

Jobreport

High-performance concrete for Stuttgart 21



LIEBHERR



Situation

For many years now, the Max Bögl Group with headquarter in Sengenthal is a competent and reliable partner for the production of high-quality tunnel tubbings. The largest single order in the history of the group so far is the contract for the production and delivery of tubbings for the Fildertunnel in the framework of the project Stuttgart 21 with an amount of approx. 80 million euros.

The order includes the production of 53,620 tubbings with a total weight of around 650,000 tonnes. From the precast factory in Sengenthal, the precast concrete parts are transported by rail to an intermediate storage facility at the construction site.

Task

To deal with a challenge of this dimension a solution for the economical mixing of high-performance concrete was needed that meets the very demanding requirements of the customer.

It was also crucial to choose a mixing plant that offers the possibility of a flexible expansion to ensure an optimal handling of future tasks, too. Furthermore it is necessary that the plant can be easily integrated into the existing precast plant.

Solution

As an optimal solution for this task, Liebherr together with Max Bögl developed a concept consisting of the Betomat 5 with a storage volume for aggregates of overall 875 m³, distributed over eight chambers.

The aggregates are delivered by truck and can be unloaded directly into the ground-leveled and covered charging hopper. A

galvanized bucket elevator and a distribution belt feed the material into the eight silo chambers. For a flexible production with different recipes, the individual silo chambers can be completely emptied.

The two Liebherr ring-pan-mixers RIV 2.5-D of the latest generation are the core of the mixing plant. The unique design of the RIV 2.5-D, in which the speed for the main mixer and the agitators can be variably and independently changed, guarantees perfect results for the mixing of high-performance concrete types such as self-compacting concretes within the shortest possible period of time.

For the daily work on the plant, optimal accessibility to all service positions is ensured through generous space on the platforms and large openings in the area of the mixing systems. The Betomat 5 is perfectly integrated into the existing precast plant of the Max Bögl Group at the location in Sengenthal. For residual concrete and washing water, the plant is also equipped with a LRS 606 recycling plant from Liebherr.

Anton Gloßner, responsible for mixing plant technology at Max Bögl confirms the outstanding features of the new Liebherr mixing system: "We are with the Liebherr RIV 2.5-D technically up to date and can easily accomplish the current tasks. Furthermore, this mixing system has appropriate reserves to meet future requirements. This applies in particular for special applications such as self-compacting concrete or high-strength concrete."

Technical data	Betomat 5 with tower silo
Output capacity	up to 120 m ³ /h (dependent on recipe)
Storage volume for aggregates	875 m ³ (8 chambers)
Diameter aggregate storage	10,5 m
Storage volume for cement	6 x 120 t
Number of lanes	2
Mixing system 1	Liebherr ring-pan-mixer RW 2.5-D
Mixing system 2	Liebherr ring-pan-mixer RW 2.5-D
Höhe Mischturm gesamt	approx. 35 m
Total high of tower silo	approx. 12 m ³ /h

Liebherr-Mischtechnik GmbH

Postfach 145, D-88423 Bad Schussenried
 Tel: +49 7583 949-0, Fax: +49 7583 949-396
 www.liebherr.com, E-Mail: info.lmt@liebherr.com