

## **NEW COMPONENTS FOR AUTOMATIC PTA SYSTEMS ARE COMING**

The request of fully automatic hardfacing is gradually interesting also and mainly the sector of PTA coatings.

Commersald has began producing his first automatic working stations by planning a series of components able to sustain intensive cycles, while keeping the usual precision and reliability.

This issue of PTA News is fully dedicated to the introduction of some new components, to describe our project and to stimulate our readers to enter faithfully upon the way of automation, sure to find in Commersald a reliable partner.

We are aware that there are many possible solution for a production problem. From our side, we pay the utmost attention to the research and to the production of reliable and cheap components.

### **Antropomorphous enslavement robot**

To load and unload the workpieces from the welding station or from the heating one, Commersald employs antropomorphous robots of the best brands.

This enslavement offers the advantage to place quickly and precisely the workpiece in the various work stations.

The couple of a cartesian robot (to move the torch and the workpiece during welding) and an antropomorphous enslavement robot, eventually of the brand requested by the customer, is the best solution for the favourable price / performace ratio and for the quick after sale service.



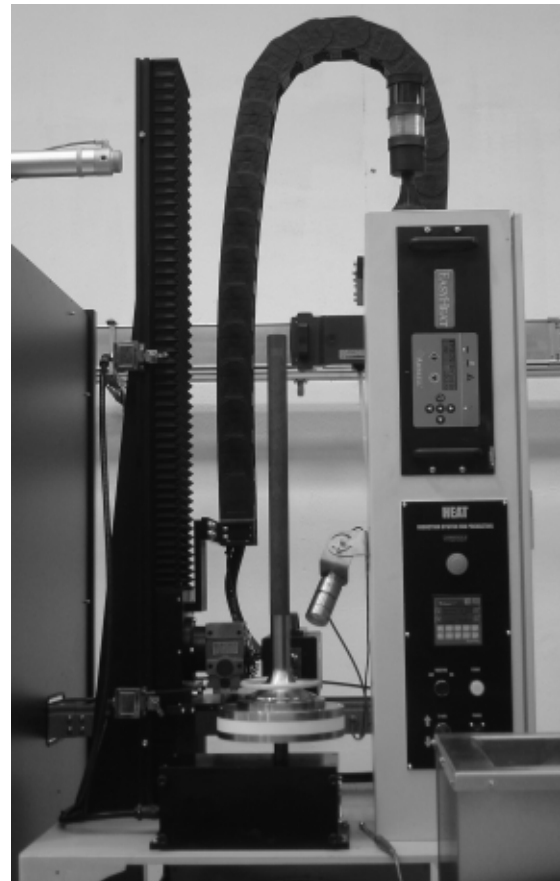
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## PREHEATING BEFORE WELDING

The range of our systems of induction preheating has been completed with some models born especially for automatic working islands.

We added an optical pyrometer to read and manage the temperature.

The piece-holding area has been insulated from the electric and mechanical components below by means of ceramic inserts in the structure, to avoid the transmission of heat and of electric disturbs.



## OPTICAL PYROMETERS

They are used to record the temp difference between the beginning and the end of the heating cycle.

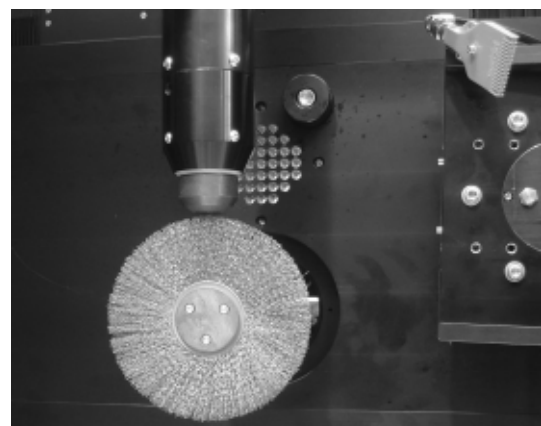
The precision of such instruments allows an immediate action in case of irregular temperature of the workpiece, informing the operator and/or stopping the automatic cycle.

## Automatic system for torch cleaning

One of the limits of the automatic PTA process consists of the need to keep the torch cleaned from the dispersed powder.

To avoid stopping the working cycle, this operation is done during the dead time, by means of a simple but effective system: a path of the torch is programmed in the software, with pilot arc switched on, passing on a rotating brush.

The brush comes out from the machine body and it begins rotating at the right time; after the cleaning the brush goes back into its seating.





## LOAD CELLS

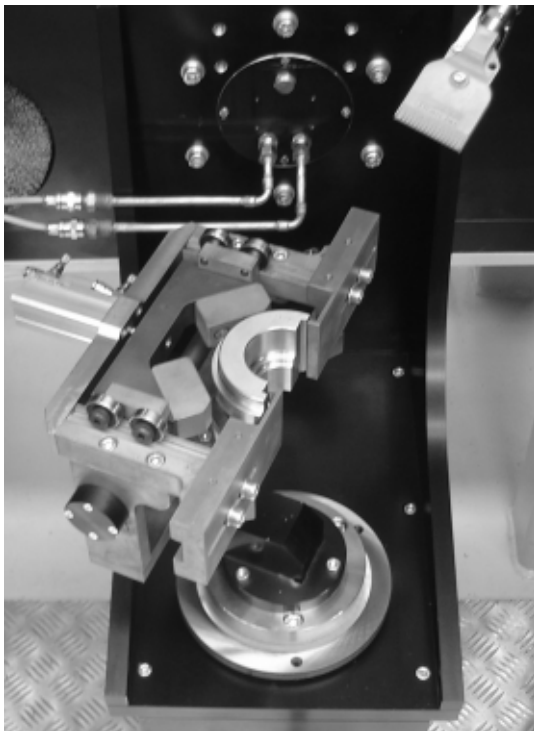
The load cells are inserted in the working island to record the weight of the workpiece before and after welding. This parameter identifies most part of the anomalies of the process. In case of variance from the set parameters, the operator is informed or the cycle is stopped as well.

## CLEANING SYSTEM

The oily residuals of the mechanical works, if not well removed, may cause defects in the welding, whatever welding process is used.

To avoid this inconvenience, usually the operator works manually, cleaning strongly the workpieces before welding.

Commersald offers an automatic system with the immersion of the workpiece in a ultrasonic tank with degreasing liquid and a subsequent drying with compressed air.



## JIGS

When the pick and place of the workpiece is automatic, we complete our welding stations with pneumatic jigs of high precision, eventually with cooled basement.

The jigs must be often cleaned from the welding powder, to avoid interferences in the positioning. The cleaning is done automatically by means of an air blast.

## POWDER FEEDERS

Commersald offers different types of powder feeders, depending on the kind of job and on the requested delivery. Each feeder is set to obtain a constant powder flux, whatever is the powder level in the tank.

The tank can have different capacities, depending on the working cycle, to reduce the stops due to the exhaustion of the powder.

