in hand was to create a so-called regulation low water level of 2.5 metres level with the Danube town of Spitz. The excavating equipment used on the sixty by nine metre working deck was a one hundred ton Liebherr excavator. The material excavated was used to create a semi-natural shallow-water zone a few kilometres up-river and to construct the embankment.



REINFORCEMENT

Felbermayr joins the disaster relief network

The main aim of the disaster relief network, which was set up two years ago by the military headquarters in Upper Austria, is to provide voluntary and unbureaucratic assistance for Upper Austria. To complement the other five partners, Felbermayr has now also joined the network. This means that, in the event of a disaster, Felbermayr will provide the military headquarters in Upper Austria with equipment and personnel to the best of its ability. According to Major General Kurt Raffetseder, Felbermayr would particularly bridge a major gap in the network in the area of cranes and platforms, as well as special equipment. For company head Horst Felbermayr, it was only natural that the company should complement the work of the network by offering transport and lifting technology and coordinated assistance organised by the military headquarters in the event of a disaster.

STORAGE

HEAVY GOODS WAREHOUSE BUILT IN GRAZ

A warehouse was built on the Felbermayr site in Graz between February and August. At 5000 square metres, the warehouse is the size of a football pitch. To complement the road link, the warehouse also has a rail connection as well as two gantry cranes with a load capacity of sixty tons. The structure, which is around 14 metres high, will primarily be used for the interim storage of machine parts. Four eight metre wide by six metre high doors provide ideal conditions for handling materials. The structure will supplement the existing 2500 square metre warehouse on the same site.

COVER STORY

17,500 watts for the main train station



Equipped with floodlights, each 3500 watts strong, the highest work platform in the world was commissioned in the middle of August. The light show was to be held for the »Long Night of Museums« in Vienna. For this, the roof of the new main train station in Vienna was illuminated with an impressive light show from a height of 75 metres. Thanks to the memory function of the work platform, the position of the lamps only needed to be adjusted once. The equipment was operated from ground level. From a viewing platform on the opposite side, the visitors were offered a fantastic view – both of the roof of the new main train station and of the work platform which has a maximum working height of 103 metres.

GREEN ENERGY

TRANSPORTING TRANSFORMERS FOR WIND TURBINES



Delivery of two transformers for the transformer substation in the Burgenland town of Zurndorf began in September. The starting point for the rail transport carried out by Felbermayr's ITB division and covering a total of around 250 kilometres, was the Weiz plant of Siemens AG in Styria. 32-axle Schabel cars with charge carriers were used for the first 250 kilometres. For the onward journey from Nickelsdorf to the transformer substation in Zurndorf, covering around twelve kilometres, the 292-ton voltage transformer was transferred to a 2x 12-axle THP trailer configuration. A tractor and shunting unit was used to drive the 85 metre long transport convoy. In addition to the weight, the dimensions of the goods being transported – 13.5 metres long by 4 metres wide and 4.6 metres high – required special attention. Creating a suitable infrastructure to transport the two transformers required three years of planning. But the end justifies the means because the transformer substation in Zurndorf is to be a central supply point for wind energy in Burgenland.



POWER PLANT CONSTRUCTION Electricity for 5500 households

A run-of-river power plant is currently being built on the Traun in Stadl Paura. The work began in September of last year and is being carried out in collaboration with two other consortium partners of the Felbermayr civil engineering division. The special anti-vibration mats being used under the foundations are a particularly interesting new product. This will guarantee especially quiet power station operation. Thanks to a fish ladder with a through-flow volume of 450 litres per second, boat owners will also be able to pass by the power station without difficulty. Following its planned completion in June 2013, the power station, which will have an annual output of 19.45 gigawatt hours, will supply electricity to around 5500 households. The new power station is part of a master plan that was drawn up by NGOs, the environmental ombudsman and the environmental authorities.



