

PYVISION-WINDOWS



**SYSTEM FOR PLACING OF
AUTOMOBILE WINDOWPANES**

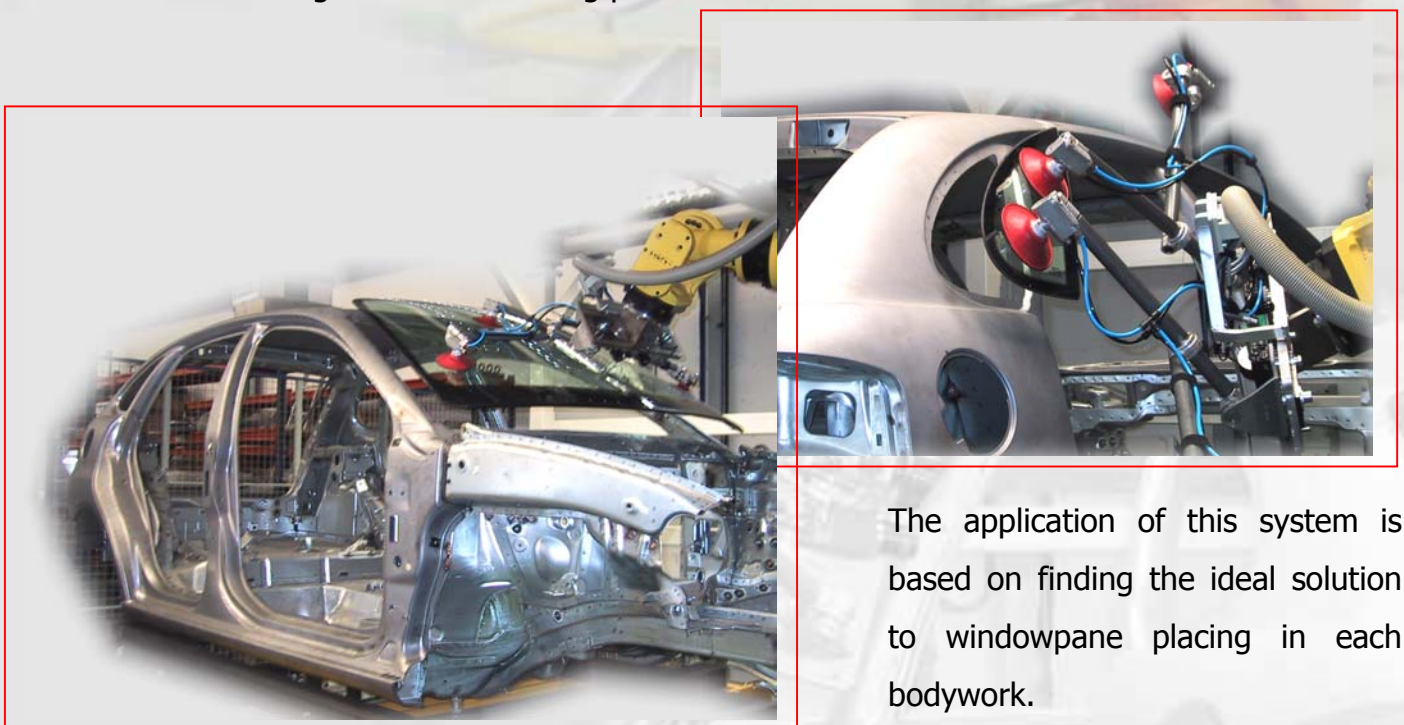
AUTOMATIC ROBOTISED SYSTEM FOR PLACING OF WINDSCREENS, SIDE- AND REAR WINDOW PANES OF THE AUTOMOBILE THROUGH ARTIFICIAL VISION

PYVISION-WINDOWS, is an application able to obtain the exact position of specific points of the bodywork through artificial vision, for the following placing of the windscreens, side- and rear window panes of automobiles.

