

A world record ! The KAHL Group handles the most challenging transport operation of all time - with the help of Goldhofer

Just before 10 p.m. on January 24, André Krause, Project Manager with the KAHL Group, and his team gave the “go-ahead”, and a superlative heavy-haulage operation began under the eyes of the fascinated onlookers. Slowly a colossus of the road rolled off into the night with its very special cargo: the world’s most powerful transformer, a Siemens 1100 KV UHVDC with a deadweight of 535 tons. “For such an operation we obviously use the most innovative equipment in our fleet, in this case two Goldhofer modules: up front a THP/ST 10 P (1+1) and at the back a PST/SL-E 10 P (1+1) coupled in parallel with, of course, our G² I K600 high girder bridge from Goldhofer and Greiner. That ensures we can satisfy both the load-bearing requirements and the height restrictions along the route.”

In May 2015 the world’s first G² I K600 high girder bridge was formally handed over to the KAHL Group and has since been used to fulfill several contracts. The outstanding deadweight to payload ratio is the key to reduced axle loads when transporting extremely heavy cargos and constitutes a vital USP for the heavy haulage industry worldwide. The high girder bridge has been designed for a maximum configuration of 2 x 24 axle lines and a maximum payload of no less than 600 tons. Depending on the cargo, the G² I K600 offers the flexibility for use not only as a high girder bridge but also as a side girder deck, vessel bridge or self-supporting schnabel transporter.

In the early planning stages of the project, the specialists at KAHL realized that the operation was going to involve a new record in terms of weight. With a length of 63 m, a width of 7.45 m and a height of 6.10 m, the laden rig looked set to become a record-breaker with an overall weight of 875 tons. “This transport solution is a first in terms of the combination employed. With Goldhofer’s heavy-duty and self-propelled modules coupled in parallel we were able to minimize the overall length of the combination so as to guarantee the maneuverability needed for the critical passages, like the underpass under the Minerva Bridge.”

For optimum preparation of the journey, André Krause relied on Goldhofer's dedicated easyTRACK and easyLOAD software. The specialists at KAHL made regular use of the software in order to simulate the itinerary as realistically as possible on the one hand and to ensure optimum positioning of the cargo with regard to weight distribution and center of gravity on the other hand. The fact that computer simulation can only reproduce reality to a limited extent is something that André Krause and his team discovered right at the beginning of the journey. When the cargo had been secured in the high girder bridge with more than 30 chains and the rig had just started to move, an unforeseeable obstacle was discovered just outside the exit from the Siemens plant in Nuremberg: An incorrectly parked truck left so little space to pass that the journey seemed over before it had begun. But a tow truck quickly arrived and lifted a vehicle parked on the other side of the road out of the way so that, although narrower than originally calculated, there was enough space for the rig to pass. With that slight delay but no other incidents or obstacles, the record-breaking rig rolled through the night and reached the port of Nuremberg the following morning.

"Once again the months of preparation paid off," says André Krause in praise of his team. "Of course the occasional adjustment had to be made on a couple of bends, but without the illegally parked truck we would have arrived right on schedule!" After an operation lasting just under 20 hours, the record-breaking rig finally reached the port of Nuremberg. There the transformer was quickly loaded onto a barge to take it to Antwerp, where the 3300 km long journey to China continued by sea. André Krause concludes: "This mega transport operation was a successful premiere for us; we have another three of these giant cargos coming up for the power gen industry. I was particularly impressed once again by the G² I K600 high girder bridge, which we have already used for a lot of challenging operations on national and international routes. I am proud of the fact that, with our big and innovative fleet and our fantastic team, we are able to handle such demanding jobs."



Even so late at night, the whole route was lined by curious onlookers attracted by the record-breaking transport operation.



Just a few centimeters separated the cargo from the concrete of the underpass.



The 875 ton rig arriving at its destination, the port of Nuremberg