Zhejiang Wanliyang orders fully automatic 25-MN closed-die forging press from SMS group

Fully automatic flashless forging

Zhejiang Wanliyang Transmission Co. Ltd. from Hangzhou, Zhejiang Province, China, manufacturer of high-grade gear components, has ordered a fully automatic flashless forging press for Zhejiang Wanliyang Transmission, China.
automatic closed-die forging press from SMS group. The forging press, type MP 2500, will have a press force of 25 MN and the capacity to forge up to five million parts per year. This press - Zhejiang Wanliyang’s first fully automatic closed-die forging press - will provide a significant increase in productivity and guarantee the company’s competitiveness in the long run.

The new press, which will be mainly used to produce gear wheels in a highly efficient process of up to four forming steps, is scheduled to start operation in June 2018.

Mr. Wang, Vice General Manager of Forging at Zhejiang Wanliyang: “We have chosen SMS group as plant suppliers because we think that they offer the best integrated package of mechanical and automation equipment. Our objective is to produce flashless forgings in a fully automated and resource- and cost-saving process. SMS group has offered the most suitable solution to achieve this, last but not least due to their consulting expertise and highly competent consulting specialists who understand our requirements and know how to implement those requirements in a customized engineering solution.”

The new MP 2500 closed-die forging press will feature programmable ejectors, an electrically actuated automatic walking beam system, a mechanically coupled and retractable die spraying system as well as bolster with quick change system.

The electrically actuated automatic walking beam system developed by SMS group is a technological highlight. Consisting of four individually encased drive units mounted on the outside of the press frame and safely protected against scale and other contamination, the system moves the forgings fully automatically within the press. The automatic system guarantees very finely tuned, smooth movements. This is achieved by the special design made up of highly efficient servo motors with downstream gears for each axis. The three axes of movement are horizontal transport, lifting/lowering and opening/closing. The
automatic system controls the path, speed, and acceleration or deceleration of each of the three servo axes. In order to achieve both minimum wear of the mechanical equipment and shortest cycle times, the automatic walking beam system operates based on optimized starting and deceleration ramps. By permanently reading in the ram positions of the press, the movement of the walking-beam system adjusts ideally to sequence of press movements.

Another special feature of the press is the SE spraying manipulator, arranged at the rear side of the press and designed to be swung out. This arrangement provides free access to the tool room. The SE spraying device is controlled simultaneously with and relative to the ram movements. By coupling these two processes, the inward and outward movements of the retractable nozzle holder are exactly coordinated with the ram positions and transfer movements of the walking beam in each individual case. During set-up, the spray device is operated pneumatically. For resetting and maintenance activities, the manipulator can be swung out of the press area. The spraying times for the various operations can be programmed separately.

The SMS group is a group of companies internationally active in plant construction and mechanical engineering for the steel and nonferrous metals industry. Its 14,000 employees generate sales of over EUR 3.3 bn.