

# Laster & Bagger

Modelle von Lastwagen, Baumaschinen und Kranen

Mit Wettbewerb

## Bergbau-Maschinen

von DM in 1:50



Eigenbau 1:50

## Volvo F16

**English text**



IMC 1:50  
Demag AC650 «Sarens»

Sammlerporträt  
Heinz Schmidhauser

Replicars 1:50  
Hitachi ZX345USLC-7



# Editorial

## Happy New Year!

With a slight delay – as every year – I wish everyone a Happy New Year, good health, success and lasting joy with our hobby! The chances are good that the latter will come true at least for construction machinery collectors, because in April all eyes will be on Munich at Bauma, where new models can be expected.


Before that, at the end of January, the International Toy Fair in Nuremberg is on the programme, where two manufacturers are expected to have their own exhibition stand: NZG and Mahler & Partner (Diecast Masters Europe). If you add Conrad with its in-house exhibition, there will be three must-visit exhibitors! I am extremely grateful to the remaining ‘Three Musketeers’, because by holding on to the exhibition, Nuremberg remains a meeting place that one would not want to miss. Many representatives of the industry, who unfortunately do without a stand for cost reasons, still make the pilgrimage to the Franconian metropolis. Important discussions are planned for the trade fair, because it is a place where you can meet and talk undis-

turbed. And this opportunity is what makes a visit to the show so valuable and indispensable for us.

In the picture above – Tada! – you can already see the first new product for 2025. It comes from Hamm and is manufactured by NZG. Can or should it be called a Bauma novelty? Probably yes, because the Wirtgen Group presents new models in Munich every three years – and in between, the range in the shop remains fairly constant.

The fact that the model comes from NZG or Hamm is all the more pleasing because the last new product from Bauma 2022 not yet presented in Laster & Bagger comes from the same collaboration. In any case, the fact that the Hamm HC 119 has not been presented so far is not due to the quality of the model. The last ones from 2022 are therefore also the first ones from 2025!

I hope you all enjoy reading this issue!

  
Daniel Wietlisbach



**Time to say thanks! I often think, ‘How lucky I am to have the greatest team in the world around me’!**

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## Heinz Schmidhauser

# At home in two worlds

by Daniel Wietlisbach

Heinz Schmidhauser was born in 1961, the oldest of three brothers. He grew up in Bischofszell in the canton of Thurgau, a town known in Switzerland for its canning factory. Despite raising three sons, his mother still found time to do homework to supplement the household budget. Heinz's father worked as a truck driver for a food company that produced syrup, preserves and fruit concentrates for bakeries and delivered the products throughout Switzerland using its own trucks.

Heinz remembers his father's vehicles: a MAN 'Pausbacke', a Scania LB75, later a Scania 85 Super and finally a Mercedes-Benz, all solo vehicles and without a tail lift. This meant there was plenty of manual work to do, because small customers were also supplied directly, which led to two-day tours of 15 to 20 stops. He also remembers delivering sacks of sugar, which had to be reloaded by hand at the station.

Heinz has fond memories of his childhood with his brothers. The boys played outside a lot or played indoors with their Siku and Matchbox models. One of the brothers had a model railway, and Heinz also had some vehicles to go with it. Since the family lived within sight of the railway station, the train traffic shaped the children's interests.

During the holidays, all three brothers liked to travel with their father in

**If there is such a thing as an 'ideal collector' for collector portraits, then Heinz Schmidhauser certainly fits the bill. Even as a child, he was fascinated by construction machinery and trucks in equal measure, and that has not changed to this day...**

the truck – sometimes even all three at the same time, since the engine hump next to the co-driver's seat served as an additional seat. Particularly popular were the two-day trips to Ticino, Valais or French-speaking Switzerland. Heinz also liked to help with the unloading and was allowed to open and close the tarpaulin and shutters.

As the oldest, Heinz experienced the last years of the MAN and even at the age of almost 30, he still enjoyed taking the co-driver seat next to his father – which was made possible by his irregular working hours at the railway.

### Youth and first collector's passion

Heinz Schmidhauser's school days were quiet and unremarkable. His proximity to the railway shaped his interests; an uncle who worked for the Swiss Federal Railways (SBB) sometimes took him with him to work. His way to school also ran along the railway line. After a trial apprenticeship,

Heinz began a 18-month training programme to become an SBB employee, qualifying him for various tasks at railway stations. Among other things, he worked in the shunting and baggage service and was responsible for heating the station buildings, which were still heated with coal at the time.

In his free time, Heinz devoted between 15 and 20 years to building plastic models that he could afford from his pocket money and his apprentice wages. Scales were less important to him; he built military vehicles, aircraft and ships from manufacturers such as Airfix, Revell, Tamiya and Matchbox. The latter quickly became popular because the multi-coloured parts made painting unnecessary and vehicles even included a miniature diorama. In the end, around 100 models were stacked in the cellar up to the ceiling. His brothers had already turned to other interests by this time and later also went down different career paths: the middle one also became a truck driver, while the youngest became an antique carpenter.

After training at St. Gallen station, Heinz transferred to the smaller station at Gossau. Four years later, he left the SBB and worked in the tram depot of the VBZ (Zurich Transport Authority) as a ‘lubricator’. He then worked in shunting at a Swiss Post distribution centre before returning to the SBB in Zurich in 1991, where he still works today in various roles.

During his time in Zurich, Heinz met his wife Sandra, who also worked for the railway, in 1981. Two years later, the couple moved into their first shared apartment, and they married in 1986. Since 2010, they have been living in a terraced house in the Zurich Unterland – close to the station, of course.

## Influences

Heinz Schmidhauser was fascinated by the world of construction machinery and trucks from an early age. One childhood memory that left a lasting impression was a sewer construction site where he spent hours watching Eberhard’s wheeled excavator. He was also impressed by the widespread Poclair ‘three-wheel excavators’ – whenever he passed one, he couldn’t help but stop. Brands like Fuchs, Liebherr and Caterpillar were part of his childhood. Heinz was also particularly impressed by a demolition job he observed during his apprenticeship. He remembers how he could have watched the cable excavator with demolition ball for hours. Another demolition job involving an RH30 was also a special experience.

The huge, cubic cabs of the trucks fascinated him. A haulage company in Bischofszell operated three Ford Transcontis for the Middle East, and Heinz attended the presentation of the

new Renault Magnum at the commercial vehicle show in Geneva.

## The hobby

Heinz got his model railway at the age of about eight, and when he started his apprenticeship, he became, as he says himself, ‘a real rail fan’. Until the age of around 30, he collected locomotives and railway carriages – entirely according to his own taste and international models. To match the railways, he stretched his collection to include 1:87 scale Sauer trucks by Roskopf, which he bought from specialist retailers and at train shows. At a swap meet, he finally came across models of construction vehicles and lorries in 1:50 scale. He was particularly impressed by a Scania-Vabis LBS76 in the classic ‘ASG’ design, but he hesitated for too long and eventually had to watch as the model was sold to another collector.

Shortly afterwards, he visited the Geneva International Motor Show and bought a model of the LBS76 – albeit in the factory colours. The cab was the same and it was this feature that he liked most about the Tekno model; it sparked his passion for the 1:50 scale. At a trade fair, he met his ‘house supplier’ Setec HTM, and on his first visit to the specialist shop, he felt like he was in a collector’s paradise given the wide variety of models.

Heinz appreciates the more solid construction and better visibility of the details at the larger scale. He soon also discovered Corgi as a manufacturer of detailed trucks, which he particularly likes for their fine and elaborate imprints. He has a clear criterion for new models: ‘The model has to appeal to me, so I have to like it and it has to evoke emotions.’ Type and colour scheme are important to him, but the country of origin plays hardly any role. He also prefers company liveries to the standard yellow of the major brands when it comes to construction machinery, even if the former are rarer. He has been a fan of the O&K brand from the outset, whose Swiss representative MBA had its seat in Dübendorf. One of his favourite models is the RH340 from Bрами, even if it is not designed in the classic red.

When he moved to the Zurich Unterland, the machines and vehicles from the Eberhard company became ubiquitous for Heinz, and so it was only natural that a corner with models of this company was created. As an enthusiastic motorcyclist, he sometimes plans his tours according to construction sites or interrupts them when he comes across interesting machines – such as a rare pipe layer on the Grimsel Pass.

The size of the machines is also a collecting criterion: for Heinz, excavators ‘from around 80 tonnes up-

## The collector

Heinz Schmidhauser (63) completed an apprenticeship to become a company employee at the Swiss Federal Railways (SBB), where he still works in an office today. Besides collecting, he is passionate about motorcycling, hiking and enjoying the good life. He lives with his wife Sandra in the Zurich Unterland.

wards' are of interest, and mobile cranes must have at least four axle rods. Nevertheless, there are a few three-axle cranes in his collection that stand out due to their particularly beautiful company livery.

