

machinery & equipment

A new large-size press for composites manufactured by the Terenzio division of Persico was installed in 2009 in a Chinese plant. Kompo 2500 is a 2,500-ton press for SMC with a 4-tiebar structure; it is one of the largest presses of its kind operating in the local market.

The machine, which has an overall height of 12 metres approx., is equipped with 3000 x 2500-mm electrically-heated platens, whose control is managed in 6 independent deck zones and up to 8 zones for the moulds. The hydraulic plant is equipped with a regeneration system that is utilized in the opening phase, achieving a speed almost double that of a press without such a system.

The hydraulic plant includes 3 pressure pumps and an independent pump that handles the safety circuit and the cooling system. In this way, the oil temperature remains controlled and constant when the press is in cycle, notwithstanding the high speed resulting from the regeneration system.

The oil temperature stability pre-



serves the gaskets and all the hydraulic components and ensures greater time and speed uniformity of press movements. Even with motors off, during the pressing phase, the cooling-filtering circuit pump continues operating above 40°C. With the same aim of ensuring constant, repeatable movements, times and pressures, the hydraulic system is of the closed-loop type.

Another particularity of the press is the self-learning system for starting the closing speed profile phase. The fast closing speed occurs simply by deck dropping: obviously at a certain point, before closing the mould, the movable platen slows down and the speed and force profiles take over for a controlled mould closing.

The fast closing speed, not controlled, is influenced by external variations such as mould weight and temperature. The self-learning system operates so that the point at which the previously set speed and force profiles start are automatically controlled and corrected cycle after cycle.

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