Programming of Collaborative Robot (Cobot) to Selectively Disassemble Products to Obtain Critical Materials

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Technical Approach, Accomplishments and Results

A virtual collaborative robot cell was created in the ROBOGUIDE program by FANUC.
- CR-4iA collaborative robot (Figure 1)
- Design of workcell setup based on Figure 4
- Simulation created using workcell
  - To model real robotic movements and possible collisions with workstation, part, or human
- Trajectory pulled from simulation
  - Models a screw being removed and discarded

References

[4] Critical Materials Institute, Oak Ridge National Laboratory, ‘Recycling and Reuse of Salvaged Automobiles and Electric Machines’

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