## Display

For a long time, Heinz only had a small display case with space for about 30 models. Only two of his earlier plastic display cases for the 1:87 collection remain; he has sold all the others. When he finally moved into his own home, the collection was able to grow and literally 'exploded' in the early years. Now he has settled on a healthy balance, and the collection is growing only slowly – which suits him just fine.

Heinz is also interested in model making, and he particularly appreciates the Conrad truck models, which can be easily taken apart and reassembled thanks to screw connections. He has successfully converted the Volvo N10/N12 torpedo front truck, once as a log transporter and once as a garbage truck. Two three-axle Renault Kerax from Joal were also given new bodies, one as a sewer cleaner with a Tekno body and the other as a milk tanker with a Siku body. He did the painting himself with a spray can or paintbrush. There are also Tekno and WSI kits in the collection, but these are still waiting for a suitable model project.

A few years ago, Heinz started collecting Drake model trucks from Australia. He had become aware of the road trains through a television do-

cumentary, and their massive torpedo front trucks with bull bars immediately caught his eye. He thinks that the Drake models are top-quality and that their price is absolutely justified. Heinz has never been to Australia himself; he usually spends his holidays in Switzerland.

While he often has to pre-order trucks and especially Drake models, he likes to take his time when it comes to construction machinery. One of his next models will probably be the Liebherr R9150 with a raised cab from WSI. His collection currently includes around 700 to 800 models in the display cases and on the shelves in the basement room, including around 100 models in 1:87 scale. The rest are evenly distributed between trucks and construction machinery.

# Conversion by Patrick Kyburz based on WSI Volvo F16 'ASG'

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by Daniel Wietlisbach

Few trucks have earned the status of true icon as much as the Volvo F16. When it was introduced in 1987, it set new standards in terms of engine output, comfort and design. The F16 was not just a truck, it was a statement: powerful, reliable and made for the really big jobs on Europe's roads.

At the heart of the F16 was its new 16-litre engine, developed specifically for long-haulage and hea-

**In the early 1990s, the Volvo F16 was a legend in long-distance haulage. Inspired by a Danish driver's original vehicle, Patrick Kyburz built a model of a Norwegian contract driver that, while fictional, could well have been ...**

vy loads. With up to 465 hp, it was a sensation at the time. It combined raw power with remarkable efficiency and was known for its durability. At a time when competition was be-

coming tougher, the F16 stood out as a workhorse that effortlessly handled inclines and heavy loads.

For many drivers and entrepreneurs, the Volvo F16 was simply the

king of the road. With its reliability and efficiency, it earned not only the trust but also the hearts of all those who drove it.

Even decades after its production run, the F16 is still synonymous with quality and durability.

## ASG

The Swedish transport company ASG (AB Svenska Godsbilcentraler) had a fascinating history of innovation, expansion and strategic partnerships. For decades, it was a central figure in Scandinavian and European freight transport.

ASG was founded in 1935 with the aim of creating a central organisation for the transport of goods within the country. At a time when the transport sector was still highly fragmented, ASG offered a solution for carrying out transports more efficiently and across the board. The company worked closely with the Swedish State Railways (SJ), enabling an effective combination of rail and road transport.

From the 1960s onwards, ASG began to grow beyond the country's borders, opening branches in other Scandinavian countries and forming partnerships with international logistics companies. The 1990s brought far-reaching changes. The transport sector was globalised, Danzas took over ASG in 1999 and was itself taken over by Deutsche Post. ASG thus became part of DHL, which meant that the brand name slowly disappeared, while ASG's infrastructure and expertise were incorporated into the new parent company.

Even though ASG no longer exists as an independent brand, its legacy lives on in modern logistics. Its innovations and pursuit of efficiency

have set standards that are still visible in the industry today. In Sweden in particular, ASG is often seen as a pioneer that helped to revolutionise the logistics industry.

## Model making

Patrick has been a big fan of the Volvo F12 and F16 since he drove both of them himself, and so all types in this series can be found in his display cases. Patrick Kyburz once again found the inspiration to build this mighty truck and trailer combination on the internet. While browsing through picture galleries, he came across a photo of a six-axle truck and trailer combination with a Volvo F16 in ASG colours. The vehicle belonged to a Danish contract driver, while Patrick's fictitious model belongs to a self-driver from Norway.

A 6x4 tractor unit from WSI was used as the base because the proportions of the F16 cab are more accurate than on the equivalent from Tekno. Existing components such as wheels and axle suspensions could be reused. The chassis was stretched to the original wheelbase of 4.0 metres using brass profiles, and the tailgate could be adopted with a few adjustments. The subframe was glued at the same time, thus ensuring better stability of the crawler frame during the further construction steps. The mudguards were shortened between the double axles – another typically Scandinavian detail. Later, round recesses for the mudguards were filed on the body, as could be seen on the original vehicle.

While the large storage box on the left side comes from the WSI parts pool, the impressive 1000-litre diesel fuel tank on the other side comes from Tekno, underlining the power-

ful character of the model. Details such as the exhaust tube with heat shield, snow chains and a fire extinguisher were added to further round off the model.

The Globetrotter cabin also received a great deal of attention and finely detailed modifications. Below the bumper, the spoiler was modified with recesses for four square headlamps, while additional lamps and the fanfare were added by Tekno. The interior reflects the luxurious 'Imperial' equipment, for example with leather seat covers. Behind them, curtains in ASG colours cover the sleeping area. For a touch of contemporary charm, Patrick placed pennants with the flags of Finland, Sweden and Denmark behind the windscreen. He found these on the internet, reduced them in size, printed them out and carefully affixed them.

The trailer chassis was largely built from scratch, partly with components from Patrick's extensive parts box. There he found, for example, the rear of a Swedish 'Briab' trailer from Tekno. The chassis frame was built entirely by Patrick himself, although the axle mounts from Tekno had to be heavily modified because of the small Jumbo wheels. The storage boxes are also from Tekno, while the underrun bumper was built from Evergreen profiles. The small wheels also required extensive modifications to the turntable. The drawbar led to the rather large distance between the trailer and the towing vehicle, which has since been adjusted.

For the tarpaulin superstructures, Patrick used two 7.0-metre-long Scandinavian loading ramps from Tekno, which have the typical large hinges. Because the height did not fit, it was clear from the start that the tarpaulins would have to be built by

hand. However, the cast-on tarpaulins were cut off above the TIR cord so that the eyelets were retained. In addition, the structure had to be shortened in the middle for the towing vehicle, which is why the middle side panels are shorter there.

As a basis for the design of the tarpaulins, wooden blocks cut to fit into the superstructures were glued. The tarpaulin frame was cut from Evergreen plastic profiles and glued directly to the wooden blocks. The tarpaulins reach the maximum permissible height of 4.0 metres.

Patrick used printer paper for the tarpaulins, which he coated several

times with white glue to create the typical surface structure. To represent the characteristic curvature of the tarpaulin, he stuffed scraps of paper behind it.

Patrick ordered specially mixed spray paints to match the original colours: RAL 1007 'Narcissus Yellow' and RAL 5003 'Saphir Blue'. These tones exactly match the ASG colours. The grill was given a typically Nordic touch with the yellow-painted ribs, and the blue outline of the headlamps was carefully painted by hand. The masking work for the yellow decorative lines was particularly laborious.

Patrick received the ASG logos as a gift from René Tanner, and he had the remaining lettering and decorative elements made by René Kohli (lastwagen-modelle.ch). It is often a combination of the two that leads to success: the yellow surfaces on the sides of the high roof are painted, but the blue stripes within them are decals.

Patrick decided to leave the model in pristine condition and to dispense with dirt or ageing. This way, the six-axle truck and trailer look like they just came from the Scandinavian fleet – a tribute to the mighty Volvo F16 and the transport company ASG.

## Translation of page 17

# Remo's Old Iron

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by Remo Stoll

This excavator is beautifully covered in snow on a cold November morning. It will soon be celebrating its 40th birthday and is still in occasional use. The snowfall caught it before the boom could be moved into the winter position – extended boom to protect the piston rods of the hydraulic cylinders. This will certainly be done soon.

Do you recognise the machine? Please send us the exact name by the closing date of 10 February 2025 at the latest. If there are multiple correct entries, the winner will be drawn by

## Do you know these? Identify construction machine and win a model ...

lot. Only participants who provide their full address can be considered so that the models won can be sent.

