

Well of perfection

The execution of a water work for Yoga plant in Massa Lombarda (Ra) certifies the historical synergy between the Emilian manufacturer and the Bongiovanni Perforazioni company. Focus on a great customized version of MI12 drilling rig



Between two professional excellences, the point of synergy and agreement, in a sector such as that of waterwell drilling - with a long history of industrial tradition - can often be found in a machine. The long-standing partnership between Massenza Drilling Rigs and the Bongiovanni Perforazioni company, in this case history, finds its cornerstone in an exceptional machine such as the MI12 drilling rig. With this model of drilling rig, Bongiovanni Perforazioni operating team has just concluded work on site for the construction of a water well at a depth of 485 meters - with a final flow rate of 150 cubic meters per hour - for the Yoga factory in Massa Lombarda, in the province of Ravenna, sharing with Massenza the common task of meticulous supervision of the construction site and perfecting agreements with the end customer. A test of efficiency and reliability carried out right on the territory that has linked

Country specialists

Massenza Drilling Rigs and Bongiovanni Perforazioni are two Italian excellences in the field of drilling. Massenza has recently exceeded 100 years of activity, as a protagonist on the international market, established for years in the headquarters of Parola (Pr). Its authority as a European manufacturer dates back to 1921, the year of the beginning of a great technological adventure centered on drilling rigs and enlightened by constant and continuous research.

Bongiovanni Perforazioni, an entrepreneurial reality from San Giovanni in Persiceto (Bo), has been operating in the artesian well drilling sector for over 80 years. Thanks to the experience gained, to the technical and operational passion - pursued with tenacity by reliable and qualified personnel - and to the use of the most modern equipment to complete important works with a style of maximum efficiency, Bongiovanni Perforazioni has become synonymous with service blameless to protect groundwater resources.

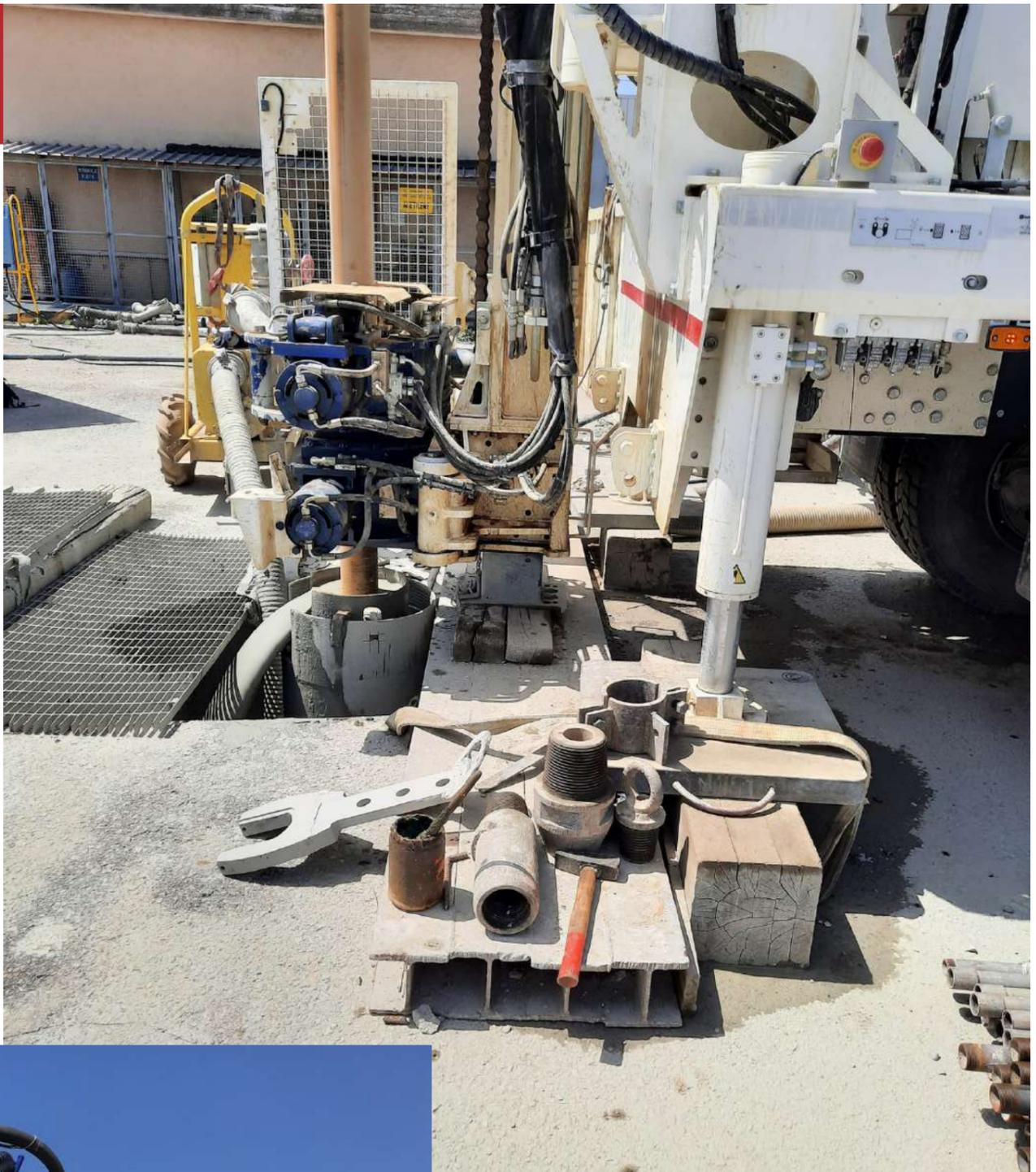
the two Emilian companies for years in a great reciprocal technical collaboration. A field test, that of Massa Lombarda, which demonstrated how a symbolic machine in the Massenza range is capable of performing the most demanding water drilling, by virtue of a versatility that makes the MI12 a perfect executor in various applications, with the ability to operate with all major drilling systems. To use it

