ENGINEERING, DESIGN AND COMMISSIONING
OF WOOD-BASED PANEL PLANTS

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member of Siempelkamp  Machinen- und Anlagenbau
Throughout the years, Sicoplan has become a worldwide known specialist in the engineering of panel production plants for furniture and building applications.

The story of Sicoplan starts in 1974, when Dieter Siempelkamp - former CEO of Siempelkamp Germany - and Frans Lein - former chief engineer of Verkor, a Belgian engineering company with many years of experience in designing board production lines - joined forces and founded a new engineering company.

In the early days, low capacity daylight presses were used. Never ending technological research and technical innovations resulted into the high-tech ContiRoll® presses producing the same volume in one hour as before in a whole day, at much lower production cost and state of the art board quality.

In-depth mastering of the technology allows Sicoplan to design board production plants, based on a broad range of raw materials such as: many species of wood, wood waste and annual plants.
Sicoplan wants to commit its knowledge and experience to design and commission complete high quality and environmentally friendly plants for the production of wood based panels. This target must be achieved within a planned schedule and a balanced budget.

The engineering domains of Sicoplan are panel production plants for:
- particle board
- MDF
- OSB
- insulation boards
- special boards (on demand)

The service range of Sicoplan includes:
- pre-engineering
- basic engineering
- detailed engineering of mechanical conveyors, pneumatic ducting and cyclones
- startup of complete plants

Being a member of the Siempelkamp group, Sicoplan contributes to the success of the world leader in design, supply and commissioning of board production plants.
With 40 years of experience in engineering and start-up of hundreds of plants, Sicoplan prepares in the early project phase a three-dimensional plant layout, flow diagram, equipment list and capacity calculations. These documents are the basis for substantial discussions with the potential customer.

In the next phase, all license application documents are provided such as: process and safety descriptions, skyline, building plans, emissions,…

Once the contract for equipment supply between the customer and Siempelkamp has been settled, Sicoplan starts the basic engineering phase. This includes technical support for the procurement of equipment (design and scope of supply) matching all components into an optimally running production line.
The three-dimensional model of the plant is continuously fed with actual supplier data ensuring a consistent and up-to-date basis for extracting the final principle drawings for steel structures, piping for auxiliary utilities, electrical cabling, etc...

The completion of the installation work is followed by the startup of the plant. Sicoplan supports the technological startup as well as the test runs for the final acceptance.
Sicoplan uses Autodesk® Inventor and Navisworks 3D presentation software in order to provide customers with a virtual model of their plant as early as during the planning phase.

The ‘digital prototype’ is used to analyze and optimize the design. This provides invaluable support for bringing all partners together. Interfaces become visible before the actual work starts, identifying possible critical areas, eliminating friction losses and guaranteeing completeness. This results in a significant reduction of time frame and budget.

As soon as the detailed data from machine suppliers become available, Sicoplan adapts the three-dimensional model in a minimum of time, focusing on each individual machine in the complete plant.

All drawings for subsequent erection and production are derived from one model, reducing the risk of faults among different revisions to a minimum.
Examples of three-dimensional engineering by Sicoplan and the corresponding picture of the plant after start-up.
WORKSHOP DRAWINGS FOR
MECHANICAL CONVEYORS,
PNEUMATICAL DUCTING AND CYCLONES

Additional to the basic engineering, Sicoplan can also supply the detailed engineering for mechanical conveyors, pneumatic ducting and cyclones.

Workshop drawings of all kind of mechanical conveyors can be extracted out of the 3D-model used in the basic engineering phase.
A machine based BOM (bill of material) is generated, as well as drawings or files (dxf format) that directly interface with numerical controlled manufacturing machines.

Sicoplan also supplies an overall BOM, scoping all the equipment designed for a particular project. In this way, equal parts that are used in several machines can be produced in one single batch, reducing production preparation time and cutting costs.
The experience and knowhow gained through the design and startup of more than 240 plants all over the world, establishes Sicoplan as the leading engineering company for panel production plants.

FROM GREEN-FIELD TO A FULLY OPERATIONAL PLANT
PANEL BOARD PLANTS DESIGNED AND COMMISSIONED BY SICOPLAN ARE RUNNING ALL OVER THE WORLD

REPLACEMENT OF PRODUCTION LINES IN EXISTING BUILDINGS