This time, the prizes are the Liebherr anniversary model of the L300 from NZG, the Cat 395 GP with three tools in 1:87 from DM, and the Saurer D330B 8x4 'Elmer Citro' from PowerTrac.

### Solution from issue 5-2024

The well-preserved 'Welaki' tipper was a Mercedes Benz L(K) 1113 torpedo round nose. The winners were drawn from the correct answers: Jürgen Precht won the Schwing Stetter S51SX concrete pump from NZG, Thomas Scholz won the Komatsu PW148-11 from UH and Philipp Engel won the Saurer D330B 8x4 'Danzas' from PowerTrac.

# Mining equipment from Diecast Masters

## Cat AD45 & R2900 XE

by Daniel Wietlisbach

Due to their working environment, machines for underground mining are not often seen in daylight. They work in cramped conditions, have a space-saving design, but at the same time impress with convincing performance data. The Caterpillar portfolio includes three site-dumpers with payloads from 30 to 63 t. There are seven wheel loader models in five performance classes with capacities ranging from 6.8 to 20 tonnes. Two models are available with diesel or battery-electric drive line concepts, which is particularly useful underground.

Diecast Masters has a long tradition of producing underground construction machines, with Norscot creating a matching pair with the AD45B and the R1700G LHD. The two new AD45 and R2900 XE are again a class smaller.

### Caterpillar AD45

The AD45 articulated dump truck with a payload of 45.0 t (max. 25.1 m<sup>3</sup>) is the medium-sized machine in the Caterpillar range. When fully loaded, the site-dump truck weighs a whopping 89.25 tonnes. To move this mass, a Cat C18 six-cylinder engine with an engine output of 446 kW (598 hp) is used, which meets the EU Stage V emissions standards. To optimise the machine for different applications, four different tipper bodies are available, one of which even

**As is well known, natural resources are also mined underground, and the machines required for this must fulfil very specific requirements. At the end of the year, two new models were added to the shelves by Diecast Masters...**

has a bulldozer ejection system.

Like all current Cat models, the Diecast Masters model comes in a tin box, from which it can be easily removed and is well protected between foam inserts. Next to driver Bob is a replica of a rock load that can be placed precisely in the trough. The model feels heavy in the hand and makes a coherent first impression, which is confirmed by checking the main dimensions; even the maximum buckling and tilting angles are achieved to scale. The model is a completely new development with a high metal content.

The wheels are very well done, with profiled rubber tyres and finely engraved wheel hubs. These are even designed on the inside, which is a long-held wish that has now been realised for the first time. Above all, the model view from behind is more authentic. When viewed from below, the axle beams and drive shaft can be seen.

The front end housing is finely engraved with numerous details, and even the screw heads on the hinges are highlighted in black. The radia-

tor grille is a separately inserted part, which reveals a fine honeycomb structure that is rarely seen. The mighty air filter is reproduced in detail as an assembly that is particularly important for mining equipment. The headlamps are precisely engraved and coloured, but not glazed. For servicing, the front frame is accessed via steps on the mudguards. Almost all the safety railings are made of sturdy soldered wire, and the anti-skid treads are coloured matt black.

The cab has been very successfully moulded. The removable roof does not show any gaps, the side window is precisely fitted and fitted with rubber seals. The other windows are backed and their seals painted on the cab housing. Rearview mirrors, a windshield whipper and the fire extinguisher complete the front frame.

The articulated joint has also been implemented in detail. The model is supplied with the steering locked by the red transport lock bar, which is why the bar must be clicked out first. The hydraulic lines, which run from the front to the rear wagon, look very nice.



The frame of the rear wagon is open and various lines are raised. The two hydraulic cylinders bring the tipper body into the original tipping position. The tipper body consists of a cast metal part, which is supplemented at the front by two separately mounted wheel chocks. Reversing lights, stop lights and a small drawbar coupling can be found at the rear.

### Caterpillar R2900 XE

The wheel loader is the second largest machine in the Caterpillar catalogue. The XE version features a diesel-electric drive. A Cat C15 with 335 kW (449 hp) powers the power generator, which in turn supplies electricity to the electric motor; the exhaust emission standards correspond to those of the dump truck. The bucket capacity is 18.5 t and the operating weight is around 78.1 t. When the two machines work together, the AD45 can load in three loading cycles. However, the performance data of the R2900 XE is also sufficient to use it efficiently with the AD63.

The model also comes in a 'tin' and is pleasantly heavy in the hand. It has been built to scale and consists entirely of new castings, mostly made of

metal. The wheels with the treadless tyres and the finely engraved rims and hubs look very authentic; when looking from the front, however, the cross-shaped ribs on the inside are disturbing instead of real detailing. The extremely compactly built rear wagon consists mainly of very finely engraved metal castings. While the engraving of the grill and the cooling grid on the right are finely displayed and painted, the cooling grids on the left side are only printed, which is not quite understandable. The structure is covered with anti-skid surfaces, all of which are printed in a sharp, matt black. The safety railings on the original can be folded up and have been implemented authentically and functionally on the model. They are very finely executed for the plastic version chosen, work well, but are also tricky. However, it is quite realistic to leave them in the folded position because they are only opened on the original for service work.

The cabin is very well done with its eye-catching mould and barred windows. The roof is also very precisely placed on the cabin and a look inside is worthwhile, because the driver is seated crosswise to the direction of travel. While the windscreen

was used in the frame, the rest of the glazing is deposited; four tiny windshield wipers ensure a clear view. The maximum steering angle can be adjusted true to the original, making the model very manoeuvrable. The drive shaft can be seen, but no hydraulic hoses.

The front frame is made of cast metal parts, the plastic mudguards are attached separately and fitted with separately mounted wheelchocks. The lift mast, designed for a compact construction, is excellently modelled and the three hydraulic cylinders, coupled with the Z-kinematics, ensure a true-to-the-original functionality. Three work lights and the cylinder protection complete the attachments. Fortunately, the model was given the largest shovel, with a capacity of 9.8 m<sup>3</sup>. It is made of a cast metal part and makes the model appear even more impressive.

As usual, the paintwork on both models is of impeccable quality. The same applies to the labelling with the current logos and warning stickers, which are all flawless and opaque. With the two new models, the manufacturer has created an impeccable pair for underground mining.

# Short-tail excavator from Replicars in 1:50

## Hitachi ZX345USLC-7

by Daniel Wietlisbach

With an operating weight of 34.9 to 36.0 tonnes, the excavator is well above the ‘standard size’ of 20 tonnes. But of course, in urban areas there are also large construction sites in confined spaces that require a powerful yet space-saving 36-tonne machine. The long LC undercarriage with a base of 4.05 x 3.39 m ensured stability despite the reduced counterweight. The built-in six-cylinder Isuzu 6HK1X engine has an output of 249 hp (186 kW) and the bucket capacity is between 1.00 and 1.62 m<sup>3</sup>. The excavator is currently available in Asia and North America, but should also be offered in the West in the medium term.

### Model from Replicars

The model from Replicars was commissioned by Hitachi Japan, but nevertheless found its way into Western specialised trade. As usual, the model is well protected in a styrofoam bed and held securely by a transparent plastic shell. It is probably no coincidence that the new model was released almost simultaneously with the telescopic excavator discussed in issue 5-2024, because the undercarriage is identical for both – except for the track width and running boards.

The short-tail excavator has been implemented to scale, with deviations in the millimetre range due to the slightly higher track chains for

**If you think of short-tail excavators as compact machines, the ZX345USLC-7 will change your mind. Even in miniature, the excavator makes an impressive impression, especially when it comes to realising replicas ...**

functional reasons. The model can be brought into the transport position true to the original, and the attachment only misses the maximum digging depth and insertion height by a few millimetres – negligible values and, of course, first-class!

As already mentioned, we are familiar with the undercarriage from the ZX330LC-7, and two details have been faithfully adapted: the short-tail excavator has two short running boards on each side and, at 800 mm, the wider track chains. The rollers and support rollers are designed as dummies, the idler is gently spring-actuated and the drive sprocket is engraved in a way that is true to the original. The triple grouser track shoes give a very nice, closed image and work smoothly. For safe (model) transport, the lashing lugs are reproduced on the X-frame in a broken manner.

The upper structure appears powerful with its compact design because, although it is shorter, it is built higher. It consists of several finely engraved metal castings that sharply reproduce many details. Even when viewed from below, numerous rivets

and screw heads can be seen, including on the turntable. The superstructures accurately reproduce not only the anti-skid steps but also all the service doors with locks and screw heads. The fan guards on the driver’s side are not perforated, but they are very finely engraved and coloured black, which comes very close to the original impression. The exhaust tubes and the rear and side cameras consist of separately mounted parts. They are also made of plastic, like the relatively delicate safety railings. The engine bay hatch opens as in the original, and a look underneath is worthwhile: the Isuzu engine is very detailed, consists of numerous parts and has been implemented in several colours – it almost represents a model in itself, and Replicars could well consider offering it separately as a load on a pallet.

