Cities grow from the desert: Tapping the potential for precast in Saudi Arabia

In 2008, Faisal Abdullah Bin Saedan and his team embarked on an agreement with Elematic Oy to build a greenfield factory close to the ancient city of Riyadh in the Kingdom of Saudi Arabia. Bin Saedan has proven experience in real-estate construction and could see the growth potential for precast in the coming years.

“The market potential in Saudi Arabia for precast is booming, especially after his majesty King Abdullah Bin Abdullaziz gave the instructions to build 500,000 residential units in different areas of the Kingdom,” explains Bin Saedan, who serves as the managing director of Saudi Asateer Precast Systems.

After the agreement with Elematic was signed, the client and company spent the following year carefully designing the layout of the factory and the equipment. Once that was settled, Elematic got to work on building the equipment in accordance with the client’s needs. Installation of the equipment progressed throughout 2010 and, early this year, production commenced. The hollow-core slab machinery started running first and later the circulating line for wall production.

At 200,000 square meters, the Saudi Asateer Precast factory is now one of the biggest and most advanced in the Kingdom.

“Elematic personnel assisted Saudi Asateer in deciding where best to place the equipment in order to optimize the space,” recalls Juhani Sivenius, project manager, technical department, Elematic Oy.

In the initial stages of the project, Saudi Asateer changed the plot where it intended to build the factory, which delayed construction. “The team ended up using this extra time to its benefit in order to fine-tune the layout and to develop infrastructure solutions that maximized the facilities. Our goal was to have the most high-quality solutions and still stay within the budgeted amounts,” notes Sivenius.

From the beginning, Elematic personnel held regular meetings with the client to inform them of project developments. Elematic observed the progress of foundation construction and sent supervisors for the
erection and startup of the machinery. During installation, weekly meetings were held on the construction site. Elematic personnel also coordinated developments with personnel in the head office in Toijala, Finland by sending weekly reports that included photographs depicting the progress.

“We worked quickly during the installation phase to make sure all elements came together during the scheduled time frame,” he adds.

A wide scope of delivery

The commissioning of the project progressed in two stages. In the first stage, construction took place for the batching and mixing plant, hollow-core slab casting beds and extruders from bays 1 and 2, and concrete transportation and prestressing. The second stage was devoted to construction of the circulation line and exposed aggregate mixing plant.
"Elematic’s scope of delivery was very wide, and there were many different products. The main challenges were manufacturing and delivery within agreed time frames," says Teemu Anttila, who works as the key account manager from Elematic’s side for this project. Anttila’s main role is to take care of the customer’s needs after the project is finalized.

All totaled, the Saudi Asateer facility consists of a tower type batching and mixing plant, several concrete transportation shuttles, 12 casting beds, extruders with full-range of nozzles from 150 to 500, cutting saws, lots of supporting machinery, exposed aggregate batching and mixing plant, circulating line with Comcaster casting machines, plotter, battery molds, and a FaMeFlex magnet and side-form system. Additionally, ELiPlan ERP software keeps the entire factory running smoothly.

Understanding the client’s vision

One of the critical factors for success was the leadership skills of the client’s construction team. “The technical manager for Saudi Precast Systems had a clear vision and understood what type of factory he wanted to build,” notes Sivenius. He adds that the technical manager and the production manager were essential driving forces in moving this project to completion.

"The technical manager made sure that communication between client and company was active throughout the project. Our hope was to find solutions for all open issues quickly. This way the client can concentrate on getting the project towards the end goal without concentrating for too long on one or two problem areas that could halt progress," says Sivenius.

Quality is the critical goal

For Saudi Asateer Precast Systems, the goal was to build the highest quality precast factory possible so that it can offer end products that are better than the average that is offered by the competition. “I think we managed to provide this, thanks to the solid cooperation between all parties,” says Sivenius.
The client also agrees. “The cooperation between Elematic and Saudi Asateer went well and we had good communication. They also committed to the agreed time limit,” says Managing Director Faisal Abdullah Bin Saedan. He adds that Elematic proved their expertise in providing mechanical, electrical and automation engineering and in equipment training for the Saudi Asateer factory personnel.

“As there was a big growth in the Riyadh market, the Saedan Group wanted to ensure fluent supply of precast products to their real estate projects,” comments Key Account Manager Teemu Anttila. “We see that there is still a huge need for precast factories in Saudi Arabia, since the government is establishing a lot of big projects that will take a major part of existing factories capacity. The Saudi Asateer Precast Systems factory is a testament to how good cooperation can lead to mutual success for client and company. We look forward to working with this important client well into the future.”