



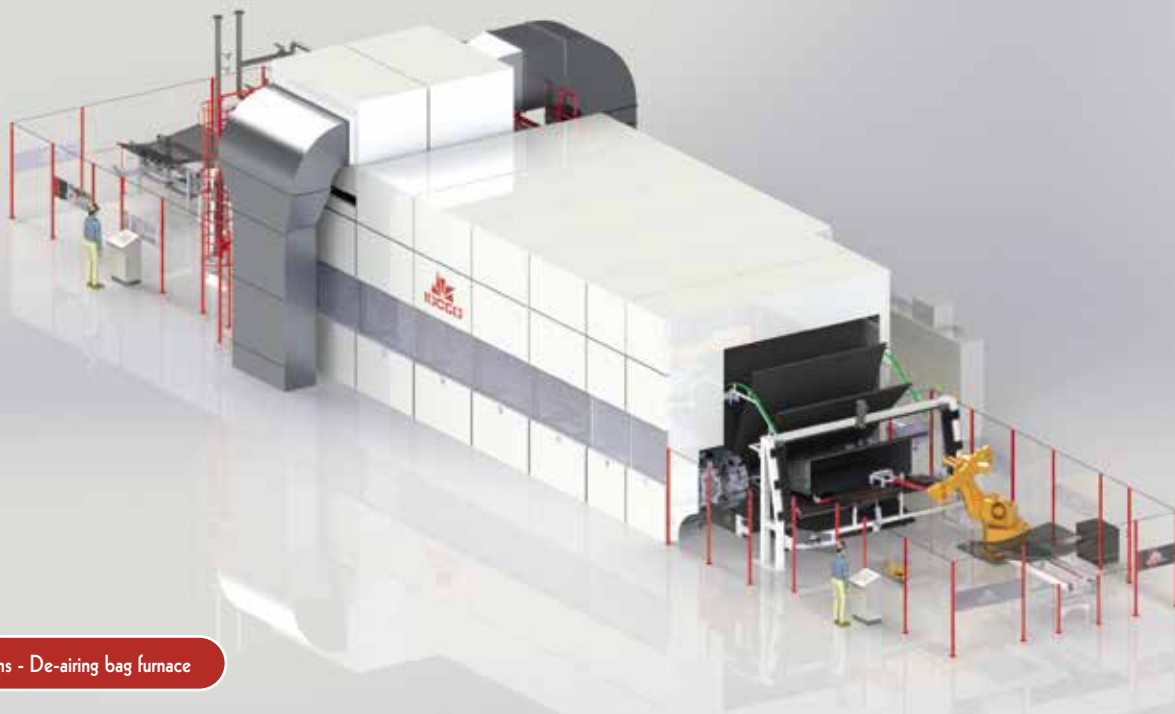
# IOCCO further increases its capability with additional production unit and offices



IOCCO's new production unit, composed of three spans, has been optimized to realize up to three de-airing bag furnaces simultaneously. The new plant, located in front of the other plant in Cupello, along with the plant located in Vasto, gives IOCCO a total production area of 17,000 sq.m. This growth enables the company to manage different big projects, such as complete lines for AVO or automatic lamination process for automotive glass and de-airing bag furnaces. The space available inside the separate locations allows to work with different customers simultaneously and for each project to be carried out individually.

## THE SOLUTION FOR A FLEXIBLE PRODUCTION OF LAMINATED AUTOMOTIVE GLASS

Automotive glass industry requires more and more dynamic processes able to optimize change over to other glass models then to achieve reduction of production costs. The lamination process in the automotive glass industry is a bottle neck because of conventional processes; and this is why most automotive glass makers are using IOCCO's innovative de-airing bag furnace systems, which allow model changes without any interruption of the process, obtaining a flexible production



Deairing systeyms - De-airing bag furnace

like never before in the automotive glass industry. IOCCO's R&D has updated the previous de-airing bag furnaces in order to reach the first de-airing system in the world able to process Windshields, Side-light glass and Sunroofs produced with ultra-thin glass and multilayers such as PVB-PDLC-SPD-XIR. The automation and control section has been completely redesigned with numerous implementations; the new system now allows easy management (user friendly) in the face of more complex software that manages the process. The monitoring system therefore allows all the process phases, vacuum values and temperatures on each glass produced to react to possible anomalies and guarantee continuous and quality production.