The technique for the window placing, is the correction of the nearing trajectory of the robot at the moment of placing the window. This trajectory has been previously programmed and PYVISION-WINDOWS will measure the coming bodyworks and will determine the correction that has to be made by the robot in order to place the window panes correctly

The application will correct the trajectory depending on:

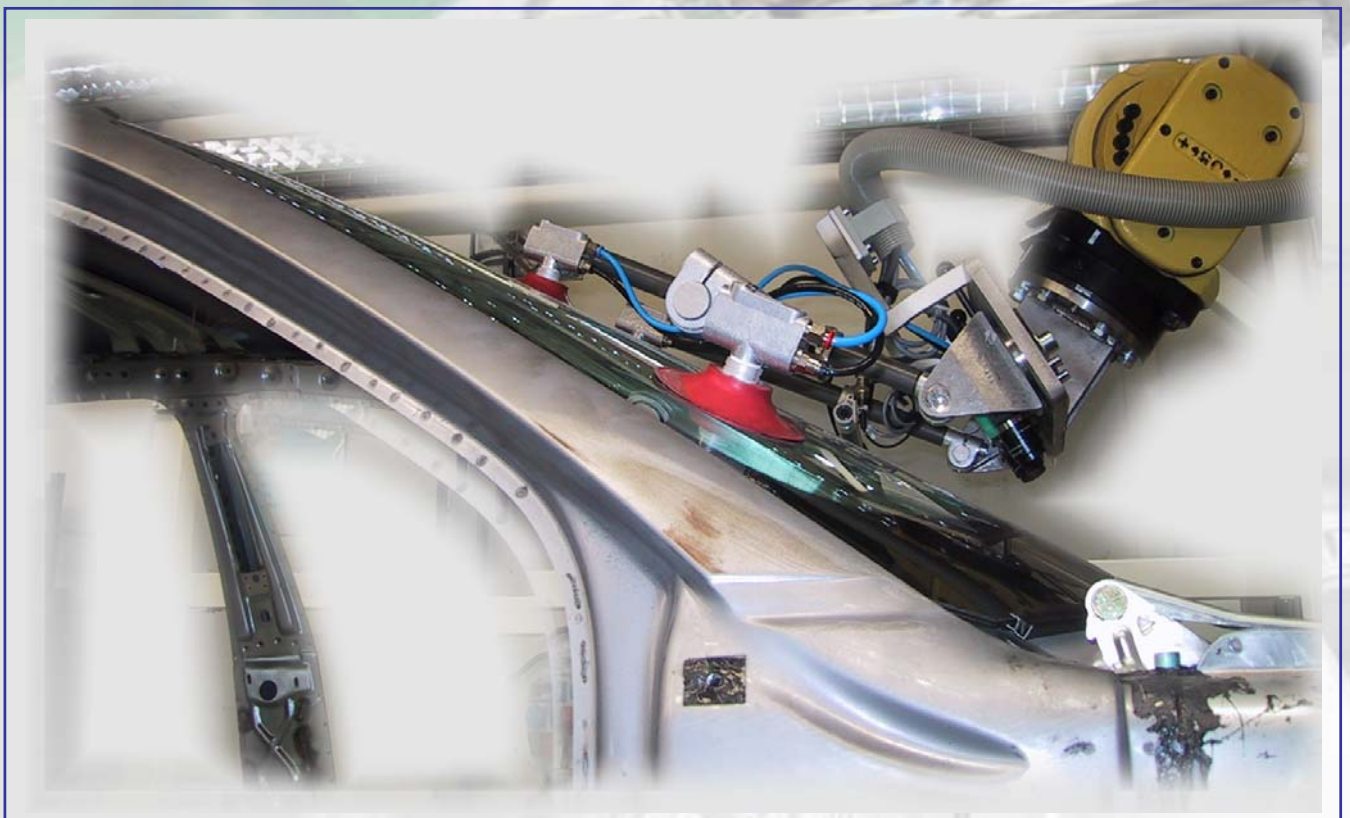
- The possible bodywork displacement at the moment of placing the windows.
- The possible de-formation suffered by the windowpane during the manufacturing process.



