

CORE MACHINE for the INORGANIC Process for core manufacturer “Officine Meschieri”

THANKS TO RESEARCH BASED ON OPEN COLLABORATION, THE MESCHIERI COMPANY CHOSE PRIMAFOND FOR THE SUPPLY OF THE EQUIPMENT WHICH IT NEEDED TO ENHANCE ITS PRODUCTION OF CORES USING THE INORGANIC RESIN PROCESS, WHILE AT THE SAME TIME INCREASING ITS QUALITY AND PRODUCTION.

THE SUPPLIER

Primafond srl, based in Thiene in North East Italy, is a company that has always specialized in the construction and installation of core-shooting machines used in core shops and foundries, for the manufacture of sand cores in cold box, shell moulding and the inorganic process, in various types and sizes. The company is also noted for its innovative sand preparation and distribution systems as well as various pieces of equipment to work in core manufacturing. The company has also noted for its hydraulic tools dedicated to finishing castings with its wedge “breaker” devices.

Primafond's style is dynamic, innovative and flexible producing customized machinery built to the specific needs of their customers. They are considered as a reliable partner in the search for the best solutions to optimize core production. Furthermore, the characteristic family management of Primafond, is the guarantee of a company that has dedicated itself with a passion to its designs and equipment. Established in 1990, Primafond has steadily grown, establishing itself not only in Italy but also in the rest of Europe and the world as a reliable supplier for core making machines and other foundry equipment, for the smallest to the largest multinational companies.

THE CLIENT

Based in Concordia, near Modena, core manufacturer Officine Meschieri srl, is a company founded in 1956 specializing in the production of sand cores for foundries. Starting with the production of cores using shell sand (Croning Process), the Modena-based company subsequently introduced cold-box production and now the core technology based on inorganic binders. With the passage of time, today they employ almost eighty, using about forty forming machines. The service offered by Officine Meschieri Srl can be said to be complete, starting from the development of products and equipment from mathematical models and tooling to delivery of completed cores to the customer's warehouse. All stages, methodically pass through verification of the raw material, core manufacture, painting operations final product control, and packaging, all to the customers requirements.

IN CLOSE PARTNERSHIP

The size of the company is such that it can guarantee a close and constant collaboration with the main producers of its raw materials, sand, paints, adhesives, resins and additives, with the aim of identifying the best possible solution for the core manufacturing, stability in the casting process and surface finish, always with the utmost attention to environmental sustainability. Officine Meschieri, through its work in quality management systems was awarded ISO 9001 certification in 2015. This allows them to be able to guarantee their customers the control of products and processes and to trace any changes requested or introduced, by following a series of certified procedures.

With the experience gained and in collaboration with leading customers worldwide in various sectors including automotive and motorcycle manufacturers, water management companies, and hydraulic industries to name just a few, it has been able to keep up with the increasingly challenging demands of the market.

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For this reason, a few years ago, Officine Meschieri decided to equip itself with a plant specialized in the production of cores with the new inorganic binder technology, commercially known under the name of Cordis and Inotec.

As this is an innovative technology, rather delicate to manage throughout the process - from the preparation and mixing of the raw material, to the management of the mixture, to the core box filling, to the reaction, to the extraction, storage, packaging and transport, with all the sensitive phases to environmental parameters such as temperature and humidity and linked to the quality of the equipment available - the company has decided to select among the manufacturers those who could boast more experience on the process and geographical proximity to the company headquarters in case of need. Being then active as a subcontractor, serving customers with different needs and different experiences, Officine Meschieri needed a flexible, versatile machine builder with a deep knowledge of core manufacture, with availability of fast assistance if required and the availability of immediate spare parts and documentation.

Primafond's choice

Their choice fell on Primafond, as a company known to them for some time for its practical, simple and functional solutions, and who have always responded to the need of Officine Meschieri by making itself available, more as a partner than as a supplier.

Having listened to our ideas and precautions that our experience has suggested to us, with a continuous, honest and constructive comparison in exchange of ideas, similarly in a manner that we try to build with our customers.

Primafond supplied us with a machine for forming cores with inorganic binder, complete with a sand preparation system, controlled by PLC and equipped with automatic dosing systems that guarantee the precision and accuracy of the mixture recipe. The installed machine has a shooting capacity of 40 litres and can mount core boxes in both horizontal and vertical division, with dimensions up to 1000x1000 millimetres. The delivery time of the machine was not very fast, but nevertheless considered reasonable compared to the size of the company that had been sought from the beginning. According to what Officine Meschieri reported to the Fonderia Pressofusione Journal, "the installation lasted about a couple of weeks, including for testing the various control and movements as well as solving some initial problems". In fact, a minimal number of hitches must be taken into account in any new and understandably ambitious project. Primafond, overcame some critical issues thanks to the dialogue with the customer, "we were able to integrate all of the demands made, including developing the ideas proposed, while also drawing on the experience gained with the construction of the previous systems".

Troubleshooting

After the commissioning of the entire plant, Officine Meschieri commented, "Primafond continued to work with us, optimizing the machine, addressing some fine points that emerged quickly under warranty, all as was expected from a supplier of a bespoke systems".

"From the experience gained" they continued, "it convinced us to also sign a contract with Primafond for the supply of a new machine for the cold-box core production for large volumes and we are also evaluating another machine for additional inorganic binder, production."

"This should allow us to offer this technology to new customers who, up to now, have not found ease of procurement or process advice". Regarding the Primafond machines, "in conclusion we can say, they are part of a phase in the life of our company that sees us as an important reference for the cast iron and aluminium foundries in Italy and others among the largest in Europe, which recognize our quality, reliability, and resourcefulness, combined with our continuous research".