When scalability and modularity simplify retrofit and/or revamping

Specialized in the design and production of transfer machines, BTB Transfer offers an additional opportunity to their customers by retrofitting and/or revamping their existing plants. This option allows the upgrade in performance and efficiency, for the best productivity and competitiveness. For this technological renewal process, features of the CNC and other products by Osai were crucial.

With more than 850 installations in 30 countries, and more than 150 customers, BTB Transfer is considered an international reference point for transfer machine design and build. Highly productive and precise rotating table systems made for chip removal of different materials (i.e. steel, aluminium, brass, cast iron etc.), used in different sectors such as automotive, plumbing, valves and fittings, hydraulic & petrochemical, household appliance & HVAC, to mention the most popular. A large and heterogeneous customer portfolio including small companies and big industrial realities, to which BTB Transfer offers an additional opportunity/retrofitting and/revamping their machines.

«*Machines that, according to specific requirements,* – says Alessandro Aletto, BTB Transfer Service Manager– *can benefit from different revamp levels. The challenge is to return scalable efficiency and performance with small investment, to make our customer's as competitive as possible*».

This happened with an 8S-15U-CN-HY NC transfer machine with horizontal axis rotating table, used for more than 20 years for the production of various thermos-sanitary brass components. The machine has 7 stations, plus 1 station for parts loading/unloading, on which there were 15 operating units. Those units managed all drilling/threading stages and grooving cycle for gasket holders, with very low cycle time.

«*Following a market analysis on products availability*– says Mr. Aletto – *we identified Osai as the best supplier, complying with our request for a flexible, scalable and modular solution, in order to guarantee high performance in the plant revamping. Moreover, price was very competitive, which is a key factor when talking about technological updates*».

For this machine equipment, Osai supplied the OPEN-XL CNC, a number of bridge modules and a 17'' touch-screen monitor.

The added value of scalability

The OPEN*control* family is made by highly scalable CNCs, based on different hardware platforms. The OPEN-XL selected by BTB Transfer can manage up to 24 processes, 12 simultaneously interpolated axes per process and a total number of 64 axes. The PCI boards implementing the fieldbus based on Ethernet, allows the management of a wide range of devices controlled by different protocols (OS-Wire, Mechatrolink III, Mechatrolink I & II, EtherCAT), in addition to auxiliary fieldbuses such as CANopen, Profibus and Modbus.

«*We decided to implement the machine using the most powerful CNC* - says Aletto – *in order to best manage all the processes involved and to guarantee the expected performances, having the added value to use the great product scalability*».

The original configuration of the machine was implemented adding 2 operating units, 10 inverters managed using EtherCAT fieldbus and a safety Plc also managed by fieldbus.

«*The first request we made was to only update the NC,* – says Aletto – *but working in progress, we realized that two new operating units had to be added (one for drilling and the other for tapping) in addition to the change of the spindles with inverter, so that the customer could set the speed. This led to a strong optimization in terms of productivity and global efficiency of the process. The update also included the safety Plc, integration that we could make quite easily*».

The Dual Core CPU of the OPEN-XL guarantees high computational power, especially for development of complex applications on multi-process machines having various axes. It is important to note that the versatile software architecture with dual O.S. (Windows CE and WES7) allows the simultaneous execution, on the same hardware, of both real-time CNC applications and generic Windows software.

«*Wiring was also very easy to be made,* – continues Aletto- *thanks to the compact 6-axis bridges, each one having 64 inputs and outputs. Here again, the configuration changed compared to the original project with only 3 bridges, and adding new units also required the need to insert an additional module. This change was possible only because the Osai system is highly scalable, an additional confirmation of the good choice made in selecting this supplier*».

Osai demonstrated they have several strong points which have been appreciated by BTB Transfer technicians, not only for product quality and scalability, but also for the availability of Osai staff in supporting BTB team in every stage of the project development.

Press info & images:

Livia Giraudo
livia.giraudo@primaelectro.com
m. +39 335 751 4948