SUCTION TECHNOLOGY THREE FANS HELPTO INCREASE EFFICIENCY

Better, stronger, more efficient. These words could be used to describe the new generation of Felbermayr suction technology equipment. This was made possible by the decision to use three fans from now on. This has increased suction performance enormously. Take a 250 metre long hose used in the imperial city of Bad Ischl at the end of November, for example. The task here was to extract around 300 cubic metres of rubble from an underground tunnel system by suction. Thanks to the new technology, it was possible to remove the material in just three weeks. With the older type of equipment, it would not have been possible to do the work. The alternative would have been to remove it manually via a sixty metre high staircase using buckets.

www.youtube.com/felbermayrty



MILESTONE 100TH CRAWLER CRANE TRANSPORTED

Over the past six years, the BauTrans low-loaders have covered around 90,000 kilometres delivering the Liebherr LTR 1100 crawler crane. The hundredth transport left the Liebherr factory in Ehingen on 24 October 2012. As with so many other deliveries, the destination was once again the northern port in Bremerhaven. Deliveries are made to the ports in Hamburg, Sassnitz and Antwerp just as often. When they arrive, the crawler cranes, with a load capacity of one hundred tons, are shipped all over the world. Deliveries within Europe are also made to the customer directly. The 59 ton cranes are transported on semi low-loaders with an extended loading area width and hydraulic ramp hoisting equipment. Thanks to the excellent collaboration, the Felbermayr subsidiary BauTrans has also been delighted to transport accessories for the LTM 1500 since 2010.

8000 KILOGRAMS OF EXPLOSIVES The biggest under-water blasting operation in Germany to date



As soon as the new Emscher culvert was completed by the Felbermayr subsidiary Reinhold Meister Wasserbau GmbH, preparations began for the reconstruction of the old Emscher culvert. On 4 November 2012, the time had come: At around 12 pm, the concrete structure, which was up to seven metres thick and extended around fourteen metres below the water level of the canal, was dynamited. To do this, approx. 5600 holes were drilled in the structure and filled with around 8000 kilograms of explosives over a period of several weeks. Since the individual charges were ignited at ten second intervals, there was no major boom. On account of the water which flooded in immediately after the detonation, the amount of dust generated was very low. Removing the detonated material using floating excavators was no less challenging.



www.youtube.com/felbermayrty

PHOTOS: LIEBHERR, MARKUS LACKNER (2), REINHOLD MEISTERWASSERBAU (2)



RELOCATION

Transport and lifting technology for chemical factory

In October, a major array of Felbermayr lifting technology equipment was being used for the demolition and dismantling of a disused chemical factory in the Romanian town of Craiova. These included numerous mobile cranes as well as several telescopic forklift trucks fitted with work baskets and work platforms with a working height of up to sixty metres. Some of the plant will be used again – including a ninety metre high reactor with a 5.5 metre diameter, for example. With these dimensions, however, the parts would have been too long to transport them to their new location in Lithuania. Using an LTM 1500 and an AC 140 as a back-up crane, they were therefore first positioned horizontally for loading onto semi-trailers. At a transport height of up to 6.50 metres, the shipments were still impressive, and approximately fifty power lines had to be raised for the journey of around seventy kilometres to the port in Bechet. For these shipments, seven trucks shuttled in convoy between Craiova and Bechet over a period of three days. For onward shipment to Lithuania via Rotterdam, the container units, weighing up to 95 tons, were transshipped to a barge, again using the LTM 1500. For this order, Felbermayr Romania carried out the route check and supplied all the logistics: Cranes, forklift trucks and work platforms, the heavy transport and escort vehicles.



CONTINUOUS ANNEALING LINE VOESTALPINE EXPANDS ITS STEEL BAND PRODUCTION

Between February and November, numerous cranes and platforms were in daily use to build voestalpine's »Continuous annealing line II«. The equipment was being used to assemble the steel structures needed for this. In the process, around 3500 tons of steel were lifted into place and assembled. Cranes with a load capacity of up to 250 tons and work platforms with a maximum working height of 61 metres were used.



FAST WORK Factory extension for Porsche

Up to 26 lifting platforms and five cranes with a maximum load capacity of 350 tons were used for the biggest construction project ever to be carried out by Porsche AG in Leipzig. A unit comprising 60,000 square metres for new car body construction and a three-storey paintwork unit were built. This involved lifting laminated beams of up to 24 metres in length and weighing up to 48 tons into place. At the end of 2013, the Macan – the new Porsche off-road model – will leave the assembly line. With this factory extension, the size of the site will be doubled as will the number of jobs, which will go from 1000 to around 2000.



