

Siemens VAI Metals Technologies

Market Leader

Siemens VAI Metals Technologies is one of the world's leading engineering and plant-building companies with innovative power for the iron and steel industry, for the flat-rolling sector of the aluminum industry as well as for open-cast mining. Close proximity to their customers is an essential element of the business strategy and as a strong partner they provide a complete scope of supplies and services for raw-material mining up to the finished products. This includes all related plants, equipment and technological processes, the integrated environmental and automation solutions, in addition to a comprehensive range of services for the entire life-cycle of metallurgical plants.

A safe choice

SVAI offers a complete portfolio of blast furnace technology, meeting the highest demands of plant performance, operational reliability and environmental compatibility. The roots of the Blast Furnace Division go back as far as the 1880's as Ashmore, Benson, Pease and Co Ltd and through various name changes and takeovers it has now emerged as part of Siemens VAI Group.

This single-source capability, in combination with expert project management and dedication to quality workmanship, is the basis for fast project completion and production ramp-up to design capacity. Today SVAI are the world leader with strong relationships in the UK, Asia & South America. Their business is built on trust and customers feel comfortable and safe.

Innovative Technology and Project Management

SVAI always take on board new technology to assure their customers that all needs can be delivered. The development of cutting edge technology within furnaces and casters, as well as mechanical equipment, is evolving all the time.

Many projects are won because of the reputation of their exceptionally highly skilled project management teams and their willingness to take on new technologies which keeps them in a dominant position in the world market.

Switch to CADWorx

When VAI acquired Kvaerner Metals (formerly the Davy Group) in 1999 the CAD standard had been Microstation with PDS and PDMS also being used. This was changed to AutoCAD to suit the VAI Group standard, which meant a severe disruption in output because of the necessary re-training on Autodesk software. Ged Flanagan, Assistant Chief Engineer in the Plant Department, recalls being concerned that the reversion to 2D imagery was a step back in time and would lead to a loss of valuable 3D expertise.

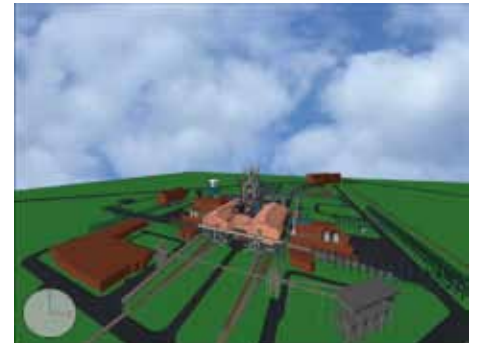
As market leader, being stuck in a 2D environment was simply no option for VAI. A corporate shift, driven by the need for 3D was spearheaded by Ian Craig who was at the time Director Technical Iron Making. The company initially considered Auto-Plant but Bentley's conflict with Autodesk and a lack of support for DWG led VAI towards CADWorx.

CADWorx software was initially purchased for blast furnace design, but remained unused until a caster unit was considered to require a new solution. VAI had no previous experience with such software and engaged Scott Tacon, a consultant to the company, to configure the software and create specification files in order to deliver the project.

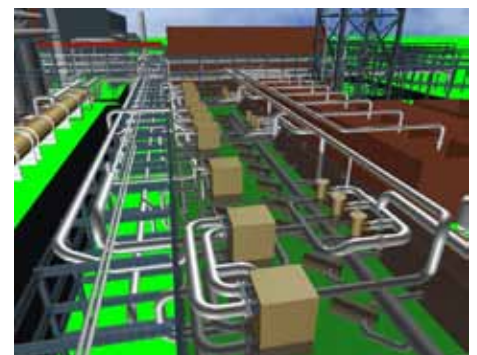
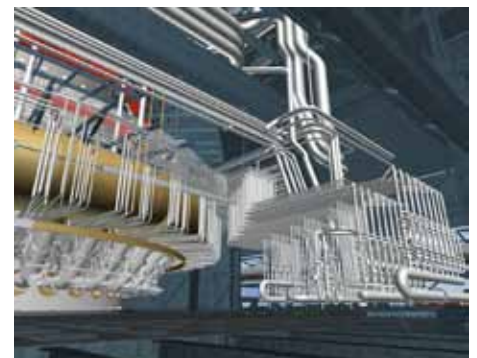
Great support throughout

This first project was for the China Steel Corporation. Earlier projects did not have a large enough need for specialist software. The CAD department had been located at a previous site. Thus the majority of those familiar with the software were left at this site.

Michael Westthorp, the Model Manager recalls, "The support from COADE and Fern was exceptional and may not have been the same from a larger organisation. Marginal productivity was gained in the beginning, which usually is the most difficult period to quantify efficiency gains". Transferring fabrication drawings into 3D models can be very difficult and time consuming, particularly when dealing with detailed drawings, but this process is now easy with CADWorx. The software enables users to simply switch between single line mode and 3D mode, as required.



"The software has proved that it can deliver and save essential time..."



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Enhanced communication, improved Deliverables

Working with CADWorx not only streamlined the flow of information but also enhanced the internal and external communication. It makes it easier for the clients to review the different stages of the project and 3D is in that respect an excellent sales tool.

Most clients prefer to see models rather than drawings because of the ability to navigate in and out of selected areas of detail which otherwise would require a level of technical expertise to understand. This is of course extremely useful when dealing with senior company representatives with financial responsibilities who are not from a technical background.

Changes to the model can be activated immediately because the software is very flexible and allows changes in conjunction with a client to be made in situ. CADWorx enables companies to create almost clash-free design with reports which can be run throughout the execution of a project. CADWorx has offered SVAI an important tool to monitor a job and also gives free information about the model without any extra work.

New Roles

As part of a project, the roles of the Model Manager and the Plant Coordinator were newly defined. The role of the model manager was to structure the modeling dates to achieve a seamless 3D progression and create a modeled item list. Michael was responsible for the setup of all relevant directories and the NWF/Composite model within NavisWorks.

He also provided training and technical support to the users and managed the updates and the maintenance of the model. The Model Manager is second point of contact to the plant coordinator and ensures that the clash detection reports are updated. The plant coordinator does the day to day management of the model which means the coordination of the site model and the plant arrangement. He also manages the timely input of the model information in accordance with the program and sets the parameters for the overall site layout to develop the basic plant. Generally the plant coordinator is responsible for all layout and coordination issues pertaining to the model i.e. ensuring that the relevant departments supply their design information on time and in the correct format, prior to being introduced to the geometry of the master model.

The Future looks bright

To explore the full potential of COADE's software solutions Siemens VAI has plans for further utilisation of CADWorx within the company. The software has proved that it can deliver and save essential time and SVAI plan to expand the use of CADWorx to other areas of the company and to train more staff on its use. SVAI are now experiencing an influx of young people at the company and they are more receptive to the change and innovation needed in the modern workplace and these people will spearhead the use of CADWorx in the future.

SVAI is looking into a bright future and this time with COADE and Fern as strong partners by their side.

"SVAI are experiencing an influx of young people, building a company that is more receptive to change and innovation."



Fern is a leader in CAD/CAE solutions for the Power, Process and Petrochemical industries. It offers its customers progressive business solutions through powerful technology products and services. Fern distributes COADE® engineering software, including CAESAR II®, the world's foremost pipe stress analysis software, throughout Western Europe.

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