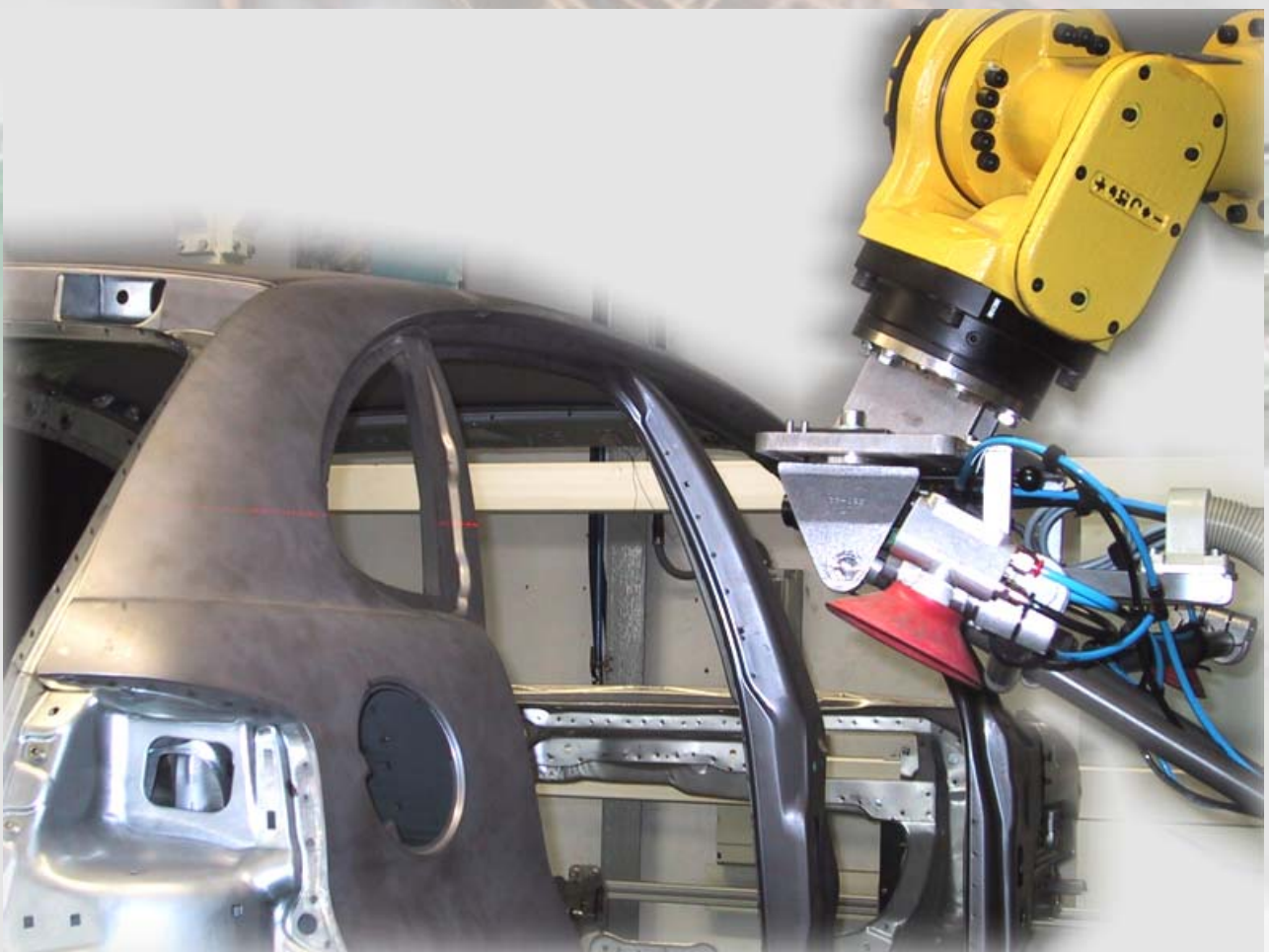
The application of this system is based on finding the ideal solution to windowpane placing in each bodywork.

Improving the applications based on the coordinates' displacement depending on statistics, this is a system of absolute measuring and correction related to the obtained measuring values of each individual bodywork.

PYVISION-WINDOWS is a system of stereoscopic vision, able to represent and reconstruct the coordinates of various parts of the automobile in tridimensional space. The vision system may be embedded in a 6-axis robot, next to the tool that holds the window pane. An eye-hand gauging process allows the vision system to be part of the robot's cnetics and to represent the measured values in the coordinates (world) of the Robot.



PIVISION-WINDOWS is equipped with a laser beam that is projected on the surface of the bodywork to obtain, in this way, various measuring values of the exact location of the window pane, and through a reconstruction technique in 3D, the exact outline of the windowpane.



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