STRUCTURAL ENGINEERING INDUSTRIAL PREMISES BUILT FOR CORRUGATED CARDBOARD MANUFACTURER

In July, excavation work for the construction of a production unit began on the site of the international corrugated cardboard manufacturer Dunapack Mosburger in Straßwalchen. To be exact, the project comprised a 5000 square metre extension for a manufacturing line and storage area, and construction of the ancillary areas required such as a glue kitchen, an oil storeroom, a compressor room, changing rooms and office space. Two companies, Gerstl and Oberndorfer, produced the prefabricated parts for the twelve metre high unit built with reinforced concrete. Manufacturing a large number of foundation units for the machinery for the production line presented a particular challenge: These had to be aligned with one another almost to the millimetre, and constructed at different levels. The new production line is to be commissioned in the middle of next year.

One of the biggest challenges for the Reinhold Meister Wasserbau workforce included the logistics for equipment and material.

Erosion protection for the Danube delta in Romania

The Felbermayr subsidiary, Reinhold Meister Wasserbau, which specialises in hydraulic engineering, has been working on measures to reinforce the Sulina canal in Romania since July. The construction site is in the middle of the Danube delta and is approx. 25 kilometres from the mouth of the Danube where it flows into the Black Sea.

The project, entitled »Bank protection on Sulina Channel – Contract C1«, is primarily aimed at protecting the embankment and the bank of the river. »Our task is to shape and reinforce the embankment over a 15 kilometre stretch of the Sulina Canal to protect it against erosion,« explains project manager Thomas Meister. However, the job specification for Reinhold Meister Wasserbau GmbH also includes constructing a nine metre long embankment path.

Transporting the material by ship

»By the time it is completed in December, we will have used around 130,000 tons of armour-stone and geotextile filter layers covering 55,000 square metres,« said Meister as he listed some of the key data for the project. »Owing to the difficult terrain in the Danube delta, all the equipment and construction materials have to be delivered by ship,« he explained when describing one of the particular features of the construction site. In the case of the armour-stone, this means that at any one time, up to eight barges are in operation

transporting materials. The two quarries are thirty and 150 kilometres away, so journey times of four days in all are not uncommon. However, since the materials must meet given specifications, this is something that simply has to be accepted, according to Meister.

»Geotextile filter layers« used for the first time

Other equipment in use on site includes three excavating pontoons with equipment weighing seventy to eighty tons, as well as

long-arm excavators. Equipment for laying the geotextile filter layers is also being used. As Meister says: »In general, so-called fascines or giant bundles of wood are used to build dams of this kind. However, since the number of fascines required would have been so enormous, we suggested using geotextile filter layers for ecological reasons during the »value engineering« phase. These consist of two layers of construction fleece filled with granulate.« Consequently, this system was being used in Romania for the first time.

Environmental protection

The increasing erosion of the delta by sediment meant that the project was essential – it is the first of two construction phases of a similar magnitude. Since the Danube delta is also a designated area of conservation, much importance is attached to maintaining the flora and fauna, as well as meeting shipping needs. Therefore, close co-operation with the environmental ombudsman for Romania is also a major factor in the practical processing of the order.



55,000 square metres of geotextile fibre layers were installed for the protective measures.

Bridge construction with obstacles

The old Tesla bridge in Leipzig has seen better days. The old brick structure is to be replaced by a new double-span bridge made of reinforced concrete by October 2013. The job has been awarded to the tried and tested bridge construction employees of the Felbermayr subsidiary in Leipzig.

