

case study

Bespoke process equipment for world leading coin blank security feature

Forgery poses significant risks to both companies and the broader economy.

To combat this issue, a distinctive security feature was essential for one of the globe's most well-known electroplated coins.

Any developed solution must be challenging to replicate and inherently tied to the electroplating process it utilizes.

Leveraging my extensive experience in Industrial Process Engineering, coupled with strong leadership skills and training in world-class project management methodologies, I successfully provided innovative solutions that met these requirements while adhering to best practices and maintaining rigorous engineering compliance.



CHALLENGES

- No “off the shelf” solution

A product was available that we could potentially integrate into the electroplating process, but it had never been tried before. This called for genuine “out-of-the-box” thinking.

- Compliance

Incorporating potentially hazardous processes in an Upper Tier COMAH site, the plant necessitated thorough engineering compliance review during the design phase.

- Limited third party interest

Due to the intricate and innovative nature of the process, it was difficult to find anyone in the global arena willing to take on such an ambitious project.

APPROACH

- Identify a knowledgeable design partner for industrial process equipment.
- Use design strategies such as Hazard Studies, LOPA, Risk Assessments, and Engineering Compliance Reviews.
- Showcase strong, client-focused project and program management through effective leadership.
- Conduct extensive prototyping trials to find the optimal approach.
- Apply project management methodologies to ensure quality, budget, and timeline compliance.

RESULTS

- **Skid mounted bolt-on solution**

Through thorough prototyping, rigorous testing, and careful design evaluation, a skid-based equipment module was developed to integrate the security feature into the electrolyte, thereby enhancing the product.

- **Interchangeable Processes**

The system was created to facilitate a seamless transition between the traditional electroplating process and the associated security feature process, making it an exceptionally sustainable approach.

- **Safe Plant Operation**

Thanks to robust design tools, the plant received approval from relevant authorities, confirming its suitability for operation in an upper-tier COMAH site.

- **Proven Effectiveness**

The plants operated for over a decade without experiencing any significant incidents or operational losses.

CONCLUSION

With a dedication to project and operational excellence, alongside effective compliance management and design optimization techniques, the plant was successfully completed. It provided the quality deliverables outlined in the business case, showcasing our capability to tackle even the most intricate process challenges.