The cab, on the other hand, is superbly executed. The windows fit perfectly into the frames and are printed with window divisions and rubber seals. The handlebar is made of sturdy wire, to which a rear-view mirror can be clipped. Work lights, windshield wipers and an antenna

made of black plastic complement the cab, as does the transparent sunvisor. The door opens to 90° and is also detailed on the inside and even has a metal wire handle. The cab interior is, as usual, first-class, finely detailed, painted in four colours and, of course, features the Hitachi logo on the back of the seat.

The attachment consists of the 6.20 m monoboom and the 3.76 m stick made of metal. While the boom consists of two parts, which leads to a somewhat unsightly seam, the stick comes from a single mould. Once

again, the manufacturer has taken great care with the hydraulic lines, all of which are modelled as free-standing from the upper structure to the hydraulic cylinders. The silver hydraulic hose connections and the areas between the boom and stick that are wrapped in reinforcement are particularly beautiful. The hydraulic cylinders are also very finely detailed and another hydraulic circuit is provided for alternative tools. The metal bucket consists of a cast metal part, which shows all the details on the outside, including the screw connec-

tions of the side cutting plates. The bucket attachment is barely noticeable, but all the more welcome: it is bolted on and can therefore be changed – the mounting width is 8.5 mm.

The colouring is very clean, all plastic parts have been injection moulded and should therefore retain their colour for a long time. The printing is also flawless and very detailed. The Hitachi ZX345USLC-7 is a first-class model in every respect, and is on a par with the best of them.

## Translation of page 25

# Tom's driving log

by Tom Blase

## 'I want to go back on the road.'

(Marius Müller-Westernhagen)

**E**ight months can be a long time. If you are waiting for something and don't know exactly what – it can be a very long time. Sometimes I woke up at night and thought to myself, 'what if you have forgotten how to do it all (the driving) or have somehow gone crazy behind the wheel as a result of the accident?'

But after the first few metres reversing through the yard, I was at least reassured on this point, 'but it's a bit like riding a bike – you don't seem to forget how to do it.'

So I'm on the road again. As part of our "champagne fleet", with the task of production disposal, since there is insufficient storage capacity on site. Not the worst job for someone who now has to take a somewhat "body-friendly" approach.

After all those weeks (no, it was eight months), the health insurance company requested a so-called reintegration. So in the first two weeks,

I worked four hours a day and then another fortnight with six-hour shifts.

So I was able to take turns playing the co-driver with different colleagues. Always keeping an eye on the clock so that I didn't overstay my short working hours (you never know whether the health insurance company is allowed to read driver cards).

A few days with my colleague Enzo, who drives around with roofing supplies and the like, followed. After a few days, I arrived at my future place of work – 'MM/Rotkappen-Sektellereien'. But here, too, I was only a co-driver for a few days before my dispatcher saw the light and 'conjured up' a truck that would allow me to complete my six hours a day on my own.

Somehow I enjoyed driving again without 'supervision' and being my own boss.

There was a lot to talk about in those days, because time had not stood still. Colleagues left, new ones arrived and routes changed – a lot of things to talk about had accumulated.

When I inserted my driver card into the tachograph for the first time, I was shocked – last reading 21.12.2023 – downloading my data took a correspondingly long time. But then it was almost like old times: I was a cog in the transport system again, albeit with more pain than before – despite the doctor's visits and the five weeks of rehab.

So the march to further medical help, as well as the search for a solution to my complaints, continues alongside my work – always with the hope that at some point I may be able to turn the cog in the system again without pain.

# Tankers from PowerTrac in 1:50

## Saurer D330B

by Daniel Wietlisbach

In terms of design, PowerTrac continues to be based on the successful 1:87 models from Roskopf from the 1980s. And forty years later, this can obviously also be implemented in 1:50 with great success.

The tanker series was launched with three vehicles with sleeper cabs and five with daycabins. The model with Avia lettering comes with decals for eight different distribution points, allowing the models to be customised. The same applies to the Agrola model with four and the Coop model with two alternative sets of decals.

The resin-cast models impress with their positive overall appearance thanks to their well-proportioned design. The two models shown here were available for the test drive, with a sleeper cab and attractive 'flame printing' and in the bright blue of the Eastern Swiss company Halter. We were particularly interested in the sleeper cab, which did not quite convince in our last report. But the manufacturer has corrected this shortcoming in the new series, and the appearance has been significantly improved. The windscreen is still slightly too high in both cab shells and the upper door edges are less rounded than on the original, but overall the cabs look better. The front

**The four-axle vehicles with tilt bodies are followed by the tankers from Arbon. Here, too, there is a wide range of colourful models to choose from...**

mudguards are also new, with the fine ribbed structure that represents a typical design element of these Saurers. The running boards, in turn, are covered with fine checker plates that follow the mudguard true to the original. The windows are very precisely inserted and the various separately applied details do not fail to impress.

The new chassis offers a total wheelbase of 5715 mm (1450 + 2900 + 1365), which has been perfectly reduced to 1:50, and the overall width of 2.3 m is also correct. Viewed from below, the chassis shows the engine's carter pan, gear box and retarder housings, drive shafts, and running gear with differential housings. The brake cylinders, trailing arms and exhaust have not been forgotten either. The storage boxes and diesel fuel tanks are correctly reproduced. The finely engraved wheels come from the earlier models, but now have the unblemished Saurer logo on the front wheel hub.

In Switzerland in the 1980s, there were two main manufacturers of

diesel fuel tanker bodies with largely identical products: Flug- und Fahrzeugwerke Altenrhein FFA and Aluminium-Schweisswerk Schlieren ASS. The tanks for four-axle chassis held 16,000 litres. The proportions and dimensions appear harmonious and are correct. On the driver's side, there is a ladder behind the cab to reach the filler caps; there are diesel fuel tanks with two or three caps. Depending on the model, there are hazard labels at the front, rear and sides. The number 30 1202 means diesel or heating oil, which are chemically identical but differently coloured.

The paintwork is very clean and opaque, and the decals are also remarkably precisely applied. This is particularly noticeable on the 'Abderhalden' model, where the 'flames' in red, orange and yellow surround both the cab shell and the diesel fuel tank, with hardly a wrinkle in sight and perfectly seated in every crack. Depending on the colour scheme, number plates have also been attached.

# New Nooteboom low-loader from WSI

## Manoovr Multi-PL

by Carsten Bengs

The prototype is used to transport construction machinery such as crawler cranes, locomotives or other heavy loads up to a maximum of 111 tonnes. At a reduced driving speed, it can technically even handle loads of 154 tonnes.

The comprehensive description included with the model was very pleasing, providing detailed information about the prototype in text and pictures, as well as a clear explanation of how to assemble the model. The model is impressively realised, with a high level of detail and, of course, great functionality.

The model consists of a seven-axle trailer and a three-axle dolly. The dimensions have been implemented consistently. The gooseneck, dolly and trailer are mounted from below using screws; of course, the model can also be set up without a dolly.

The surface of the trailer has been designed with an anti-slip surface, making it look very authentic. The small eyelets for lashing down the load, which are clearly indicated, are equally positive. Even the small wooden planks for load support in the front area are colour-coded so that they are immediately recognisable as such.

The loading floor can be adjusted for wide loads. Small extensions can be pulled out sideways and would widen the loading floor by a total of around 10 mm. The wide range of accessories includes stanchions in

**WSI is stretching its low loader range with the Manoovr Multi-PL models. The successful prototype scores with a low loading floor of 780 mm and axle loads of 12 t ...**

two versions, which can be inserted into the holes provided and would secure corresponding loads. The warning signs for excess width are also included. All axle rods roll smoothly and all but the first two are steerable.

All of the dolly's axle rods are steerable; the steering angle is also sufficient. All of the axle rods are height-adjustable, and small springs keep the rear ones in the lower position. The complex steering kinematics, which can only be seen from below, are also impressive. Small, delicate steering linkages and hydraulic cylinders ensure smooth steering of the axle rods. The running gear is also modelled in metal; the compressed-air reservoirs are indicated and the rim profiles correspond to the prototype. The number plate, lighting and warning lamps at the rear are convincing.

The gooseneck can be adjusted using small hydraulic cylinders and is finely detailed with a power pack, controls, spare tyre and wheel chocks. Two small support legs, which are secured by small bolts, hold the gooseneck horizontally.