The bridge in the Leipzig district of Heiterblick, named after the inventor Nikola Tesla born in 1856, is around one hundred years old. Owing to its poor condition, the structure, once constructed of brickwork, is now in limited use. Recently there had been a weight restriction of 2.8 tons and a speed limit of ten kilometres per hour for private transport. The authorities in Leipzig therefore needed to take swift action and in the end, the Felbermayr subsidiary in Leipzig, which specialises in civil engineering, was awarded the contract. In the same way as the original structure provided a fly-over over the Deutsche Bahn railway tracks for road transport, pedestrians and trams, the new bridge was constructed for the same purpose. »Owing to the increase in traffic, however, two bridges are to be built side by side,« reports Felbermayr construction manager, Hartmann Schellenberg. This means that when the first phase of construction is completed in December 2012, traffic will be diverted to one of the new bridges and then

the old bridge will be demolished. Work on construction of the second bridge will then begin.

Special measures need to be taken for rail traffic

Work on the construction of the fifty metre long bridge commenced in February with the technical railway-related modification measures. Among other things, this involved adapting the Deutsche Bahn communication and supply lines for the reconstruction work. This ensured that rail operations were not affected during construction work. »The pits were then lined, or the trenches were boarded as the Austrians say, to prevent material slippage from the approach to the bridge,« explains Schellenberg. Since the substrate for the bridge foundations was not sufficiently stable, deep foundations with bored piles had to be constructed. Only then could construction of the reinforced concrete units for the bridge head and the bridge piers begin. Since a dis-

tance of 1.5 metres had to be maintained between the bottom edge of the bridge and the overhead line for the railway, Schellenberg explained that special measures had to be taken: »In manufacturing the pre-stressed concrete superstructure for the roadway, we also had to allow for the height of the formwork needed for this so that, in addition to the 1.5 metre loading gauge, we had to allow a further metre, so putting the bridge in a super-elevated position.« When the formwork was stripped and the abutment was complete, the superstructure, along with the already concreted footpaths, the rail channels for the tram and the first layer of poured asphalt, had to be lowered hydraulically to the »correct« height.

Tension builds going into half-time

Once the first section of the bridge was complete, the old Tesla bridge had to be demolished and fully removed between 27 and 31 December for technical, rail-related reasons. »By 1 January, it should no longer be obvious that we had been there,« explained Schellenberg in describing the major task to be undertaken between the public holidays. During this short time frame, it would involve demolishing around a thousand tons of material and removing it by truck. »This quantity of materials is roughly equivalent to a goods train with twenty cars,« said Schellenberg by way of explanation. The demolition process was also challenging in logistical terms, particularly in relation to the requirement to exclude any possibility whatsoever of defects in the building equipment. »We almost had two of every hydraulic hose in our trousers pockets,« jokes Schellenberg, referring again to the difficult situation regarding the supply of spare parts at the turn of the year. Schellenberg is happy to report that »thanks to excellent preparation, however, we have been extremely successful in overcoming this problem« and he is confidently looking forward to the impending construction of the second span. This is to be completed by October 2013. ■



The Tesla bridge is designed to be a double-span bridge with one lane each for the trams, cars and pedestrians.





Heavy loads in action

In mid August, the most powerful mobile crane in Austria was used to lift a new railway bridge in Nettingsdorf near Linz into place. The crane had a dead weight of around 800 tons. The new bridge weighed 220 tons.

In brilliant sunshine in the early morning of 19 August and under the gaze of many interested onlookers, the bridge was secured to the boom of the crane which rose seventy metres skywards. However, the numerous bystanders had not only come to see the giant crane in action; with the lifting of the new bridge into place, they were experiencing an almost historical event because the old bridge was built in 1905. Structurally speaking, this makes it one of the oldest structures of its kind. According to Österreichische Bundesbahnen, it also means that the project represents a sustainable investment in an efficient and modern rail infrastructure.

Good planning is half the battle

»The crane weighs 800 tons in total,« says Felbermayr's head of operations, Gottfried Hrast. It therefore goes without saying that transporting the crane is always of crucial importance for operations such as this. Around thirty truckloads were needed to transport the 620-ton ballast alone. In order to set up the crane safely, however, the location for the crane had to be compacted to withstand the specified support pressures. »For a lifting operation such as this, you sometimes need to plan many months ahead,« explains Hrast. »Good planning is half the battle,« concurs a colleague. This also proved to be the case with the bridge-lifting operation.