## Industry 4.0

### TO OPTIMIZE PRODUCTION

Good process control is the basis of competitiveness, both based on product qual-

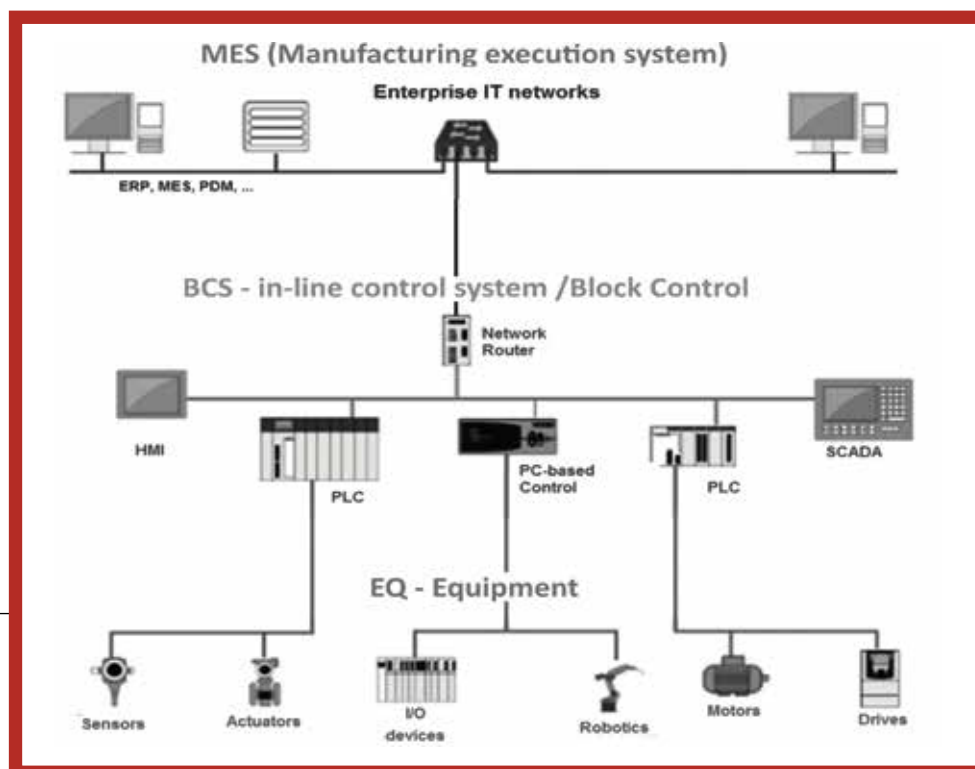
ity and production capacity. Understanding and managing the progress of the process data coming from the field is fundamental. IOCCO's team has developed the ability to select and process only its own data with the continuous implementation of a structural software standard that includes all the installed devices. Particular attention is paid to continuous information and training on the new systems offered by the market both in terms of sensors and actuators and PLC,

