



- Ranked among top 260 companies in India (ET listings)
- Global footprint with presence in more than 87 countries



Integrated Engineering and Design with CADISON[®] Brings Significant Advantages for ISGEC

CADISON[®] enables productivity and workflow improvements

Isgec Heavy Engineering Limited with more than 5000 employees is one of the market leaders in India for industrial boiler segments. With its strong engineering capabilities for the design of Boilers, Power Plants, Sugar Plants, Pressure Vessels, Heat Exchangers, Presses, etc.; Isgec's vision is to be the most preferred plant supplier in fulfilling growing energy demands with a focus on customer delight, technological innovations, and global reach.

ISGEC's Industrial boiler design team implemented CADISON[®] in a phased manner. In 2010 the team started using CADISON[®] for plant modeling by converting fabrication and erection drawings into a 3D model. It avoided reworks during erection & commissioning by early detection of clashes and issues during the design stage itself. CADISON[®] P&ID module was implemented in the year 2011 to improve the accuracy of instrument's and valves being used through standardization of specifications & catalogs, KKS tagging philosophy, etc.

3D to 2D approach was adopted by ISGEC in the year 2014. It was decided to make all manufacturing drawings through 3D based tools. Existing 3D tools used such as Tekla[®] for Steel structure and Inventor for Mechanical parts are interfaced effectively with CADISON[®] using the interfaces (provided by CADISON[®]). Pipe fabrication and erection drawings were generated using CADISON[®] ISOGEN which is built-in with 3D-Designer. In the beginning of year 2015, CADISON[®] was expanded to electrical, instrumentation and piping team to improve design productivity and accuracy.

Today, complete design of Boiler, Sugar plant and Power plant is done in CADISON[®].

“First-time-right concept is being adopted by ISGEC to offer a better product at an optimum price”

By standardizing on CADISON®, ISGEC has overcome the following challenges:

- Shorter plant delivery demand by clients
- Managing design changes by client, supply partners and within design groups.
- Optimize product and plant equipment’s cost
- Early detection of issues at site and shop

Engg Function	Equipment/ Component Design	Piping	Structure	Electrical	C&I	PID	Plant Design
Target							
Analysis	Ansys iW Simulation	PV Elite Caesar / FE Pipe	Stadd Pro	ETAP			
2D/Isometric	Inventor	Solid Works VB Program	CADISON Tekla	Prosteel	Advanced Steel	CADISON	CADISON
3D/Modeling							
Base Platform	AutoCAD						

“CADISON® fits in well into our existing engineering environment and complements our legacy software investments.”

Many design tools were explored and CADISON® was chosen for the following reasons:

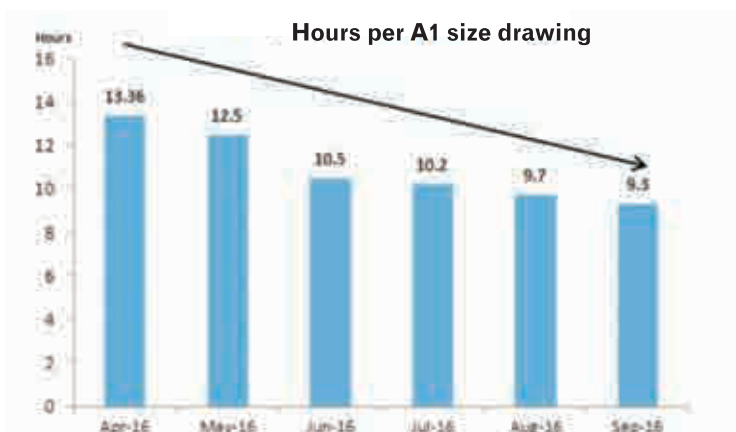
- Its integrated plant design and engineering capabilities (P&ID, Piping, Electrical, etc.)
- Interface with AutoCAD 3D, Inventor and other AutoCAD tools
- Interface with stress engineering tools such as CAESAR II

100+ plant designs are made using CADISON®.

3D designer and P&ID modules of CADISON® are the show stoppers for Isgec and are extensively used due to its intelligence and connectivity.

Benefits

- Better engagement with client due to model walkthroughs at early stage of project and reduced site punch points
- 3D based model working has given 10% savings in overall project design hours by using a common object-oriented database thereby achieving real integration between different disciplines
- Design errors due to Bill of Material mismatch were brought to zero
- Piping drawing productivity has increased to the tune of 30%



“Most of the designers are familiar with AutoCAD and it was decided to have AutoCAD based CADISON® application for Plant Design. Also, the Total Cost of Ownership of CADISON® is lower and its effect on project costing is minimum”

– Mr. ESG Pragasam Associate, Vice President- Engineering