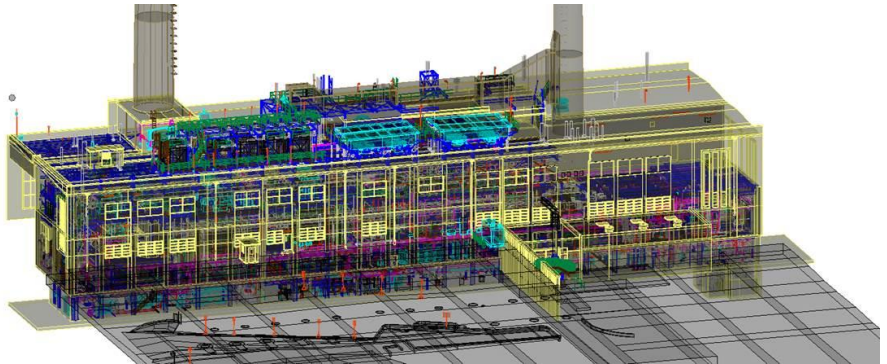


3D Laser Scanning a Power Plant

1,200 Scans of Accurate Data Captured in this 5-Level Building to Create a 3D Model



Due to the vast space and density of piping, it would have been difficult and time consuming to accurately depict the location of pipe runs, structural features and other details in the plant manually.

Task: TruePoint provided 3D laser scanning and modeling services for a Power Plant in Ann Arbor, Michigan, which generates and processes four main services: steam, electricity, compressed air and domestic hot water. The objective was to as-built survey the 5-level building, basement, exterior facades, rooftop areas, electrical switch gear rooms, vaults and interstitial space below the control room. TruePoint generated a 3D model in Bentley Microstation for the client's use. The model included all civil, structural, electrical and mechanical features, including piping and conduits ½" in diameter and larger.

Challenge: The client needed to accurately document existing conditions. Due to the vast space and density of piping, it would have been much more difficult and time consuming to accurately depict the location of pipe runs, structural features and other details in the plant manually. It would have also been difficult and unsafe to capture

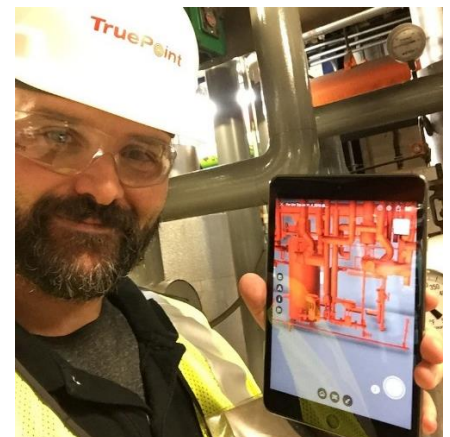
overhead and structural features without the use of a lift.

Solutions: Utilizing several scan technicians and multiple Leica laser scanners, including the Leica P-40, P-20, and C-10 ScanStation, TruePoint was able to occupy existing plant benchmarks and orient the data to survey control. TruePoint's scan technicians captured full color panoramic photographs at each scan location with the on-board camera. TruePoint completed over 1,200 individual scans for this project due to the density of the piping.

Deliverables: TruePoint's team of in-house CAD technicians provided Microstation POD files, full-color TruViews and a Bentley Microstation V8i 3D model.

Added Value: TruePoint communicated directly with on-site personnel at the Power Plant and participated in daily work briefings to ensure compliance with plant safety protocol.

Location: Ann Arbor, Michigan



TruePoint's CAD technician visited the site utilizing cutting edge methods to conduct in-field verification and quality assurance review of the 3D model on tablets in real time using both virtual reality and augmented reality methods.

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