Precision work

Slowly, gently, the steel cables become taut. The attachment points are checked one more time. »All systems go,« the head of operations announces over the radio. The crane lifts the load and slews the 45 metre long bridge towards Krems. This was a crucial moment. In order to continue the lifting operation and increase the radius, a further 400 tons of suspended ballast had to be loaded in addition to the 220 tons of superstructure ballast. To continue lifting, it was also important to extend the suspended ballast in the opposite direction as the radius of the load increased – as a counterweight so to speak. After roughly two hours, the lifting operation was largely complete. This is where the precision work came in: Positioning the bridge at the fixed end. Bridges like this change in length on account of the temperature. »With this design, it can be as much as eight centimetres,« explains Hrast, speaking from experience. The bridge was therefore fixed in place at one end, and on the opposite side, it was lowered onto an abutment which can compensate for the thermal expansion of the bridge. The bridge is to be

commissioned in October. After that, local residents can look forward to less noise pollution from railway traffic. According to Österreichische Bundesbahnen, the maintenance and inspection costs will also be far lower. ■

The new bridge over the river Krems has a span of 43.2 metres and was constructed as a trough bridge with ballast bed.



Lifting gear with a rail system was used to fit the spirals to the suction pipe.

Mountain circuit with 1200 HP

At the beginning of August, two spirals were delivered for the Reisseck II combined gas turbine-vapour power station in the Möll valley in Carinthia. This was the starting signal for the delivery of key technical components to Austria's highest power station construction site. The starting point for the shipment with the brilliant finale was the Voith Hydro plant in Sankt Pölten.

That was a very tough job,« says Günther Trauner of Felbermayr's heavy transport division in Wels. As a division manager with more than 25 years of professional experience in matters relating to special and heavy transport, he has seen many things in his time but this transport was certainly something quite special, commented the division manager. Even if the weight of the spirals, each weighing 56 tons, would not normally represent a challenge, managing it on a road with a 14 percent gradient means it had to be treated with respect.

»Angled stand for road transport«

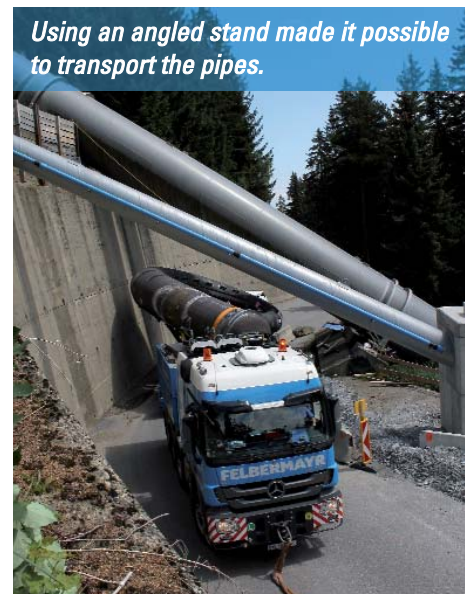
At the start, everything was quite simple. An eight-axle low-loader was used for the first 320 kilometres from Sankt Pölten to Mühldorf in Carinthia. However, on account of the width of the spirals, which had a diameter of eight metres, the load still had to be

secured to a custom-built angled stand for this part of the journey. »A contraption designed and manufactured by Voith Hydro,« comments Trauner. Thanks to this development, it was possible to reduce the transport width to 6.35 metres. Once Mühldorf was reached, the spirals, which had been transported one by one, were lowered onto so-called elephants' feet and then transferred hydraulically to a five-axle low-loader. This was necessary because otherwise, it would have been impossible to negotiate the 18 bends on account of the tight corners. Another unique feature was the use of two tractor units. This ensured adequate traction on the steep ten kilometre stretch of road from the Möll valley to the construction site.

