

Production Capacity Planning in 3D

Client: Leading Product Manufacturer

Platforms

- ▶ Factory CAD
- ▶ Process Simulate
- ▶ Solid Edge
- ▶ Windows XP With NVIDIA Graphics Card

The Problem

The client is a conglomerate with interests in engineering, abrasives, fertilizers, finance, bio-products and plantations, 30-40% of which are exported worldwide.

The client was setting up a new production plant & was looking at a solution that would provide the following:

- ▶ Analyze and plan capacity and provide project cost estimation
- ▶ Quick & accurate revamp the project while maximizing utilization
- ▶ Process planning integrated with product development to manage change

Major Challenges that the client was facing are:

- ▶ Virtual deployment of plant to build factory right first time
- ▶ Simulate the entire production process

The Solution

To overcome the above problems, Axcend worked with the customer to understand the complete requirement & based on the study provided necessary consultancy to offer a complete solution.

- ▶ Capacity planning includes plant design, simulation of machine operations keeping in mind all their constraints.
- ▶ Development of entire 3D plant layout using Factory CAD; equipments like Robot & Turn Table were designed using Solid Edge.
- ▶ Entire layout was imported into eM-Engineer for integration to give necessary animation and simulation of production process.
- ▶ The components in the simulation process were designed as per scale and hence provide information on the actual space occupied at any point of the work cell along with the collisions.

Production Capacity Planning in 3D

ROI

- ▶ Build factories right the first time
- ▶ Improve communication with proper visualization in 3D
- ▶ Reduce costly changes during commissioning
- ▶ Reduce time from facility design to production

Salient Features

- ▶ Space computations & analysis
- ▶ Process visualization with various constraints of collision
- ▶ Flexibility on deployment of additional component
- ▶ Virtual walkthrough of the entire plant along with running machines