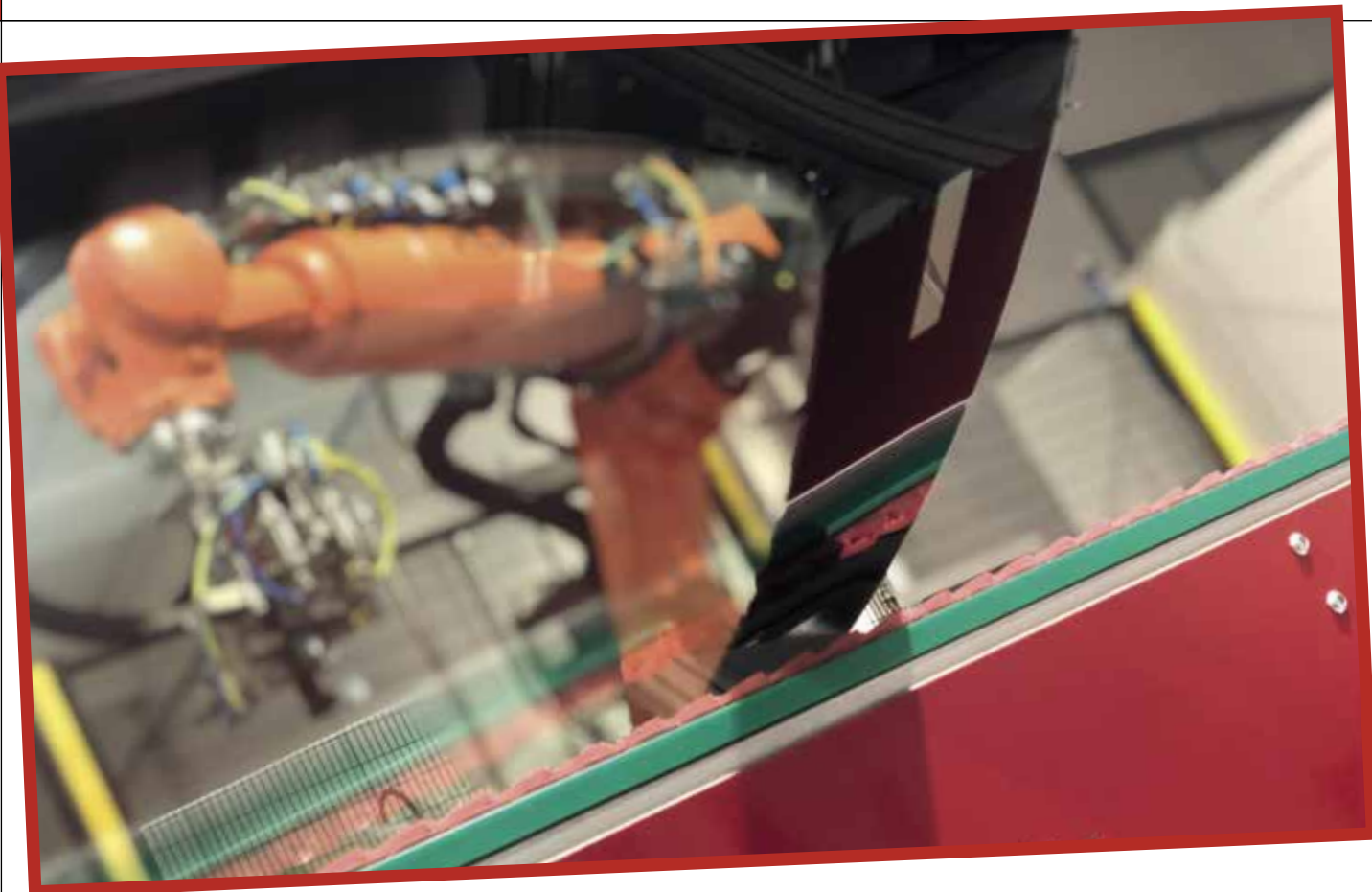
Robot, Vision, human/machine interface (HMI) and PC-based systems. Moreover, remote connection enables IOCCO technicians to intervene when needed, wherever the machine is located in the world, guaranteeing imme-

diante assistance. The system to collect production data helps the use and predicts maintenance assuring constant production running, resulting in prompt aftersales service, also by means of augmented reality systems.