As usual with WSI, the model has extensive labelling with operating instructions, warning stickers and logos. Mud guards on all running gear

rods, complete with the Nooteboom logo, round off the details. For bulky loads, the model can be extended by 18.5 cm to a total length of 62.0 cm.

An MB Actros MP5 SLT Giga Space 8x4 is used as the tractor unit. It also impresses with many details. The engine, which is modelled in great detail, is hidden under the cab. A glance at the interior suggests that the prototype offers sufficient comfort. The seats are modelled in two colours and the dashboard is also easily recognisable. The hydraulic components are modelled behind the small component tower. The mirror cameras have not been forgotten, and four headlamps would provide light at the front; warning lights and a number plate complete the details. The mudguards and mud guards on the axle rods have been well implemented, as has the drive train.

A model of the smaller five-axle Manoovr Semtieflader is also available in the same quality. It is perfect for transporting larger excavators up to 66 tonnes at full speed and 94 tonnes at 20 km/h. The excavator can drive onto the low loader via the ramps and place the boom in the rear trough. Small hydraulic cylinders move the ramps, while in-

tricate chains secure them during the journey. The model can be extended by 7.5 cm for long and bulky goods. The small support legs, which can be

turned out to provide support for the low-loader when it is parked, were met with enthusiasm.

With the Manoovr trailers, WSI presents further extremely successful and perfectly implemented low-loader combinations.

## Historical model from IMC in 1:50

# Demag AC650 'Sarens'

by Carsten Bengs

When it was introduced at the Bauma trade fair in 1998, the Demag AC650 was the largest mobile crane that could carry the boom during travel with an axle load of 12 t. Development of the crane started as early as 1995 as a replacement for the successful AC1600; this was certainly a milestone in mobile crane construction. Now, the type designation of Demag cranes also included the lifting capacity, while its predecessor still included the load moment in the designation.

Reason enough to dedicate a model to the successful crane and IMC has created a perfect replica – details and functionality are convincing. In 1999, the first crane went to 'Nederhoff' and this colour scheme was therefore also the first version to appear as a model. This was followed by a beautiful 'van Seumeren' version and now finally in the attractive colour of 'Sarens'.

Although parts of the AC700 could be used, IMC had to develop numerous molds from scratch. For example, the boom, the sideways superlift or the undercarriage cabin. The chassis was also completely ad-

**It is not unusual for models to be updated to match the originals, but it is unusual for a model to be restored to an older state. However, the example of the excellently realised older AC650 may well set a precedent ...**

apted from the legendary model with new diesel fuel tanks and boxes.

The nine-axle chassis rolls smoothly and the drive train has been implemented with a high-quality drive shaft. All axle rods can be steered with sufficient steering angle. The rigid 6th axle is an exception, but it can be raised on the model in a prototypical manner using the screwdriver provided. The mudguards have also been implemented very realistically.

The front area features anti-slip plates and radiator covers made of photo-etched parts. The engine area has been accurately reproduced; a 420 kW Daimler engine would be installed in the prototype. The exhaust tubes, air filters and diesel fuel tanks are easily recognisable and the differences to the AC 700 with modified diesel fuel tanks have also been faithfully recreated.

The massive supports hold the model securely and the outrigger pads can be hooked onto the support struts during the journey, just like the real thing. The front supports can also be dismantled to reduce weight. Of course, crane mattresses are included in the accessories and can also be lifted in the manner of the real thing using the small chains.

The spacious cabin is the same as the first version of the AC 650 and thus also differs from the AC700. It impresses with mirrors, warning lights, windschield whippers and a detailed interior. The drivers seats, set off in black, are immediately noticeable. The labelling of the model is also of high quality, with the Demag AC650 lettering and Sarens logos being present in an exemplary manner.

The massive upper structure would house a 205 kW engine. The anti-slip

surface and the massive exhaust pipe are well implemented. Small steps, rotary heads and handrails round off the details. In contrast to the AC700, the crane still did not have a railing on the upper structure. The small hydraulic hoses on the side of the boom linkage have also been finely implemented. The hoist winch has sufficient non-twisting cable and is operated using the supplied key. To access the key, the side panel, which is held in place by magnets, must be removed.

The superstructure cab also has a detailed interior, windschield wipers and handrails; it also features working headlamps. The cab can be tilted and is located at the rear of the superstructure during travel.

The AC650 is also ballasted with the 20 t base plate and a maximum of 14 individual ballast blocks. They have lift eyes and can also be lifted with the small chain in a manner

that is true to the original. The model comes with the complete counterweight, which is 160 t in the real crane; all real ballast options can also be simulated on the model.

The boom has also been redesigned because the Superlift linkage is different. Its dimensions look very coherent. Even at flat angles of inclination, the boom is held securely by the two cylinders with grub screws. In addition, all telescopes can be locked in the three positions, just like the real thing.

The AC 650 still had the simple sideways superlift bracing, the predecessor of the current one. This is mounted on the boom using small screws, and the small hydraulic cylinder would raise it. The lifting cable is guided over the sheaves at the top; overall, therefore, a somewhat more complex assembly. In particular, when the original is used with a seesaw, the seesaw must first be raised

before the seesaw's flying bottle can be pulled to the seesaw arm.

The rear neck bracing is again mounted using small screws; the tie rods can be securely fixed to the model when not in use. At the boom head, the sideways superlift is guided over the massive bolt and secured with small bolts – this implementation is impressive.

The model has a three-sheave hook for 92 t and a seven-sheave hook for 189 t lifting capacity. It is pleasing that IMC has completely revised all rollers and their bearings compared to the AC700, and that they now turn absolutely smoothly.

Even if you can't tell by looking at it, the AC650 is a vintage crane. IMC has created an absolutely perfect model of the successful crane, and we can only hope that it won't be the last historic crane to be honoured in this way. The beautiful blue colour suits the model perfectly.

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## Imprint

## Hydraulic luffing jib cranes in 1:87

# Liebherr 195 HC-LH and NC-LH 12-55

by Carsten Bengs

The advantages of this design lie in the simpler assembly compared to conventional luffing jib cranes, since the A-frame is missing and thus the reeving of the jib luffing rope is no longer necessary – a great time saver. In addition, the boom can also be completely assembled and reeved on the ground if a sufficiently large mobile crane is available – a significant safety advantage.

Conrad has implemented both models consistently and in detail, while focusing on easy assembly. The extensive description included with the model was particularly impressive. This contains information about the prototype and the model, and the simple assembly is well explained. It also encourages you to post photos with the model on social media.

The model stands stably on the undercarriage, which corresponds to the 21 HC 290 variant and has a cross-section of 70 x 70 mm. Small metal foundation blocks provide additional stability. The undercarriage is ballasted with a total of two ballast plates and four ballast blocks; the four main blocks bear the Liebherr logo, clearly legible in the casting.

The tower consists of three segments in total, each of which would in turn consist of three tower sec-

**At Bauma 2022, Liebherr presented the first hydraulic luffing jib crane, the 195 HC-LH. Now, the matching model is available from Conrad. It was also released as the NC-LH 12-55 for markets outside Europe...**

tions. The model thus comes to a tower height of 48 cm or 41 m. All tower sections are stably connected by the new sliding joint. This was first introduced with the 370EC-B 12 Fibre and replaces the previous plug-in connections; a beautiful and functional solution. All segments have ladders with fall protection and rest platforms inside.

Two small slewing motors on the turntable would ensure gentle slewing movements. The cabin and the electrical cabinet are located on the central frame, which is firmly connected to the turntable in the model. This is significantly larger in the 195 HC-LH than in the NC-LH 12-55. The drivers seat and control levers are clearly visible in both cabins. Small zinc railings add to the fine details, as do an assembly platform and a ladder with fall protection.

The boom foot is already connected to the central frame and contains the hoist winch with non-twisting rope and the boom cylinder. Fortuna-

tely, the boom cylinder is not made of plastic, but of brass, and secures the boom stably in any position using a nut. It can be easily locked using the key provided.

Conrad has also done a good job of implementing the quick-release connections on the boom. The counterjib is hooked into small hooks at the top of the pivot point and fixed at the bottom with small bolts. The ballast plates, which are simplified into one block, are located at the end of the counterjib. In the real crane, it would consist of a maximum of five blocks, each weighing 5.6 t.

The open-bottomed boom consists of two segments that also have bolt-free quick-connect couplers and are easy to assemble. Unfortunately, only the maximum boom length of 55 m can be realised on the model and no shorter variants. The guide rope pulleys, on the other hand, are movably mounted.

