

Mit EdgeWise Plant reduzierte Stantec die Modellierungszeit einer komplexen Kohlekraftwerk-Aufrüstung um mehr als 50%

Goal: Deliver accurate, as-built CAD model of a 14 story coal plant on a very tight deadline

EdgeWise Benefits:

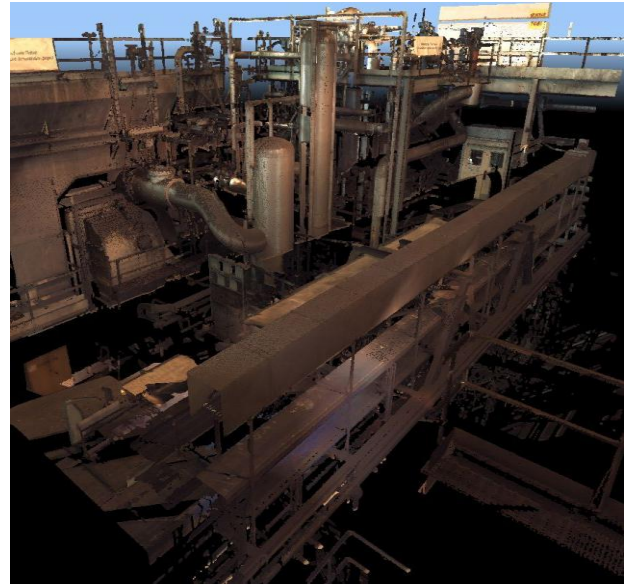
Reduced modeling man-hours by more than 50% and allowed Stantec to meet the client deadline

Hardware/Software Used

- 2 Faro Photon 120 laser scanners
- EdgeWise Plant 2.0
- AutoCAD

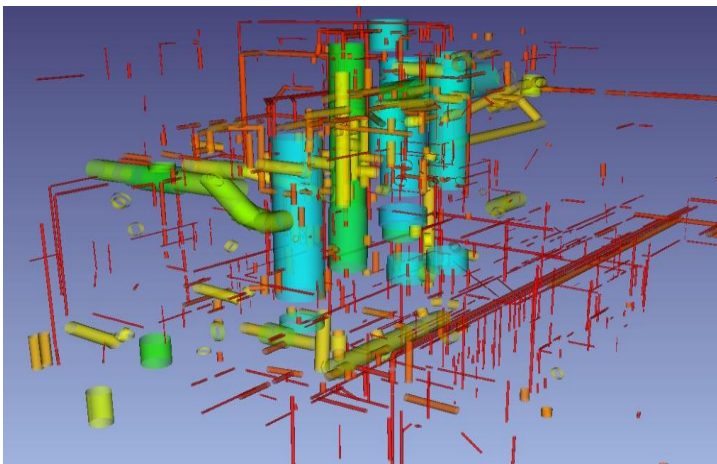
Außeneinsatz: Es wurden zwei FARO Photon 120 Laserscanner verwendet, die im Verlauf von zwei Wochen das 14-stöckige Kohlekraftwerk scannten. Um die Vermessung in der ganzen Anlage durchzuführen, wurde ein Trimble S6 Scanner zusammen mit einem Leica Lino Laser eingesetzt. Auf Grund der überfüllten Stellen, schweren Geräte und der Mehrstöckigkeit der Anlage eine echte Herausforderung.

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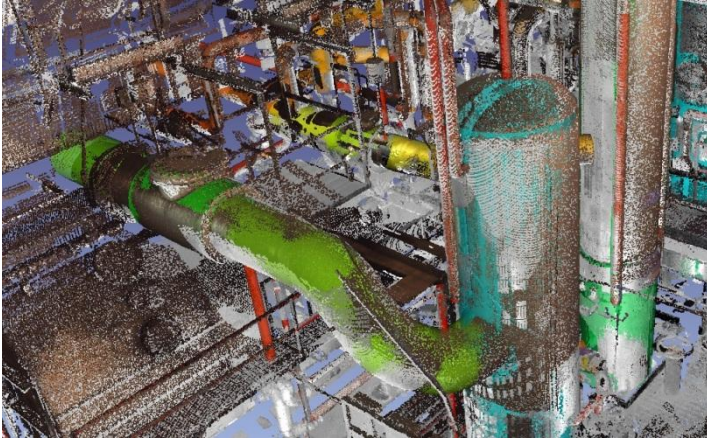
Modeling: The scan data was registered using the Faro Scene software then imported into the Leica Cyclone software for further processing. Edgewise Plant was used in many of the heavily congested areas of the power facility due to its automated pipe modeling capabilities. The registered Faro FLS files were read and processed directly into Edgewise Plant, one of the great benefits of the software.

The area in this example was comprised of 22 individual overlapping scans with many individual pipe-runs and metal railings. With the new mega batch processing capabilities, Edgewise Plant was able to automatically process and extract cylinders from the 22 scan files in just over one hour with minimal user interaction. Edgewise Plant automatically detected over 2000 individual cylinders from the scan data, which was then merged in Edgewise using the built in cylinder cleaning tools. In addition to the cylinder extraction, Edgewise Plant was used to extend and connect pipe runs as well as add elbow





With EdgeWise Plant 2.0 Stantec Reduces Modeling Time by more than 50% in Complex Coal Plant Upgrade



Bottom Line:

Edgewise Plant 2.0 allowed Stantec to decrease the amount of man hours during the 3D modeling process by utilizing the software and computer processing power to complete the automated extraction. After Edgewise Plant completed the automated extraction, the 3D modeling team took on more of a quality assurance role within the project ensuring the completeness of the final model. Edgewise Plant has proven to be a valuable tool allowing Stantec to continue to be one of the leaders in laser scan processing and 3D deliverables.

connections directly inside the software using its finishing tools. The cylinders and elbows were then exported to Leica Cyclone for further modeling using the COE (Cyclone Object Exchange) export functionality inside of Edgewise Plant for a seamless exchange between the software products.

Edgewise Plant allowed Stantec to reduce modeling time by over 50% in these congested areas due to the automated cylinder extraction and batch processing in its latest 2.0 version. Much of the redundant pipe modeling was eliminated by using Edgewise Plant allowing for a quicker turnaround of the final deliverable to the client.

At the end of the project it was determined that Edgewise Plant 2.0 is not only beneficial in congested areas but within an entire project. The batch processing capabilities allows for fast automated cylinder modeling in both congested and wide-open areas so future projects will use Edgewise Plant throughout.

Company Profile: Founded in 1954, Stantec provides professional consulting services in planning, engineering, geomatics, architecture, environmental and project management for infrastructure and facilities projects. Stantec utilizes phase-based and time of flight laser scanning instruments on industrial, transportation and architectural projects, providing clients with a diverse offering of 3D laser scanning and modeling services.