inside the construction site, in the Yoga production site, the same drilling rig was set up by Massenza on a truck and implemented with an oversized hydraulic circuit for the rotation head and for the mud pump (driven by an independent hydraulic pump). It is equipped with a remote control (with two rechargeable batteries) to ensure total control during operation and the equipment also inclu-



des a protective cage, to ensure maximum user safety.

Worksite operators drilled the first section of the well - up to a height of 240 m - with direct mud circulation, using a 500 mm diameter tricone. This first section was then covered with SS pipe with a diameter of 355 mm, cemented to the ground level. At such a significant depth, the ground becomes "hard"; this is why, to reach the final height of 485 m, drilling continued with a bit, specially enlarged by the drilling company to a diameter of 338 mm. The terminal part of the well was made of stainless steel, with a diameter of 168 mm and a thickness of 6 mm. During the completion phase of the well, for a depth of 230 to 245 meters, cementing was carried out to close the pipe, in the terminal part, starting from the initial lining. During the entire drilling phase, a sludge treatment system was used in order to obtain a fluid that was always clean and of adequate



te viscosity, given the importance of the site and the type of terrain. To complete the work, the well was cleaned using an air lift. In all, the construction site lasted a month, and during this period of work every detail and technical component made the difference in terms of speed, effectiveness and quality of the final result. The Massenza drilling rig naturally played the leading role with the MI12 model set up, as we anticipated, on a three-axle Astra truck, whose PTO is used to operate the rig. This prerogative allowed Massenza to design a drilling rig that exactly complied with the needs required by Bongiovanni: in fact, all the components necessary on site can be found on board the machine, thus ensuring considerable operational functionality and great logistical efficiency.

This version of the MI12, designed to work with direct circulation both with mud and with air, has truly remarkable performance characteristics for a system of this size: antenna for 6 m rods with a 22-ton capacity, pulling capacity of no less than 15 tons and double vice with a passage of 410 mm - but equipped with



a system for lateral translation which allows the passage to be increased up to 600 mm. As we said, it is equipped with a remote control for total control of the drilling rig, positioned on a comfortable tripod. This ergonomic detail allowed the driller to position himself in the area with the best visibility and to shelter from the heat of July (the month designated for the start-up of the Ravenna construction site and, in this 2023, characterized by particularly high temperatures). A specific technical mention should be reserved for the automatic drill pipe loader, mounted on board complete with box: it allows you to transport 198 m of pipes directly with the drilling rig, for a system that makes change operations for these components are extremely simple, fast and safe. Once the rods on board are finished, then, the

tilting system of the rotation head allows you to continue the work effortlessly, simply by positioning the additional rods on two supports in front of the well. Other remarkable qualities of the MI12: each Massenza machine is highly customizable and, in particular, the version conceived for Bongiovanni and destined for the Ravenna shipyard was completed by a lighting system (visible in the images of this service). No component of the machine has been left to chance: the study of the Massenza technical team has opted, with regard to the operating dynamics of the machine, for a device with hydraulic drive by means of a gearmotor and chain, with high resistance to pull and push for a limit of 150 kN (15 tons). The system is equipped with a device that increases the ascent and descent speed, decreasing

drilling times and increasing productivity. The rotation head has a capacity of 22 tons and is equipped with a hydraulic device for lateral parking (for a stroke of 800 mm) and, as already mentioned, with a hydraulic device for tilting the head for frontal loading of the rods. drilling. Further technical mention for this particularly successful new project, centered on the MI12 drilling rig model: the implementation with an air compressor for purging, with a flow rate of 5,000 l/min. Extreme pièce de résistance that reveals all the design mastery of a manufacturing champion like Massenza, at the service of an entrepreneurship of the utmost importance in the area. ♦