Maintenance support via augmented reality system





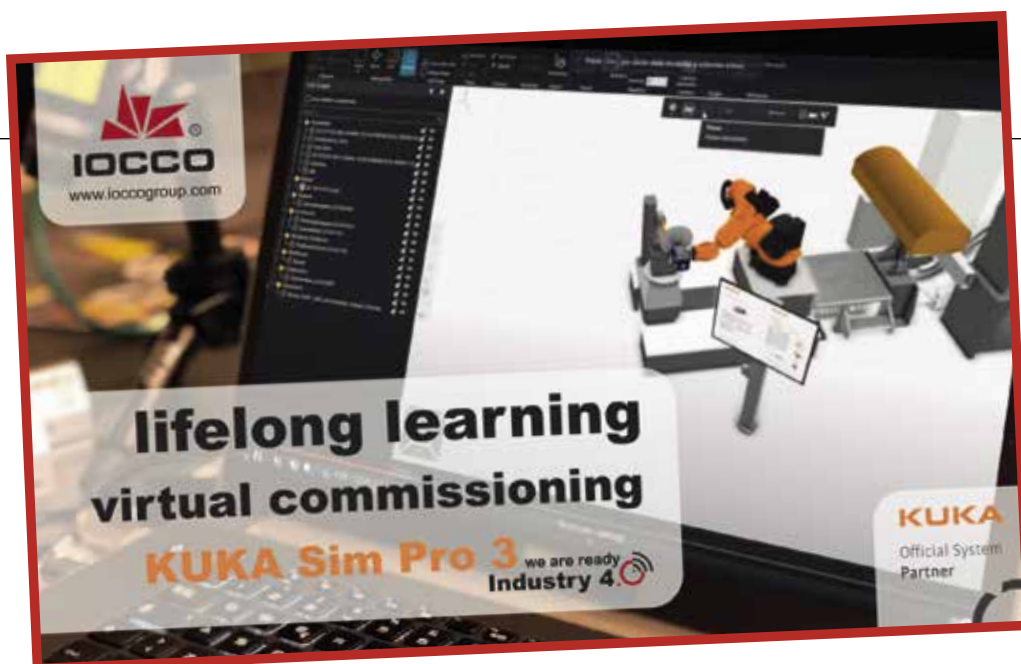
### ADDED-VALUE OPERATIONS LINES AND MACHINES FOR THE AUTOMOTIVE GLASS SECTOR

All operations performed on naked glass to get glass ready to be assembled on cars requires state-of-the-art solutions made by expert engineering used to realize such complex lines. IOCCO adopts the latest technologies available on the market to enable customers to monitor production in real time, reduce failures and downtime, optimize plant availability and production, and plan maintenance.

Sometimes, more than one of the processes listed below can be combined in the same line:

- Bright finisher assembly
- Centring pin and spacer assembly
- Long life primer application
- Polyurethane extrusion on periphery areas
- Seal, bond on lace and finisher assembly
- Alarm, fax, antenna, heating circuit connector assembly
- Grommet assembly
- Assembly and gluing of various accessories (bars, centring pins, spacers,...)
- Polyurethane extrusion on glass periphery
- Bracket/pin application supporting various devices
- Seal, bond on lace and finisher assembly
- Long life primer application
- Mirror boss assembly





- Centring pin and spacer assembly
- Holder application
- Spacer application
- Encapsulation (PU, TPE, PVC)

IOCCO's engineering team is involved with customers directly during feasibility studies to obtain suitable solutions for the complete set of auto glass.

## ENGINEERING OFFICES IN PESCARA

For very complex projects, IOCCO also collaborates with research centres and leading Italian universities. For this reason, additional technical offices and meeting rooms have been inaugurated near Pescara airport. The company also has an-

other engineering office in Pescara, which has a strategic location to arrange meetings with customers arriving from abroad because of its closeness to Abruzzo airport.

## VIRTUAL COMMISSIONING TO PREVIEW CRITICAL PATHS

Virtual commissioning is a fundamental tool for sharing and analyzing systems before their implementation. Virtual commissioning provides a solution for the movement of a significant portion of commissioning tasks to an earlier phase of the project, and therefore no longer near the critical path. In virtual commissioning, a simula-

tion model of the system is created to replace the real factory. The virtual factory is then connected to the real control system, so that the simulation can be used simultaneously with procurement and assembly to verify the design and test the control system. This allows for quicker detection of possible errors.

## NEW TECHNOLOGY IMPLEMENTATION IN PRE-ACCEPTANCE TESTS

The covid period pushed IOCCO to use new technologies to allow the virtual presence of customers during the pre-acceptance test phase. Various video systems have been adopted, such as 360° and Drones, technologies with the aim

to guarantee full operation and reliability.

Checks proved to be more effective and in-depth, and all technological areas – not normally reachable in physical presence – are acquired by the video systems in complete safety.

In addition, and thanks to these methods, all operating parameters, in terms of flow rate, quality and safety, can be better checked in detail. This advanced procedure to carry out the validation phases of project is currently a IOCCO standard procedure.



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