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FormworkPress

Professional Formwork News **Special Issue on Bridge Construction 2024**

Building bridges with MEVA

Expertise in formwork and services




How can we help you?

MEVA combines products and services to meet every customer requirement

During the construction of bridges important aspects need to be taken into consideration. A high level of specialist knowledge, careful planning and strict observance of quality standards guarantee safe and long-lasting infrastructure and the realisation of projects to the principal's full satisfaction.

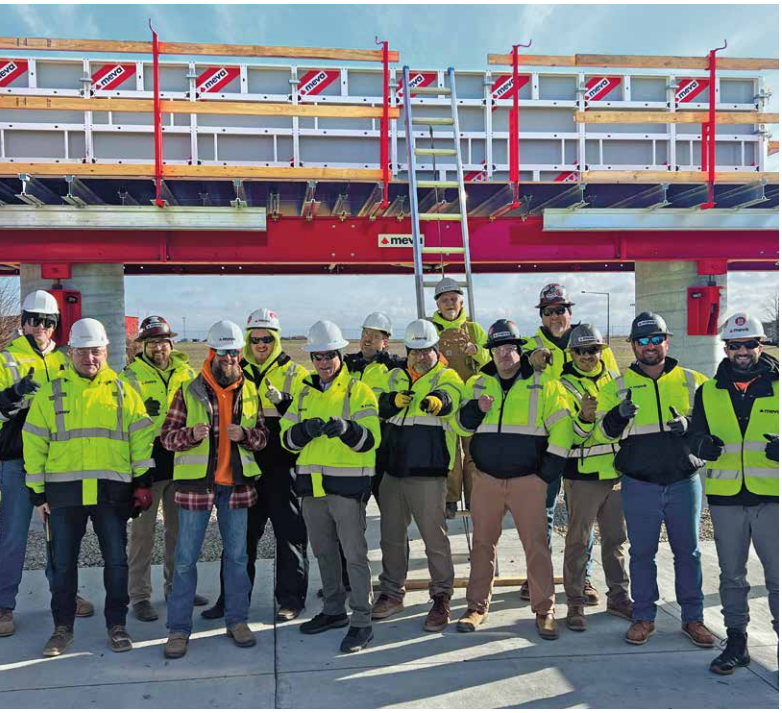
Thorough formwork planning and well-founded experience in concrete construction form the basis for precise forming of the bridge elements. This doesn't need to be expensive: Cost-effectiveness, work safety, flexibility and sustainability through durability characterise the MEVA products – whether standard systems or special solutions developed by experienced engineers in our special-formwork department.

MEVA Schalungs-Systeme GmbH based in Haiterbach, Germany in the northern Black Forest is a medium-sized, innovative formwork manufacturer and has been a pioneer and trendsetter in the formwork industry since 1970. Since this time, we have worked as a partner for construction companies around the world to ensure the successful completion of numerous projects. The product portfolio ranges from wall formwork systems, circular and rectangular column formwork systems, and circular and slab formwork systems to working and safety platforms to shoring towers and climbing systems.

3D and BIM formwork planning as well as further digital solutions and integrated comprehensive services go far beyond just the basic formwork product. The infrastructure and road construction sectors, in particular, profit from this. Formwork centres throughout Germany and Europe provide services such as cleaning, facing replacement, reconditioning and functional testing – for MEVA formwork and also for third-party systems.

With approximately 600 employees in 40 locations in more than 30 countries spread across five continents, MEVA is able to provide support on the spot worldwide. With a wide variety of frame formwork systems ranging from lightweight and easy-to-handle systems up to heavy-duty systems and with special solutions and bespoke services (formwork planning, rental equipment, reconditioning and cleaning of formwork), MEVA provides significant support during the execution of numerous bridge construction projects. Our engineers work intensively on the initial and further development of modular solutions for tunnel, bridge and other infrastructure construction.

Reliable partner for bridge construction projects
MEVA service packages can be optimally adapted to suit the needs of the individual construction companies. The all-in-one solutions ensure a high degree of cost certainty and reliable project execution. Easy-to-handle, durable and flexible systems reduce the labour costs, simplify the processes and increase the efficiency on every construction site.
Formwork. Simple. Clever.



Combined cycle and pedestrian underpass in Mannheim, Germany, built with a clever combination of special and standard formwork.

Just as diverse as your requirements

Abutments, bridge piers, underpasses

MEVA's products and services are in demand for the construction of bridges all over the world. Here is a small selection of successfully completed projects.

Bridge piers in Ferrybridge, England.

Abutments for a railway bridge, Pilbara mining region, Australia (Mammut 350).

Rooftop garden at the CABINN hotel in Copenhagen, Denmark (MT 60 shoring tower, special formwork, AluStar and StarTec wall formwork).

