

Remote Factory

Automation reduces factory step cycle time by 30%.

The Remote Factory solution brings automation into the final factory step of electron microscopy production and saves floor space thanks to the remote control of the microscope PC from a web app.



Key features of the product or service:

Remote Factory represents a new way of working in production. Our goal is for people to do only those tasks that a computer is not good enough for. The machines do not get tired; they can work overnight and on weekends. At the same time, thanks to automation and location solutions, we can deliver more microscopes from the same production area.

Product or service advantages

- Calibration of an image of tin balls acquired with a Scanning Electron Microscope was originally done by humans. Automation supported by computer vision algorithms avoids human eye imperfections.
- Automatic steps are connected to each other into a long process, and thanks to automation reliability, we can control them remotely.
- We can set up almost the entire electron tube automatically, which saves us about a week of work on each instrument.

Technical specifications and product details

- React web application for the dashboard. Access to microscope PC via Guacamole remote desktop. Business logic implemented in Python backend.

References

Initial deployment in 2023 in one finalization room of Thermo Fisher factory in Brno. Additional factory rooms / microscope models in 2024. Plans for further deployments.

Contact Information

<https://mymicroscope.thermofisher.com>