



# CASE STUDY

Automated Copper Cathode  
Handling System



# TABLE OF CONTENT

TABLE OF CONTENT	2
PROJECT OVERVIEW	3
CLIENT	3
PROJECT SCOPE	3
SOLUTION	4
IMPLEMENTATION	4
RESULTS	5
CONCLUSION	6

## PROJECT OVERVIEW

A leading copper mining company, faced significant inefficiencies and high labor costs associated with the manual washing, grading, and strapping of copper cathodes in their patio. To address these challenges, the client partnered with EPCM Group for a Build, Own, Operate, and Maintain (BOOM) project, implementing an automated solution to streamline their copper cathode handling process.

### CLIENT

International company in the mining industry

## PROJECT SCOPE

EPCM Group was tasked with designing, supplying, and maintaining an automated system comprising six robotic cells to handle various stages of copper cathode processing.

The system was required to:

- Unbundle copper cathodes.
- Vision grade the cathodes.
- Wash cathodes contaminated with organic material.
- Rebundle and strap the copper cathodes.

## SOLUTION

EPCM Group provided a comprehensive BOOM solution that included:

### Design

- Customization of robotic cells to meet specific operational needs.

### Supply

- Provision of state-of-the-art robotic equipment and necessary infrastructure.

### Operation

- Continuous operation of the system to ensure optimal performance.

### Maintenance

- Ongoing maintenance to ensure reliability and longevity of the system.

## IMPLEMENTATION

The automated system was installed and commissioned at the client site, with the following key components:

### Robotic Cells

- Six robotic cells were integrated into the existing production line. Each cell was equipped with advanced vision systems to accurately grade the copper cathodes.

### Washing Unit

- A dedicated washing unit was installed to clean cathodes contaminated with organic material, ensuring high-quality output.

### Rebundling and Strapping Unit

- Automated rebundling and strapping mechanisms were implemented to enhance efficiency and safety.

## RESULTS

Over the past six years, the automated system has delivered significant benefits to the client:

### Increased Efficiency

- The automated process reduced the time required for washing, grading, and strapping cathodes, leading to higher throughput.

### Cost Savings

- Automation significantly lowered labor costs and minimized manual intervention, reducing the risk of human error.

### Consistent Quality

- The vision grading system ensured uniformity and high quality of the final product.

### Sustainability

- The washing unit effectively removed contaminants, contributing to sustainable production practices.

## CONCLUSION

The BOOM project executed by EPCM Group has transformed the copper cathode handling process. The successful implementation of the automated system has not only improved operational efficiency and reduced costs but also ensured consistent product quality and sustainable practices. This project stands as a testament to EPCM Group's commitment to delivering innovative and effective solutions to its clients.

## CONTACT

905-829-1711  
INFO@EPCM.COM  
870 EQUESTRIAN COURT -  
OAKVILLE, ON L6L 6L7 CANADA