

Nordimpianti System Srl, 66100 Chieti (CH), Italy

Supermix in Peru combines with Italian expertise for a solid concrete outcome

Concrete Supermix SA is part of the Cementero del Sur SA consortium which is itself part of the Grupo Gloria conglomerate, a company whose aim is to be a pivotal point of support to its customers by offering the latest technology combined with the highest professionalism. The company, because of its role in mining and major infrastructure projects at both a national and international level has always been considered a strategic partner and a winning choice for its customers. With high standards of safety, quality and respect for the environment, Supermix is a leader in the production and marketing of ready-mix concrete, aggregates, precast concrete products, and various other building products. Supermix recognized a growing trend of its customers that meant there was an increasing demand in the Peruvian market for the supply of high quality prestressed floor elements such as hollow core slabs and T-beams. In 2010 the company took an interest in prestressed concrete elements that could meet the technical requirements of the country, being that Peru is located in a seismic zone.

During this first year Nordimpianti and Supermix made their initial contacts where Nordimpianti was able to provide technical solutions and suggestions regarding future production.

In 2011 Supermix visited several exhibitions, both in South America and Europe and looked at many suppliers of machines for the production of prestressed elements. During this period the Peruvian company formed a more precise overview of the project and what they expected from a potential new supplier.

Supermix came to the conclusion that it needed a supplier that would be able to create a fully modernized production facility that was versatile, with reliable equipment and low production costs. To achieve this it also recognised the need to work with the driest concrete mix designs and using a low percentage of cement per cubic meter of concrete. From this moment it was clear to the Peruvian company that the machine it needed was the slipformer from Nordimpianti.

In 2012, a technical team from Supermix led by Álvaro la Rosa went to Sao Paulo, Brazil to visit a plant of one of Nordimpianti's customers, one of the largest in the country. The purpose of the visit was to verify on-site, the efficiency of Nordimpianti's machines and after sales support taking into account the distance between the two countries. The perfect finish of the T-beams and hollow core slabs produced by the machines, the low maintenance costs along with the good level of service, these were the tangible differences that made the Italian company really stand out. The visit was decisive and Supermix chose Nordimpianti as its strategic partner for the new production.

Having established Nordimpianti as the supplier they sent to Nordimpianti all the



View of the new production unit for prestressed concrete hollow core slabs and T-beams



The universal slipformer machine during the T-beam casting phase on the first bed. The quality of the finished product is evident.

More
than
just
tailor
made

For the production of prestressed concrete elements
NORDIMPIANTI designs and manufactures
machines and plant tailored to every customer



Manufacturing plant with fixed casting beds and movable machines that can be configured for small or large production to meet the needs of your company.



Special carousel plant with movable casting beds and fixed machinery for high output production requiring only the minimum of personnel.



Exclusive to NORDIMPIANTI the **Sf Series** Slipformer is capable of producing large **hollow core slabs** up to 1000 mm high.



The operator starts the cleaning machine to prepare the bed for the new work cycle

necessary data to carry out the design phase of the new production facilities. Nordimpianti had the task to meet the particular production parameters of the company taking into account the noteworthy geographic location of the plant. This plant is located at a height of 3600 m above sea level and gives rise to many challenges that may affect production machinery at these altitudes.

Nordimpianti's internal engineering department is well used to developing and designing machines with specific motors and components for all situations to ensure the perfect efficiency of the machines.

Supermix also requested a technical solution be found for the distribution of the concrete within the two halls of the existing plant. One batching plant and one fly bucket would have to be able to produce and

transport the concrete to two areas of the factory, one dedicated to the production of prestressed hollow core slabs and T-beams, the other for the production of railway sleepers.

For concrete distribution Nordimpianti looked to the skills of Marcantonini, another Italian company which for over 40 years has been involved in the design and supply of concrete batching plants and concrete transportation systems for the precast industry.

The collaboration of Nordimpianti and Marcantonini resulted in the supply of a semi automatic concrete distributor specially designed for Supermix. This efficient concrete distributor is able to supply concrete from the batching plant to the casting machine along the 150 m length of the



Start of production: The concrete supply bucket provided by Marcantonini discharges the first concrete batch into the slipformer machine, in this instance making T-beams.

casting beds. The batching plant is located at the centre of the building to minimise the distance to be covered by the concrete distributor. The concrete distributor is equipped with inverter controlled motors enabling it to cover all parts of the beds at speeds of up to 120 m per minute. Upon the specific request of Supermix, the concrete distributor has also been equipped with a 12.5 ton lifting winch meaning it can also be used as an overhead crane. The system can work fully automatically or manually through a remote control.

The construction of the foundations and production beds was carried out by the Yura company, itself part of the Gloria Group.



The first prestressed T-beams from Supermix ready to be shipped to the customer's site.



The wires, necessary for prestressing, all being pulled simultaneously along the bed by a cable pulling trolley.

Yura has very experienced personnel and they carried out the work to a high professional standard.

Concreto Supermix has purchased a complete plant from Nordimpianti thus creating one of the most advanced facilities in Peru, both in terms of technology and production capacity. It is able to produce about 2,200,000 linear meters of prestressed T-Beams and 300,000 square meters of hollow core slabs per year.

The machines supplied include a universal slipformer; a saw for multi angle cutting; a cable pulling trolley for pulling the stressing wires along the production bed; 10 production beds, 5 made from steel for the production of hollow core slabs and 5 made in concrete for the production of T-Beams, a multifunction bed cleaner able to clean both steel and concrete beds whilst at the same time applying detaching oil; a lifting machine to transport the manufactured elements away from the production bed thus avoiding delays if using overhead cranes and clamps.

The universal slipformer is capable of producing both 10 T-beams, each 100 x 110 mm wide per bed and also, by simply changing the forming insert of the machine, hollow core slabs up to 300 mm high. The changeover of production between the two elements is easily and speedily achieved because of the use of quick connectors.

The production of prestressed T-beams has been successfully started in September 2014 and this is the product most in demand in the Peruvian market. May 2015 will see the commissioning of a Slip-former machine for the production of hollow core slabs.

Relying on Nordimpianti has proved very successful for Supermix and Nordimpianti is now helping with the ascendancy of a new leader in the Peruvian market for the production of prestressed concrete elements. ■

FURTHER INFORMATION

nordimpianti

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