CASE STUDY

China Hi-Tech (Jiangxi) saves time and improves accuracy with Forte 3DWorx on viscose facility

Key facts:

Company: China Hi-Tech (Jiangxi) Textile Design Institute Company, Ltd.

Website: www.jtdi.com.cn

Industry: Manufacturing

Country: China

Octave products used: Forte 3DWorx *(CADWorx Plant Professional)*

Key benefits:

- Improved data accuracy
- Reduced labor requirements
- Improved customer satisfaction

Identifying goals

The PT Rayon Utama Makmur Group facility in Solo, Central Java Province, Indonesia, will produce an annual 80,000 tons of viscose staple fiber and is the company's second such international viscose project. Because of Indonesia's limited industrial base, China Hi-Tech (Jiangxi) Textile Design Institute Company, Ltd. had to import all materials from China, and the country's complex import procedures demanded that the bills of material be highly accurate. Also, the installation was to be built by local workers, which elevated the importance of producing 3D isometric (ISO) drawings for the construction. Jiangxi chose Forte 3DWorx to address these design challenges.

Overcoming challenges

Three-dimensional design work included three main factory sections including stations for viscose preparation, spinning and spin bath. The preparation area contains 19,500 square meters (sm) in four levels 38 meters high with 580 devices and 1,000 pipes. The spinning area is 12,000 sm in three levels 21.6 meters high with 300 devices and 500 pipes. The spin bath is 15,300 sm in three levels 37 meters high with 540 devices and 1,500 pipes. The ancillary design included alkali, acid and carbon disulfide storage facilities and piping.

The overall project contained 1,340 pieces of equipment and more than 3,000 pipelines totaling 55,000 meters in length with 64,000 fittings and 28 specifications. Nominal diameters ranged up to 1400 and materials included:

- Carbon
- Stainless
- Galvanized
- Polypropylene
- Fiberglass reinforced pipe (FRP)
- Fiberglass reinforced plastic pipe (FRPP)

It was the first use of Forte 3DWorx for Jiangxi, but the software proved to be easy to learn. From training to final drawing, the project took only three months, including specifications and equipment modeling, and all done by just eight people.

Realizing results

Forte 3DWorx helped the company improve the accuracy of the bills of material from 85% to 95% and reduced labor time with the software's automated isometrics and materials lists, saving an estimated 2,120 hours. Forte 3DWorx helped Jiangxi eliminate errors and complete the project on schedule, improving customer satisfaction significantly.

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.