Underground

Once it arrived at 1600 metres above sea level, the entrance to the cavern revealed

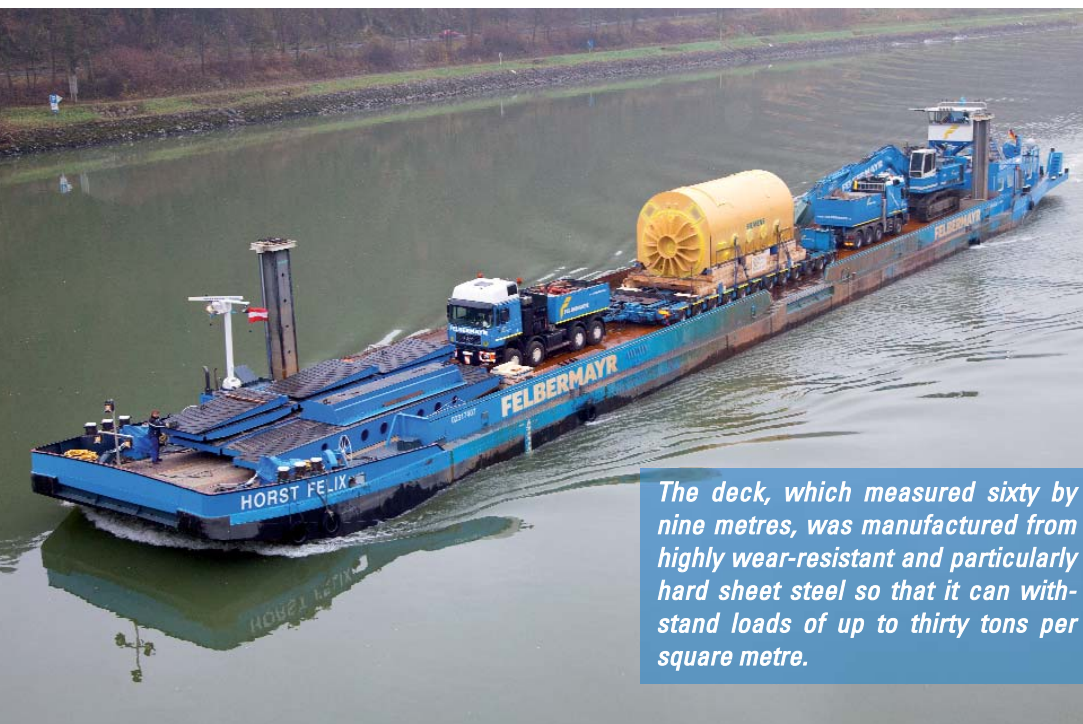
Using an angled stand made it possible to transport the pipes.



itself to the Felbermayr transport team. The spirals had to be transported a further 200 metres into the heart of the mountain. »The spirals, which were roughly ten metres long and four metres high, then had to be unloaded with a 160 ton mobile crane and lowered down to the base of the suction pipe at a depth of around thirty metres,« explains Trauner. After this, the Felbermayr assembly team with their lifting gear, which ran on rails, took over the spirals and then proceeded a further thirty metres vertically to the final installation location. The power station is to be commissioned in 2014 and the water will then flow through the spirals at a pressure of up to one hundred bar. According to Trauner, the co-operation with the Voith project team and the logistics partner LogServ could scarcely have been better: »Thanks to the collaboration, the transport went smoothly and with the highest possible level of efficiency.«

Closing the gap for multi-modal transport

Starting from the end of November, Felbermayr will be transporting a generator weighing 294 tons from the Linz heavy load port to a power station in Hungary. The key player in this two-phase transport project is the heavy goods vessel, launched in 2011, the »Horst Felix«.



The deck, which measured sixty by nine metres, was manufactured from highly wear-resistant and particularly hard sheet steel so that it can withstand loads of up to thirty tons per square metre.

Transporting heavy loads by road is becoming increasingly expensive. In addition to increases in fuel costs and tolls, reducing the load on bridges is also becoming an increasing problem for shipping companies. When transporting the generator from Mühlheim on the Ruhr to a Hungarian power station, it was possible to circumvent this problem by using water as the means to transport it. The »Horst Felix«, a dry freighter converted to a heavy goods vessel, played a key role in the process.

