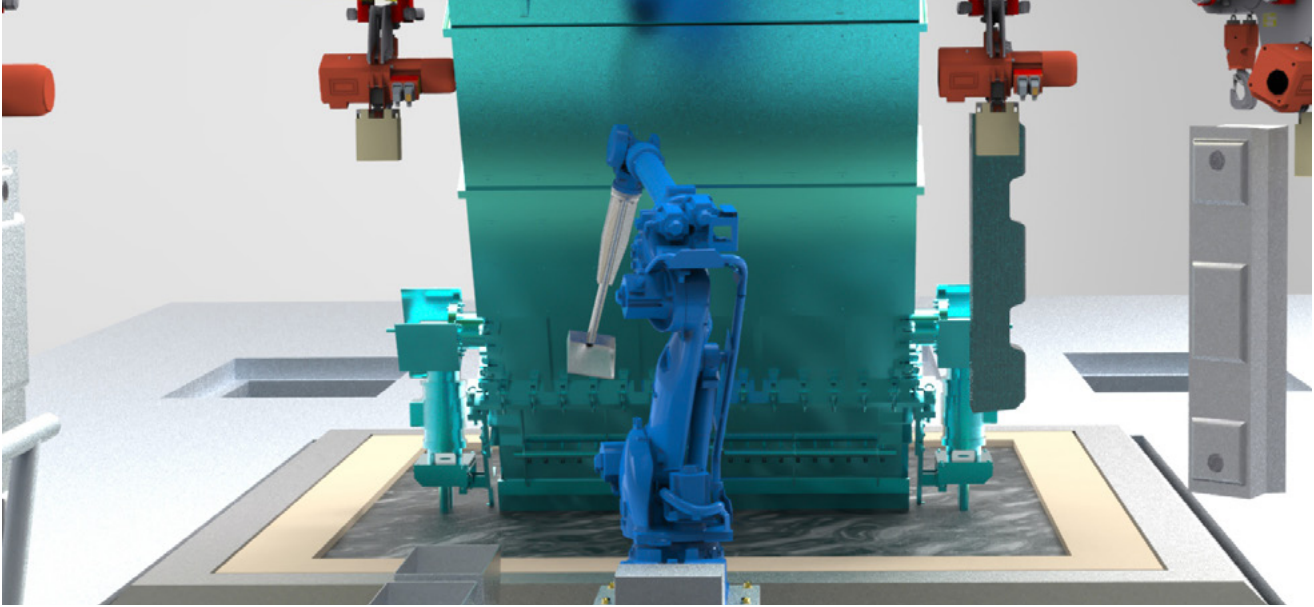




Dross Removal Robot

Improved melt bath cleanliness
in safe operation

Dross removal and sampling robot for Galvanizing Lines.



The robot design is compatible with most of the bath configurations

YOUR CHALLENGE

The melt bath is at the heart of the coating process, the quality of the final product being directly affected by the condition of the bath which is under the permanent surveillance of the operators. The presence of dross needs particular attention and dross skimming operations are regularly conducted to reach the highest coating quality. These operations are a very physical job that could be dangerous due to the bath.

OUR SOLUTION

Safety: The coating pot is one of the most hazardous areas considering the limited space available, the hot temperature, the high noise level and the possible liquid splash. This is an area where any mistake could lead to a major injury.

