RAMTECH

Scan to Model for Critical Energy Assets

Building Information Modeling (BIM)

AT A GLANCE

CLIENT CHALLENGES

- The accuracy of the BIM model was critical to enable the management and upgrade of the assets in a phased manner
- Ensure the tolerance between model elements and scanned data is detected
- Integrate into a signal 3D model from multiple data sources

CLIENT BENEFITS

- Significant cost savings were achieved on their asset refurbishment and expansion plans
- Ability to achieve a reality view model

Business Need

The client was engaged to provide an intelligent 3D model of existing storage terminals, which would eventually be used by the owner of the asset to take informed refurbishment and expansion decisions. Using state-of-the-art modeling techniques, RAMTeCH provided our client with a full set of 3D models. The aim of the project was to develop a 3D BIM model from scanned data with mechanical and structural disciplines integrated into a single model.

RAMTeCH Solution

The first stage involved checking all the relevant data received such as inserting the point cloud data into Revit and cross-checking the units, levels, and origins. The 3D modeling process commenced with a purview of the LOD 300/350 level of development.

Post-modeling, the quality check process involved creating sections, plans, and 3D views to detect the tolerance between model elements and scan data.

The coordination process was carried out using Naviswork Manage. All the clashes in the model were identified and a clash detection report was generated. Based on our past experience and client recommendations, a complete clash resolution was achieved.

Once the model was clash-free, finishes and materials for all elements as per the original site conditions were added to make the model photo-realistic. 'Enscape' as a software tool was used to check in reality view.

Results

A high-quality, completely clash-free, and realistic model was provided to the client as a final deliverable.