In the 195 HC-LH, the small cradle is also realised on the boom. This



enables safe access to the top. The two load hooks of the models also differ: the 195 HC-LH has a hook for single or two-line operation, while the NC-LH 12-55 has a hook for two or four-line operation. The tiny sheaves turn smoothly. The bearing blocks of the hook, which hold it

securely during transport, have also been beautifully implemented. On the 55 m boom, the model can lift up to 2.55 t at maximum reach; the maximum load capacity is 12 t with a 30 m boom.

Both of Conrad's hydraulic jib cranes impress with their beautiful

attention to detail and, as usual, their solid construction. Despite the smaller 1:87 scale, they reach an impressive height of 1.13 m to the jib tip and are sure to find their way into many dioramas – especially on model railways.

## Translation of page 37

# Anniversary competition

# Results

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by Daniel Wietlisbach

The question was how many pages of 'excavator models' and 'trucks & excavators' have been published in the last 15 years. By the last day of the participation period, we had received messages with the correct solution of 4772 pages. A total of 78 readers combined and calculated correctly.

We would like to thank you not only for your enthusiastic participa-

tion, but also for the numerous congratulations that have reached us. We are, of course, very pleased to read and hear that the magazine has been inspiring people for 15 years, is still well received and is enjoyed by its readers. However, all this praise does not make us rest on our laurels, but is a great motivation to continue, to give our all and to continue to put together a great mix of topics for our hobby for each issue.

## Prizes and winners

Due to the encouragingly high number of participants, the winners were determined by drawing lots. The models have already arrived at their destinations and we warmly congratulate them all!

## Models from Peter Veicht

# Gross UB650

by Robert Bretscher

And once again, history takes us to Munich to the subway construction sites that dragged on into the 1960s and 1970s, where mainly heavy construction machinery was in use. Nevertheless, smaller universal mobile excavators were also found on the civil engineering sites, where they were often used as auxiliary equipment, primarily to relieve the large machines of ‘small items’. This meant that lighter mobile cranes from Demag, Fuchs, Gottwald or Gross were joined by their heavy neighbours.

In 1950, construction equipment manufacturer A. Gross from Schwäbisch Hall launched the first universal wheeled excavator, the UB3 model. These universal excavators were not only delivered with crane and gripper attachments, but also with high or low-profile buckets. The three-digit type designations were intended to refer to the standard bucket capacity. The large UB650 model presented here could therefore be equipped with a 0.65 m<sup>3</sup> shovel.

As a boy, Peter Veicht spent almost more time on these construction sites than in the classroom. The period of the underground construction sites, which lasted over twenty years, was the opportunity to get to know the duty cycle crawler cranes and their operators from the ground up. Quite by chance, while I was browsing through old photo albums at the

**With the Gross UB650, Peter Veicht created another reminder of a long-gone dredging equipment manufacturer in Germany. He discovered the original on the construction sites of the Munich underground ...**

Veicht family home, I came across a picture of Peter sitting laughing in the driver’s seat of a large mobile crane as a five-year-old. Of course, the little crane fan was carefully observed by the construction machine operator standing next to him, especially when the youngster tried to move individual levers. This adventure probably remained in his memory.

Years later, when Peter happened to come across a large UB650 mobile crane at a subway construction site, he had to draw it in order to rebuild it later. Original brochures, which he was able to obtain from construction machine enthusiasts, helped him with this. This is how the 1:50 scale model made of brass and copper was created in the early 90s; it was also exhibited at the construction machinery exhibition in Bern in 2000. Peter made a total of two large UB650 models, one in light green with a gripper and our crane model in dark green (see also issue 2-2016).

It’s a shame that Peter didn’t produce a small series with a two-axle undercarriage; these rare mobile excavators are a feast for the eyes. It’s

incredible how skilfully Peter had conjured up the finely rounded upper edges and the round rear section of the engine area. Veicht only worked with the simplest of hand tools, a converted hand drill and various files. A narrow, gloomy corner of the cellar served as a workshop and the family kitchen had to be used for the final assembly of the models.

The aptly shaped driver’s cab with the hinged roof, which gives the driver an excellent upward view, is not to be overlooked. The three-axle model is operated with two discreetly mounted screws for moving the boom and crane winch. Worth mentioning is the boom locking mechanism, which is specially equipped with two ropes and works perfectly. The upper structure is extensively decorated with numerous blades and ventilation plates. For the rather simple but controllable and all-wheel-drive chassis, Veicht chose the drive axles of a Mercedes-Benz truck from Conrad. After all, the three-axle chassis was given additional effective supports to be able to lift impressive loads.

## Possibilities of 3D printing

# Wagenbauer cabins

by Hans Witte

From 2014 to 2021, Arjan van der Sande and I worked with PKC to develop white metal kits. After PKC unfortunately closed its white metal foundry unexpectedly in March 2021, we decided to continue developing classic Dutch cab shells using 3D printing.

It was clear to us that casting the parts we 3D-printed (Arjan) or made by hand (Hans) with white metal or resin would no longer be a matter of course in the future. However, during a visit to Piet Douma of Model Truck Friesland (MTF), we were impressed by the quality and new possibilities of 3D printing parts in resin.

We then started printing cab shells and other parts directly. This change took some getting used to, not only because of the different process, but also because we had to adapt our way of thinking and approaching things. The big advantage of resin printing is that it is not produced for stock, but on demand: 'Printing on demand'.

To make our print products recognisable, we came up with the somewhat playful brand name HaWaS, which is made up of our initials. HaWaS is involved in the development and realisation of classic cab shells, individual parts and complete projects for truck models on a scale of 1:50. HaWaS is not intended to generate any income; instead, we mainly enjoy developing things for fellow model builders who do not have this option.

**Three enthusiasts have come together under the name HaWaS to offer 3D-printed cab shells that fit classic bonneted cars. They are not in it for the profit, but to share their passion for the hobby with others ...**

### From enthusiasts – for enthusiasts

Piet Douma is different: he has invested in an expensive professional printer and the associated equipment, which of course has to be amortised. This means that he also bears a business risk. However, Piet works on our projects alongside his job and as far as possible on a hobby basis. That's why our printed materials are rather inexpensive. At the moment, HaWaS products are sold at the model car exchange in Houten. However, shipping is also possible (contact and information: [hans.witte@texel.com](mailto:hans.witte@texel.com)).

We had already started developing Dutch trucker cabs during our time at PKC. With the help of MTF, we were able to continue, perfect the parts and significantly expand the range. The original plan was to develop a 'Paul en Van Weelde' and a 'Kees Mulder' cab for the classic Scania-Vabis Torpedo from Tekno. However, another Paul variant has since been added, and after the Volvo 495 Titan from Tekno became available as a kit, we developed the matching day and sleeper cab from Nyström. Tekno

only supplies a BeGe cab for the Volvo, but we believe that a Titan should primarily have a Nyström cab.

Because we work with 3D printing, it was relatively easy for us to adapt the computer models for the Mack B61 from Corgi (v/h Vitesse) and the DAF Torpedo from Lion Toys. While the cabs for the Vabis and Volvo models require a round recess for the mudguard at the front, this was not necessary for the Mack and DAF.

Each of the three partners contributes its own expertise to the development and production of the HaWaS projects. I started with the cab shells, using 2D drawings on a scale of 1:25 on my Rotring drawing board. For this, I had measured and photographed a number of cab shells in Kees Zandbergen's Scania Museum and studied numerous photos and other information. The first drawing was of a cab shell by Paul en Van Weelde on a Scania-Vabis chassis, which I had already drawn in 2016. For this, I used a reliable Scania factory drawing at a scale of 1:25 and a Tekno model. Reducing the scale from 1:25 to 1:50 resulted in a razor-sharp dra-

wing of the model at a scale of 1:1. I drew an opening in the bulkhead where the Tekno dashboard would later fit. The goal was to be able to simply swap the cab shell from the kit. To do this, the cab floor just had to be sanded to fit the HaWaS cab; the interior could be fitted out with the Tekno parts from the kit. After the Paul en Van Weelde cab shell, several drawings of the Paul, Kees Mulder and later Nyström cab shells for the Volvo torpedo followed.

My drawings – sometimes with additional details – were sent to Arjan, who converted them into a 3D computer model. We evaluated this together, and after any adjustments, Arjan ordered a test print. I made several test prints and then adjusted the cab shells by hand to fit the Scania Vabis, the Volvo, the Mack and the DAF. I passed on the necessary corrections for the adjustments to the various chassis to Arjan, so that he could edit the 3D computer models. The computer file was then ready to put the cab shells into production. The cab shell for a DAF Torpedo comes with a hood cover, a partition and a realistic dashboard. I made these parts by hand and Arjan then converted them into a 3D model. All the files were then sent to Piet Douma, who took care of the entire printing process.