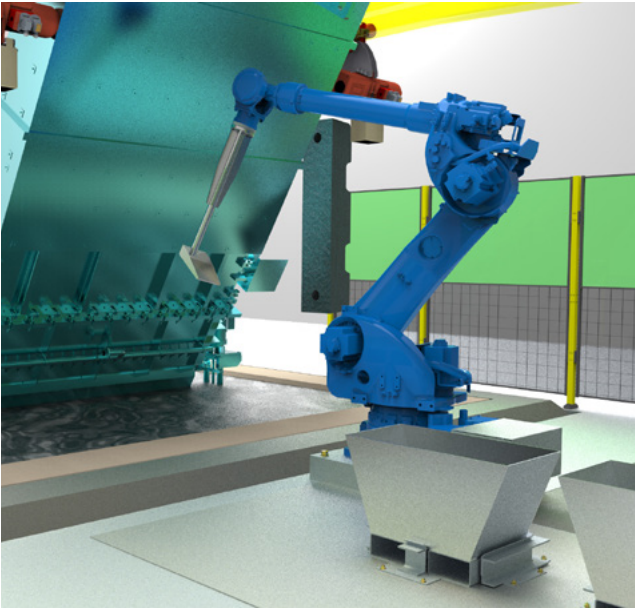
Furthermore, analysis performed by the University of Michigan on pot-skimming jobs indicates that the biomechanical demands on the musculoskeletal system are beyond the capabilities of many workers.

Due to safety regulations, operators are kept at a safe distance in modern lines thanks to safety protection fences. Bath management in the pot area is performed automatically by a robot equipped with various and dedicated tools.

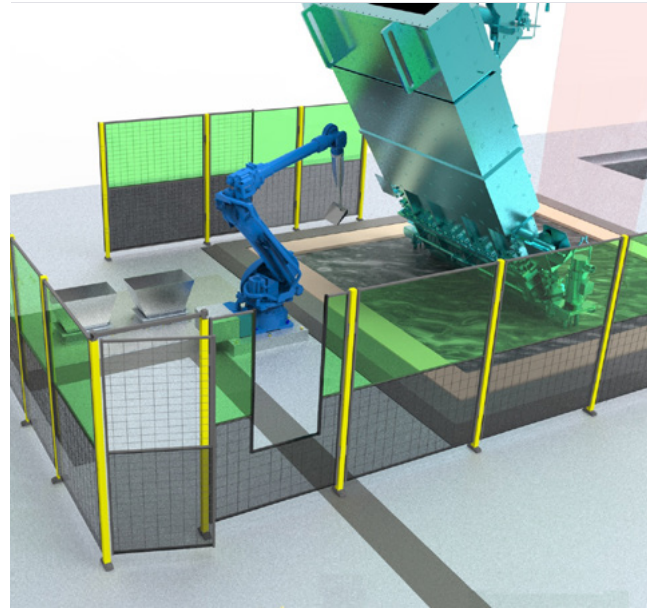
Quality: Dross formation in the bath has been carefully studied and the dross robot has been implemented in our overall solutions to manage the bath area.

Based on the final product requirements and the dross formation, our solution is dynamically integrated in line with the process parameters [closed-loop control with continuous quality measurement].

Appropriate, precise and smooth motions of the robot minimize the disturbances of the bath and therefore improve the strip surface quality. An automatic tool changer allows the robot to perform multiple operations such as dross skimming and bath composition sampling.



Dross evacuation managed with a container



Integrated design including a safe environment

User-friendly:

- Our solution is designed to be highly flexible and seamlessly adapted to existing bath configurations
- Specific sequences are scheduled to start automatically or are launched at anytime by the operator using a HMI interface
- For maintenance operations, manual control remains possible by a mobile panel

Saving:

- State-of-the-art management of the dross skimming (frequency, area, tool) limits dross formation
- Efficient drip control during dross removal also minimizes waste of material

Mechatronic package:

- Combination of mechanical, electrical and automation equipment for optimized functionality

Workshop:

- Our solution is assembled and tested in our workshop in Montbrison, France. All individual movements, safety functions and sequences are validated to perform a faster commissioning on site

Revamping:

- The Dross Removal Robot is engineered to be easily and quickly installed as new equipment for revamping projects and fast implementation, leading to quick ROI

Main benefits.

- Limit heavy duty handling for operators
- Safer environment for operators
- Design for user friendly operation
- Improve bath surface for higher strip quality
- Minimizes waste of coating material



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