144 wheels for 444 tons

When the Felbermayr heavy goods vessel, the »Horst Felix«, took the 294 ton generator on board on 22 November, it had already travelled 800 kilometres: It took 13 days to travel from the Siemens site in Mühlheim on the Ruhr to Linz. When it arrived, the twelve metre long

high-tech component was transferred to a low-loader. The vehicle was a 1.5 coupled heavy load trailer with twelve axles. According to Felbermayr project manager Peter Niedermair-Auer, this special vehicle was essential because the generator was around five metres wide. However, the enormous weight of the generator also contributed to the decision to opt for this combination of vehicles because it optimised the load distribution. Two heavy-load tractor units with 650 and 800 HP respectively, and ballasted to forty tons each, guaranteed the necessary traction. Together with the low-loader, which weighed seventy tons, the total weight of the transport was 444 tons.

Cost optimisation with roll-on roll-off

The »Horst Felix« was designed as a RoRo ship. »With a specially designed

bow and a loading ramp, the road transporter can drive onto the ship directly,« explains Niedermair-Auern and he goes on: »In the heavy load port, we have ideal conditions for this so that rolling on took little more than an hour.« The ship then set off. »This shipment didn't have to negotiate any bridges, roundabouts or tight corners,« said Niedermair-Auer delightedly, having been spared the planning process from a myriad of traffic management measures. After three days, the »Horst Felix« arrived at the port in Hungary which was around 300 kilometres from Linz. Here again, driving off the

»HORST FELIX« MOTOR GOODS TRANSPORTER

| | |
|-------------------------------|--|
| Length: | 85.80 m |
| Width: | 10.40 m |
| Loaded draught, min.: | 12 dm |
| Loaded draught, max.: | 27 dm |
| Load-bearing capacity: | 1414 t |
| Power: | 1000 kW |
| Working deck: | 60 x 9 m, 15 t per m ² , 30 t per m ² (crane) |
| Ballast: | up to 1200 t (with trimming tanks) |
| Anchor piles: | up to 14 m |
| Equipment: | <ul style="list-style-type: none"> · Shipboard generator (160 kVA) · RoRo ramp for maximum flexibility for handling equipment and heavy loads · Ballast system · Bow thruster |
| Optional equipment: | <ul style="list-style-type: none"> · 974 Liebherr excavator: <ul style="list-style-type: none"> - With long fittings (18 m) - 5.2 m³ bucket capacity - All attachments (gripper, chisel, GPS-3D excavator control, etc.) · Crane operation · Piling rigs and anchoring equipment |



The RoRo ramps are designed to withstand 1000 tons of transported weight. Owing to its special design, you can be under way within an hour.

RoRo ramp went quickly. As an extra safety precaution, a second tractor unit was used in addition to the shunting and tractor units. »The alternative would have

been to unload it with a lattice boom crane with a high load capacity,« explains Niedermair-Auer and points to the far higher costs for using a crane. The dis-

After a one hour journey, the transport arrived at the storage area. Once it arrived, the generator was unloaded using lifting gear.



With intense media interest, the generator rolled onto the heavy goods vessel.



tance to the power station was now only five kilometres. Once it arrived at the power station's storage area, the 294-ton generator was unloaded and placed in interim storage using the lifting gear. »That was the plan,« says Niedermair-Auer who, in spite of careful advance planning, was still prepared for surprises. In the end, however, there were no surprises because thanks to the deployment of the »Horst Felix«, any contingencies were reduced to a minimum. ■

PHOTOS: MARKUS LACKNER (3), HARALD STEEG



Up to ten units were delivered to the construction site each day with the vehicles making round trips.

Transport and lifting technology for retirement home

At the end of September, the basic assembly work for building the highest modular timber-frame building in Austria was complete. This involved transporting 136 timber-frame units from Kalwang in Styria to Hallein in Salzburg. Kaufmann Bausysteme, based in Reuthe in Vorarlberg awarded the logistically challenging project to the Felbermayr subsidiary BauTrans based in Lauterach.