### Printing process

The printing process used by Piet is called SLA, which means that a liquid (monomer) is transformed into a polymer (resin/plastic) by the action of UV (ultraviolet) light. The size and number of prints and parts that can be produced in one print run depends on the size of the build plate. The process takes place in a diesel

fuel tank filled with liquid, in which the building board (the surface on which the print is built up layer by layer) floats just above the bath. Monomer is converted into polymer by UV light generated by a laser; where the laser beam is switched on and hits the liquid, it hardens into plastic. Where the liquid is not hit by the light, it remains liquid. The desired print is created by moving the construction plate a small distance upwards after each exposure. The objects to be printed are therefore suspended upside down in the liquid. Depending on the type of parts, a printing process can take up to 12 hours or longer.

The type and quality of the resin used, the quality of the machine and its operation are very important. In particular, the layer thickness/steps (0.05 to 0.15 mm) ensures that the surface is as smooth as possible. The various parts to be printed are arranged one below the other on the computer to achieve the most favourable arrangement on the building board. Usually, a part is placed at a certain angle to obtain the densest possible printed circuit board. Where necessary, the PCB program places so-called supports to maintain the mould. It also happens that a support gets in the way and has to be adjusted manually. Arjan and Piet regularly try to get to the bottom of all these and other printing problems.

After printing, another curing and cleaning process follows in two other machines. This protects the mould and removes the uncured monomer. Sometimes a little bit remains in the printed circuit board, but the model maker can easily remove it themselves by, for example, soaking the part in an alcohol bath for a while and, if necessary, cleaning it with a stiff brush. Working with resin requi-

res some attention, which is why we have created a separate leaflet with tips for further processing resin parts.

### For experienced model makers

The windows are made by Arjan, who has purchased a vacuum machine for this purpose and developed his own working method. For all cabins, there are 3D-developed moulds around which the windows are thermally and vacuum formed.

Our cab shells and printed parts are intended for experienced model builders. All cab shells require some work on your part, such as removing the existing cab shell on Mack and DAF trucks and creating a tight joint with the hood. Printed parts are included for this, but the cab floor and other interior parts must be made by the builder. Detailed instructions for the various chassis are included with all cab shells.

In addition to the correct dimensions, a good feeling for the moulds of a cab and other objects is particularly important for a coherent and lifelike implementation of 1:50 models in 3D technology. In this respect, we strive for the highest quality, and we think we are doing a good job of it. Compare the photo of the Tekno Volvo Titan with HaWaS Nyström cab shell above with a picture of the WSI model (issue 3-2022, page 52). Obviously, there is sometimes a lack of sufficiently qualified 3D draftsmen, or their work is not critically evaluated enough. Or is it a cost issue and the manufacturer wants to save time? Personally, I think that a construction that differs from the real thing is bad advertising and I hope that anyone tempted to buy such a model first takes a close look

at its quality and how true it is to the original.

It's better for modern trucks because you can work with the 3D files of the real car. So if you have to draw

a classic cab shell from scratch, you need the necessary expertise, drawing skills, creativity and a feel for moulds.

After this somewhat theoretical article about the development and printing process, next time I will explain how to attach the printed cab shells to the various chassis.

## New variety for a familiar model

# Sennebogen 830E

by Urs Peyer

As is well known, Sennebogen offers countless equipment variants for each material handling excavator. Six boom and seven undercarriage variants exist for the 830E in mobile and crawler versions; the Vario Tool variant is highly versatile: a quick-change system is attached to the end of the boom. This allows heavy scrap shears and sticks with or without bucket linkage to be attached directly to the boom.

The Sennebogen 830E standard mobile material handling excavator has been available from Conrad for quite some time. After the conversion, the standard version becomes the Vario Tool variant with a heavy-duty scrap shear from Genesis.

### Undercarriage

The plug-in protective cover of the drive shafts could be carefully lifted off with a screwdriver. Underneath was the screw that holds the undercarriage and upper structure together,

**There can only be one – no two are the same. This is how the product diversity of Sennebogen can be described. Urs Peyer prepared an 830E for the scrapyard ...**

which could now be easily loosened. The floor cover of the undercarriage was removed after the four pressed joints had been milled off. Since Conrad uses plug connections for the wheel rims, new running gear had to be built or the existing ones had to be heavily modified.

To reuse the rims and tyres, they had to be disassembled as follows: After removing the tyres, the rims had to be turned until the gap at the end of the axle rod could be seen through the narrow opening in the rim. Now, with pointed tweezers, the two ends could be pressed together through the opening and at the same time the rim could be pulled off the axle.

Because larger tyres are to be fitted, space must be created all around the undercarriage. To do this, the two

small plug-in access ladders between the tyre and outrigger were removed. Furthermore, about 12 mm had to be sawn off the checker plate surface of the access ladders on the outriggers. And finally, the centre step of the access ladders between the axle rods was shortened by 1.5 mm on both sides, and the outer steps by 1.5 mm on both sides.

The large tyres and wheel rims were taken from the Caterpillar MH3040 material handling excavator from Diecast Masters (see conversion report in issue 5-2024). The distance between the centre of the axle and the upper edge of the undercarriage remained unchanged, as did the overall width of the tyres. The square axle housings are made of a 6.3 x 6.3 mm ABS profile, the round part is a 4.0 x 2.0 mm tube, and the

axle rods themselves are made of a 2.0 mm round rod made of aluminium or brass. The axle rods had to be supported because of the larger wheel diameters. A 3.0 x 2.0 mm tube with a 2.0 mm rod or a 2.0 x 6.3 mm and a 1 x 6.3 mm ABS profile were used. (Figures 1 and 2).

### Upper structure and boom

To disassemble the upper structure into its individual parts, all screws had to be loosened; to disassemble the boom, the two rivets were drilled out. The grey cover with the Sennebogen logo over the hydraulic hoses was plugged in and could be carefully pulled out.

To remove the cylinder, all rivets of the four hydraulic cylinders had to

be drilled out. The plugged hydraulic connections were disconnected. The entire hydraulic hose belt was carefully loosened with a knife and a lot of dexterity – without cutting the plug connection!

The short boom, the quick-change system and the top plate were designed by Markus Lechermann of LDB-Modelle and were available to order for a long time on the 3D printing platform Shapeways, as was the cab guard (Figs. 3 and 4). To enable the dismantled hydraulic hose conveyor to be re-installed, suitable holes were drilled on the new boom; the conveyor had to be shortened exactly in front of the quick coupler.

After Shapeways went bankrupt, many designers had to find new ways of producing and marketing their

products. Markus sometimes prints himself, but he has also found a 3D printing service provider that offers high-quality products. All parts can now be ordered directly from him by emailing LDB-Modelle@outlook.de. He provides continuous updates on newly added components on his Facebook page 'LDB Modelle'.

The scrap shear kit from Genesis is from Refo-Tech (Fig. 5). An alternative to this would be a scrap shear from Gaz Evans (gemmodels.co.uk). Markus Lechermann also has a model of the Demarec DXS50 in his range.

For the colour scheme and labelling, the model was sent to a professional paint shop, but only after the trial assembly had been successfully completed to everyone's satisfaction (Fig. 6).

## Industrial street as a visual conclusion

# Forgotten Street

by Tom Blase

After my factory hall and the associated courtyard area were completed, I turned my attention to the front visual finish, which was to be formed by a road with a boundary wall and green spaces behind it. I used a 1.2 m wide plywood panel 6.0 mm thick for this, with another 6.0 mm plywood strip to form the road area, which I glued on.

The planned Industriestrasse should be separated from the depot by a wall – an unadorned and neglected enclosure. 8.0 mm thick pine strips

**'A goal would do the game good,' this saying by Marcel Reif went through my head as I was looking for a way to visually add the factory premises at the front. An industrial road finally became my 'gateway' in the game with the dioramas...**

and 10.0 x 10.0 mm pine rods were arranged at regular intervals and also glued to the base. Using a firmer chisel and scribe, the wall sections were individually treated to represent wea-

thering, giving the small wall a rather worn appearance. I designed the upper end with a semicircular pine stick that protrudes a little on both sides and looks quite harmonious.

While the glue was still drying, I devoted myself to the later vegetation. Three trees from the accessory manufacturers Noch and HEKI once again took on the holding function for my hydrangea trees from the local garden, which were placed in between. Otherwise, at least a dozen more hedges and shrubs were created, all of which were flocked and leafed; planting is more fun when the supply is larger and you can draw from an abundant source.

### Factory gate

I had wanted to build an old gate with bars for a long time. I still had a beechwood strip in which I drilled holes 5.0 mm apart to hold the bars later. After this work, I cut the remaining frame parts of the gate out of the beechwood on the bandsaw. After the glue of the frame had set, the ‘toothpick bars’ could be inserted and glued. Finally, both gate leaves were smoothed and sanded down on the belt grinder.

