

Bianchi Precast Group, 43045 Fornovo di Taro (PR), Italy

Two new self-reacting production lines for prestressed beams in Poland

The company Nowostal sp z o.o was established in 2008 in Nowe Miasto nad Pilicą, Poland by the Wisnik family. Their main activities are the production of structural steel elements and prefabricated concrete elements. They provide a comprehensive service to main construction companies in Poland. They offer design, assembly, and on-site supervision of construction projects. With many years of experience, with excellent products and high-quality services, they are one of the most recognizable companies on the Polish market, with which even the largest construction companies want to cooperate.

Nowostal is a professional and reliable company with highly qualified engineers and employees with many years of experience. The high quality of their products has resulted in a rapid and dynamic development of their company. They have two plants:

- steel fabrication in Domaniewice, Poland.
- precast concrete plant in Kanice, Poland

The Precast plant

Located in Kanice, on a plot of several hectares, a main production hall of over 10,000 m², with six overhead gantry cranes and capacity to produce precast concrete elements up to 45 tons. Within this facility they produce a complete range of precast concrete elements for both the residential



Nowostal factory

and commercial markets. These elements include: foundation elements, wall panels, reinforced beams, floor slabs, stairs, balcony slabs, elevator shafts, façade panels, lintels, precast chimneys, roof girders, purlins, and lift shafts.

Towards the end of 2020 Nowostal approached Bianchi Casseforme s.r.l, through our local agent Ciepiela Technology Promotion with the interest of acquiring two pre-stressing production lines with the vision of increasing their product range to include prestressed elements. After initially propos-



First line installed



The first production run



Prestress training



Strand relaxation training

ing fixed abutments placed into large pits in the floor, the decision was taken that self-reacting structures would better suit their requirements. In early 2021 a contract was signed with Bianchi Casseforme s.r.l for the supply of these two lines. Bianchi Casseforme s.r.l is an Italian family-owned company established in 1964 active all over the world with a wide range of services and products dedicated to the precast industry and industrial building construction.

Bianchi's Supply

The pre-stressing lines

Two self-reacting steel structures with a useful length of 79 m, a maximum beam width of 900mm and a maximum load capacity of 600 Ton each. Designed with the load bearing structure placed underneath the casting surface, this reduces the



“ Since 1964 an international leader in design and implementation of customised solutions for precast concrete factories “



Rectangular beam production



Long rectangular beam production

footprint of the two lines, thus optimizing the available space within their factory. Composed of longitudinal load bearing beams, transversal beams placed at each end designed to anchor the strands in a standard regular grid pattern 50x50 mm, fixed and relaxation ends, hydraulic cylinders for the relaxation of strands with 400mm stroke and 380mm of manual placed spacers.

Accessories

Also included in the scope of Bianchi supply were: 25-ton strand jack (for both dia. 15.2mm and dia. 12.5mm) and a strand stressing pump unit with integrated stressing jack supporting arm, a strand de-tensioning pump unit which allows for the synchronized control of the four relaxation cylinders on one line and quick connect couplings to allow the same unit to be used on the second line. A strand pushing machine with double remote control able to push the strand at a speed of up to 60m/minute and two strand dispensers for the holding the strand.

Foundation design

Due to the uplift loads placed at the ends of each line, the floor had to be designed to withstand these forces. Bianchi supplied the design calculations, drawings, and reinforcement design which Nowostal then used to modify the existing floor.

After the installation and prestressed training Nowostal are now producing pre-stressed concrete elements and production is going at full speed. ■

FURTHER INFORMATION



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