

The Siempelkamp site in Krefeld (blue = under construction; green = planned; grey = finished)



Siempelkamp enhances its Krefeld location

By Stefan Mettler and Ralf Griesche

Siempelkamp Maschinen- und Anlagenbau and Siempelkamp Foundry will invest approximately 54 million euros in new production facilities from 2007 to 2009.

Construction phase I of the machinery and plants division
This is the most important investment program in the history of the company, and it shows how viable the Krefeld location is. The Krefeld machinery and plants production unit is specifically investing in new machinery which will make the manufacture of large parts possible.

This includes a large turning lathe (Heyligenstaedt) and a Gantry portal milling machine which are part of an initial phase already under construction. The foundations have been poured for both machines and the 3,000 m² large workshop is being built. In the first quarter of 2008 the machines will be installed and will start production.

The portal milling machine has a mounting length of 22.5 m (74 ft), a machining width of 7 m (23 ft) and a height of 6 m (20 ft). In the future it will be used for chip-removing processes on press tables and other large parts manufactured in the Siempelkamp Foundry.

The foundation consists of a monolithic concrete block which was poured in 72 hours at the end of August 2007. It used up 6,400 m³ of concrete. To make a comparison, this much concrete would fit into 10 single family homes. The capital expenditure for this construction phase will amount to approx. 13 million euros.

Construction phase II

Planning has started for the second expansion phase. The current building complex "Lichthof" will be extended by the addition of another workshop with an area of 3,000 m².

This building will accommodate a new vertical lathe with a surface plate diameter of 16 m (52 ft). The lathe will be used to machine large workpieces, such as mill heads, manufactured by the Siempelkamp Foundry. Using the new lathe, machining processes that have been carried out by contract manufacturers up till now will soon be performed at Siempelkamp's own production facility in Krefeld. Thus, tedious

and expensive transportation to machine shops will no longer be necessary. The portal milling machine will receive a second portal.

This construction phase will require close to another 17 million euros, so that the machinery and plants division in Krefeld will have invested approx. 30 million euros by 2009. Siempelkamp will then own an exceptional machine shop for the large steel parts and castings from in-house production. With the three new machines Siempelkamp can offer a new kind of machining, which attracts attention worldwide, even for job order production.



Expansion of the molding shop (September 2007)



The new molding shop completed (November 2007)



Expansion of the molding shop for medium and large-size castings

As the worldwide leading manufacturer of casting components made of spheroidal graphite iron with a raw weight of up to 300 t (330 US tons), Siempelkamp covers close to 45% of its yearly total order value with these types of tonnages. The fact that we lead the way technologically in the areas of heavy and large castings ensures that we have expert knowledge and the best quality for the remaining production and weight areas. Castings with a piece weight of up to 50 t (55 US tons) will be produced in serial production in the new molding shop 310. Here, the performance focus is set on the energy industry as well as on mill and machine tool building.

In the course of a program change of casting tonnages with a piece weight between 32 t (35 US tons) and 46 t (50 US tons), the capacity utilization of the available molding shop rose and the extension of the molding shop followed shortly after. Thus, another construction project started which is anticipated to fit in seamlessly with the other successful construction projects of the company.

Following the completion of the recreation and management building in the spring, measures for the expansion of the molding shop for medium and large castings began. This is the second-largest single investment in the history of the Siempelkamp Foundry. Managing director Stefan Mettler says: "Through capacity expansions, our foundry wants to react to the ongoing demand in the capital goods industry and to support the expansion of our product line, which

became necessary as a result of customer demands. Our customer's confidence and trust is our main motivation for taking on the organizational work and financial risks that such projects involve."

The completion of the construction project, which commenced in April and is divided into two stages, is forecast for the end of December. The construction work achieved so far is already quite impressive.

The construction was carried out in stages in order to continue normal production. Notably, the foundry was not only able to continue normal production without noticeable losses but was also able to handle part of this year's extended order backlog already.

State-of-the-art technical equipment for the extended molding shop

It is not only the line of products under the future roof of the new molding shop that deserves attention, but also the technical equipment that will be used here.

Even though the new molding shop will continue to accommodate the old molding shop areas 311/312 and will combine several converted old products, it has received completely new technical equipment.

The extensive modernization of the new workshop equipment aims at more economic production processes as well as more relaxed working conditions for the employees.

The square footage of the new molding shop alone is one example. The shop dimensions include 1,000 m² of molding

area, 200 m² of ramming area, 300 m² of storage area as well as 620 m² of traffic area.

The creation of another molding pit area, this time with a dimension of 1,000 m², will offer another possibility for the use of universally distinguishable molding pits in the future. The new molding shop can be divided into as many as 26 pits and can thus be used with unprecedented flexibility.

A special technical highlight is the new pouring ladle transport. By using a newly implemented rail transport cart the distances for the transport of liquid iron are shortened and previously necessary work processes are eliminated. Amongst other things, the direct supply of core intensive products is guaranteed through the close proximity to the coreshop.

For all new transport routes a new crane system consisting of eight cranes was installed. A transversal run of the cranes enables accessibility to and area utilization of the entire shop.

In future, liquid iron transport will be carried out by three ladle handling cranes which can carry a load of up to 80 t (88 US tons) each.

The climate control now available inside the enclosed crane cockpits and the improved climate and sonic conditions inside the shop are worth mentioning as part of the modernization measures.

By 2008 a new pattern storage building and, next to it, a new flask storage building will be built.

The pattern storage building will be built, as demonstrated in the picture com-

position, on the extended Siempelkamp-owned land on the other side of the railway line and will be equipped with state-of-the-art storage handling technology.

The new flask storage building will replace the old one bordering the railroad line. This second investment stage will cost approximately 6 million euros and will cover a total area of 25,000 m², of which half will be taken up by the pattern storage building.

All improvements are dedicated to higher efficiency and improved working conditions. All in all, the investments clearly underline a true commitment to the Krefeld production location.



The foundation for the turning lath and the portal milling machine