Now it was time to give the road a helping hand with a little grey acrylic paint. The obligatory potholes and frost heave are simply part of my third-order commercial areas. In the gate area, someone had probably taken the trouble to install gullies and

drainage channels at the time. For the channels, I used thin spruce strips, which I gave a jointed, slab-like appearance using a fine saw. Now it was time to design the green spaces on the company premises. To do this, a handful of washed chippings were scattered in the applied grass adhesive and then grass was added – to create the appearance of an unkempt grass cover.

The aforementioned trees from the accessory suppliers form the beginning of the slightly overgrown corners. After that came the secret stars of the landscape scenery. Plate-shaped hydrangeas are and remain my ‘universal weapon’ for a realistic, natural look.

Meanwhile, the two gate leaves were painted green and given handles made of bent paper clips, to which a piece of brass anchor chain from ‘Aeronaut’ was attached. I also used two billboards from an earlier project – this makes the long asphalt straight a little more lively and I find contemporary advertising simply coherent and fitting.

### Weathering and dirtying

After that, I had to pull myself together again, because my favourite part was about to begin, which al-

ways makes me a little nervous with anticipation. The wall was given some scores, cracks and quirks with a chisel and screwdriver, as well as a diluted sand-paint mixture to simulate years of weathering. The gate leaves also received a good portion of rust pickles and since someone had driven against it while manoeuvring, an annoying buckling was created, which also gave the rust enough breeding ground.

Where trees stand, a wall quickly becomes mossy – I find Turf from Woodland Scenics ideal for such work. The narrow strip between the road and the wall was created using terrain filler from Noch and fine track ballast. Here, too, dark green Turf and a few tufts of grass from Heki were used. In my mind, I heard the boss: ‘Nobody is taking care of this – what will the customers think when they come to visit?’

The street actually turned out quite unspectacularly, but it provides a valuable visual service to give the factory courtyard a suitable finish and at the same time to represent a coherent entrance area. It simply forms “the decisive gateway to enrich the game...”.

## Our partner page

### New-build University Hospital Basel

A 120,000 m<sup>3</sup> large and 26 m deep excavation pit had to be constructed for the new, 65 m high building. The preliminary work started in October 2023. A 150 m long and up to 36 m deep secant bored pile wall was constructed along the row of houses on Hebelstrasse. A total of 1500 anchors were required to secure the construc-

tion pit. The logistics in the long and narrow construction pit repeatedly posed a challenge.

Because the access ramp in the construction pit had to give way to construction progress, Eberhard moved his Sennebogen 6113E to Basel in September 2024. The clamshell grab holds 8 m<sup>3</sup> of excavated material,

weighs around 24 t when full and is filled by a track loader. The daily output varies between 500 and 600 m<sup>3</sup>. In addition to the 120,000 m<sup>3</sup> of excavated material, the Eberhard excavators also handle 5500 m<sup>3</sup> of concrete demolition.

## New on the market

### Diecast Masters / Eberhard 1:50

Anyone who works for the Eberhard companies receives a model in a special livery or with special lettering every year for their birthday. Because these models are in demand among collectors and the Eberhard company understands this, they can be ordered in the following year from the Ebianum shop (delivery only within Switzerland) or from the specialist dealer Setec-HTM. In 2024, a Cat 775G was labelled with the logos of the porphyry quarry in Detzeln, Germany.

### Tekno 1:50

Tekno is introducing a completely new generation of wheels, which are said to be significantly more de-

licate than the previous version. The detailed rims include Alcoa rims for the front wheels, as well as rims for driven wheels with the typical Scania hubs. A universal rim for rear axles is also new; it can be used for non-driven Scania or driven Volvo wheels. The new rims are available in packs of ten and are available in raw or chrome-plated versions from the parts shop. Furthermore, they have already been installed on the latest production models.

To ensure that trailers are not at a disadvantage compared to trucks, the range has been simultaneously stretched to include robust steel rims.

### 5% at the Kobelco Fanshop

The exclusive promotion from the Kobelco Fanshop for readers of Laster & Bagger has been stretched

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(kobelcofanshop.com). A permanent discount of 5% applies to the entire range. To take advantage of this offer, simply enter the promotional code BAGGER5% during the ordering process.

### New toolings from Conrad and WSI

Those who followed Conrad's Advent calendar on social media were able to watch the development of a new mould, a Mack truck with a box body.

WSI is adding a semi-low loader with a tarpaulin to its range of trailers, which will be available with three or four axles and with ramps, for the first time from 'DKJ' (see box on the right).



## News in brief

### Komatsu WA700-8

Komatsu Global presented the new WA700-8 wheel loader for the mining industry in November. With an operating weight of 97.1 t, the WA700-8 is ideal for loading dump trucks in the 65-tonne class in four working cycles, such as the Komatsu HD605-10 or Caterpillar 775. The built-in six-cylinder Komatsu engine with a displacement of 23.15 litres delivers 577 kW or 773 hp. A new drivers seat and numerous assistance systems make the machine operator's daily work easier. Compared to its WA700-3 predecessor, the update is around 25 tonnes heavier and thus much closer to the 115.5-tonne WA800-8. (up)

### Caterpillar 793 XE mining truck

In November 2022, Caterpillar presented the 793 XE, the prototype of the first battery-powered mining truck. The milestone was built at the Tinaja Hills test site, south of Tucson in the US state of Arizona. At Minexpo 2024 in Las Vegas, Caterpillar announced that the first 793 XE had been delivered to several customers worldwide for testing purposes. The laden 793 XE reaches a maximum speed of 60 km/h. The payload of the standard 793 version is between 231 and 240 tonnes, depending on the application. This requires an engine output of 1976 kW or 2650 hp. (up)

### Fifth generation Cascadia

In mid-October, Freightliner presented the fifth generation of the Cascadia model. According to the

manufacturer, the latest version offers new, outstanding safety features, improved aerodynamics and new options for integrating day-to-day business. The safety architecture includes Active Brake Assist 6, Active Lane Assist 2, Attention Driver Protection and Side Guard Assist 2, plus the brand new Intelligent Braking Control System (IBCS), which is designed to stretch the service life of the brakes by automatically using the retarder when decelerating via the brake pedal. The system works as a 'brake-by-wire system' and is thus fully electronic with pneumatics as a backup. Efficiency has increased by 35% since the first Cascadia, with the Mirror Cam, which is now also being introduced in America, also making a contribution. (eu)

### Steyr eTopas 600

At the IAA Commercial Vehicles trade fair in Hannover, Steyr Automotive and SuperPanther announced a strategic partnership for the joint development of competitive electric trucks. The first result, the eTopas 600, is expected to go into series production as early as 2025. The tractor unit has been specially designed for the European market and is expected to offer a range of 500 kilometres. The LFP batteries have a capacity of 621 kWh to achieve this range. In addition to the eTopas, SuperPanther, which is based in China, also wants to establish the eEmerald series at the same time. This series will consist of three different models with different drives, reaches and cabin configurations to meet different customer needs. Since Steyr was already declared dead, its return with SuperPanther as a partner is definitely surprising. (eu)

### Major project Kühtai 2

Tiroler Wasserkraft AG is building a third reservoir with a capacity of 31 million m<sup>3</sup> in the Kühtai ski resort, around 35 km west of Innsbruck. This will require the construction of an earth dam with a volume of 7 million m<sup>3</sup>. Most of the fill material is being extracted on site, at a rate of up to 60,000 m<sup>3</sup> per week. Around 200 construction machines are in use on the project, the largest of which are two Cat 6015B excavators, seven Cat 777G dump trucks and a Komatsu WA800-8 wheel loader. Ascendum, the Austrian Volvo dealer, is directly managing a large fleet on the construction site at high altitudes: two EC950F excavators in the 95-tonne class, 26 articulated steering trucks from A25 to A60 and 12 wheel loaders from L120 to L350. Another 15 machines will follow. (up)

### Renault 2025 vintage

Renault recently started marketing the Renault T, C and K of the 2025 model year. They were developed with the aim of further improving vehicle efficiency, with a further 3% reduction in fuel consumption. At the same time, driver comfort and safety have been increased. The most obvious change in the new generation is the camera mirrors, which are now available as standard on the T-series models. The C and K models will continue to be equipped with traditional mirrors. The Renault T Smart Racer truck has been optimised for long-haul operations. It combines a DE13 turbo-compound engine with all the fuel-saving options available. As a result, the Smart Racer consumes 14% less fuel and emits 15% less CO<sub>2</sub> than a standard model. (eu)