Each of the nine metre long by over five metre wide housing units weighed 16 tons each on the scales. The start date for manufacturing the timber modules was the middle of May. By the end of July, all 136 timber modules were complete. From the start of the production process, BauTrans was involved with transport and lifting technology, as project manager Andreas Mathis reports: »From the end of the production line, the modules were lifted onto low-loaders and transferred to the storage area.« But the project did not become a challenge until the modules were being transported to the retirement home in Hallein. Since the national Ennstal main road was impassable on account of roadworks in several places, a diversion had to be made via the Bosruck tunnel and the Voralpen junction at Sattledt. According to Mathis: »Thanks to the excellent co-operation with the Austrian roads company Asfinag, the routing of the special transport through the Bosruck tunnel was facilitated, thus ensuring a smooth journey.« If we remember that up to ten transport vehicles were frequently

under way at the same time, it quickly becomes clear how difficult it is to organise this type of transport without significant traffic hold-ups. The modules had to be delivered »just-in-time« and in the right sequence.

Use of other locations ensures cost efficiency

The collaboration with the Felbermayr subsidiaries in Bergheim, Saalfelden, Wörgl and Graz also proved beneficial. Owing to the short distances between these locations and the construction site and production plant, platforms that were required at short notice, for example, were available on the construction site quickly and cost-effectively. The platforms used were mainly telescopic and scissor platforms with working heights of 15 and 20 metres respectively. An LTM 1150 was used to lift the modules into place, and an MK 88 mobile construction crane was used to lift the false ceilings into place. At the end of September, after just one month of construction, the last of the 136 timber-frame

units was lifted into place and assembled by Sutter Holzbau. The modules, which are designed as single and double rooms, are to be ready for occupation by the end of 2013. In the view of the Salzburg proHolz (pro-timber) initiative, this will represent the successful completion of a public sector flagship construction project. ■



A mobile crane with a maximum load capacity of 150 tons was used to lift the modules into place.

ANNIVERSARIES

Many thanks to our long-service employees

40 YEARS Franz Stöttinger – Cranes Wels
35 YEARS Ryszard Pestrycowski – ITB Wrocław
30 YEARS Jerzy Banasik – ITB Wrocław · Günther Kaiser – Waste Management Wels · Walter Steiner – Workshop Wels
25 YEARS Miroslav Bijelic – Civil Engineering Wels · Karlheinz Braumann – Civil Engineering Grieskirchen · Kurt Gmeilbauer – Cranes Wels · Franz Hobetseder – Civil Engineering Grieskirchen · Manfred Kapeller – Projects Wels · Johann Maidl – Administration Reinhold Meister Wasserbau · Christine Moors – Administration Reinhold Meister Wasserbau · Karl Obermayr – Heavy Transport Wels · Franz Rossenegger – Civil Engineering Wels · Thomas Tepy – Transport Lanzendorf
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UPPER AUSTRIA Structural and civil engineering under new management

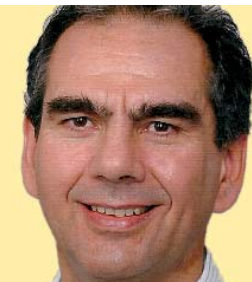


Robert Stürzlinger, Master Builder

Robert Stürzlinger has been working as the new manager of the Structural Engineering division since 10 May. The 33-year old began his career as

an architectural draughtsman. In 2005, Stürzlinger moved to Felbermayr where he was appointed construction manager and was responsible for several industry-related construction projects until he passed his examination to become a master builder on 3 May. The primary objective of the father of three is to continue with the successful development of the Structural Engineering division and to establish the area of project and industrial construction on an even sounder footing.

Friedrich Königstorfer's career began with the HTL für Tiefbau (Higher Institute of Education for Civil Engineering) and his first job with an international road construction and civil engineering company. After holding further professional positions as a group and division manager in road construction, Königstorfer moved to Felbermayr where he has been manag-



Friedrich Königstorfer, MBA, Master Builder

ing the Civil Engineering Division for Upper Austria since 1 October 2012. The 45-year old sees his primary objectives in the further optimisation of work processes and expansion of the division in the fields of road construction and civil engineering. In his private life, he is a father to two sons and keeps fit with ballroom dancing and jogging.

Competition

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