Dultenaugraben Viaduct South in Rheinfelden, Germany (KLK 230 climbing system).

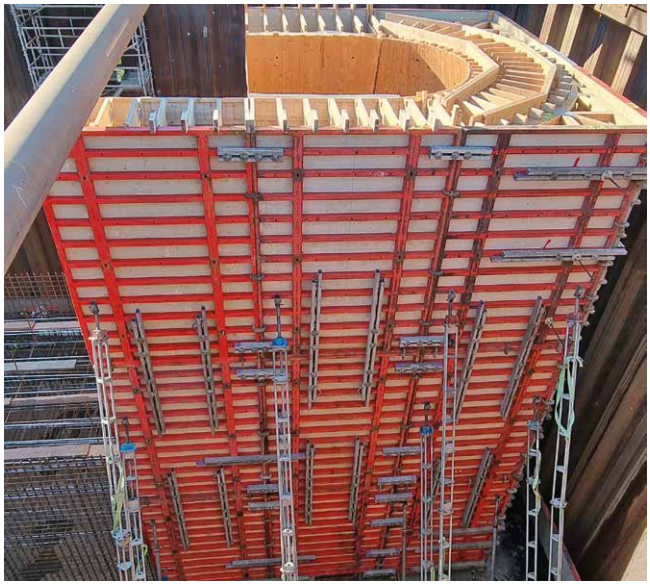
Road bridge over a railway line in Le Versoud, France, with slender set-up of Mammut 350 and SecuritBasic for safe working practices right next to the railway tracks.

Viaduct over the M6 motorway near Budapest, Hungary (Circo circular column formwork, KLK 230 climbing system).

Motorway bridge near Heilbronn, Germany, MT 60 shoring tower, manoeuvrable on rails.

Double bridge piers for a motorway bridge in Bóly, Hungary (standard and special formwork).

Rhin-Rhône rail link in Mulhouse, France.



Striking bridge piers in Hungary

In Hungary the last remaining gap on the M6 motorway from Budapest to Osijek in Croatia has now been closed. The centrepiece of the 20 km long section to Ivándárda on the border with Croatia was a viaduct with a unique support structure. The striking bridge piers were built by the Hungarian subsidiary of STRABAG with planning performed by MEVA and the clever combination of standard and special formwork with shoring tower systems and working platforms. The surfaces shine in architectural concrete quality that is very pleasing to the eye.

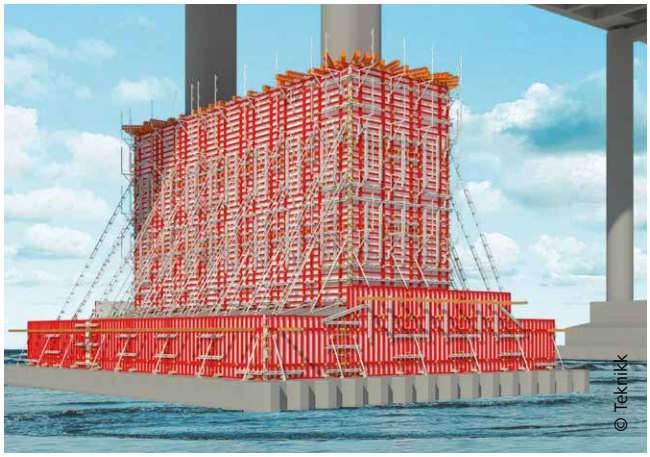
The formwork planning for the bridge piers, which stand next to each other in pairs and have variably curved surfaces and striking central grooves, was a challenge – not least due to the penetration surfaces and the small radius on the short sides. The facings were doubled up accordingly on several sides.

The three standard systems Radius (for curved walls), Circo (for circular columns) and Mammut 350 (for straight walls) were combined and set up on-site. This ensured that a minimum quantity of special bespoke panels was required. The simple work processes contributed to the economical and rapid construction. As a height of 7 m was poured during each cycle, the concrete for each 14 m high bridge pier was poured in two cycles. Once the concrete poured during the first cycle had hardened, the MT 60 shoring tower system was set up and the working platform installed – for comfortable and safe completion up to the final height.

Railway bridge in Norway

The new Minnevika railway bridge crosses a river at the end of Lake Mjøsa between Oslo and Hamar. MEVA's partner MAXBO Teknikk performed the 3D formwork planning using the BIM method. This made it easier to exchange the model with the contractor and enabled it to be linked up to the BIM workflow. The construction company PNC Norge performed the concreting work.

The bridge rests on numerous piles and 20 pile caps up to 14 m under the surface of the water. Pier shafts with different heights and a cross section of 18.6 by 6.3 m reach up to the surface. Two oval columns stand on each of these (3.2 x 2.2 m). Efficient formwork planning had to be conducted from the pile caps to the column heads. The challenges included the complex structure and the multiple use of the formwork. Besides special solutions, MEVA's Mammut 350 wall formwork, Triplex heavy-duty props and the KLK climbing system were used.

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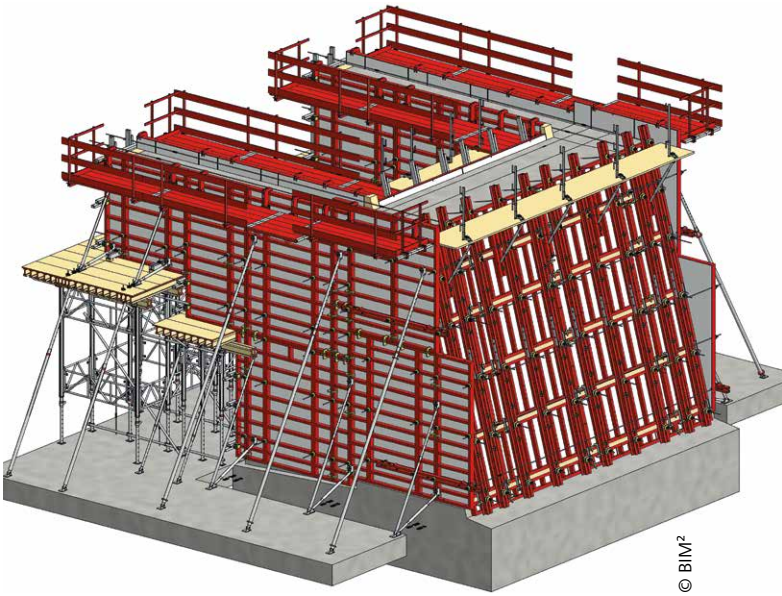
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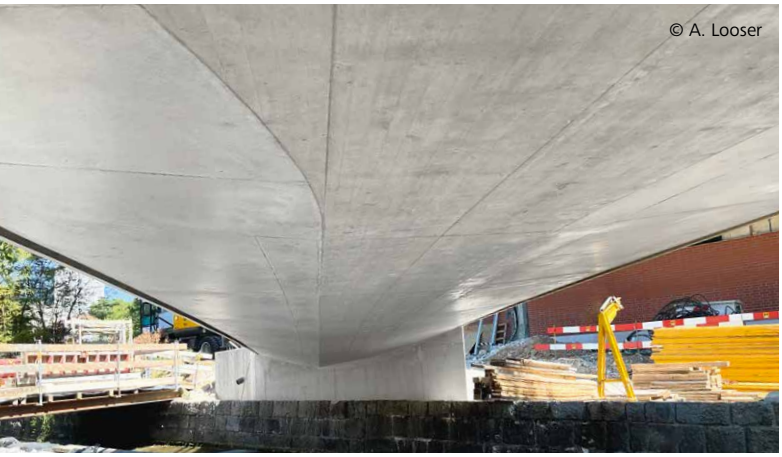
Footbridge in Basel

In the district of St. Alban, Marti AG built a footbridge using special formwork from MEVA. Required was the construction of an architecturally attractive, subtly triaxially curved crossing. Not only the people crossing over the bridge, which curves slightly as it crosses the water, but also observers who let their eyes wander beneath the construction are mesmerized by its captivating design.

MEVA Switzerland implemented the planning using 120 m² of special formwork. The architectural concrete required a combination of various smooth surfaces and classic wooden lath style finishes with a visible grain. This was realized according to the principal's wishes, the planner's specifications and the template image. "Our workers were able to assemble the special formwork quickly on the building site and the concrete was poured without problem. This testifies to optimum formwork planning on the part of MEVA. We completed the project on schedule and to the satisfaction of our principal," reports Marti's construction manager Armin Looser.

Precisely formed in Franconia

GLS Bau und Montage GmbH built a bridge to carry a track over the A9 motorway near Nuremberg in just a single night. The deck and the abutments were created separately using formwork technology as well as 3D planning provided by MEVA in order to create a better understanding of the set-up and processes on the construction site. The 7 m high abutments and wing walls of the U-shaped reinforced concrete construction were realized with minimum use of material and Mammut 350 panels. The bridge deck was poured separately next to the motorway. The MevaFlex slab formwork was installed on the steel support structure using horizontal steel girders and the end faces were formed using Mammut 350. The 900-ton support structure was then set down on the abutments using a heavy-load transporter. Construction manager Florian Brandstätter: "Due to the good planning and the robust systems provided by MEVA, we were able to work with great precision, ensuring that the subsequent steps also ran smoothly."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You can rely on us wherever you are.

With 40 offices on 5 continents, we are on the spot wherever you need us.

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