



Södra Mönsterås Screen Room Improves Performance and Ease of Operations

In late 2019, AFT was awarded a comprehensive screen room project upgrade at Södra Cell Mönsterås TM4. To facilitate the screening modernization, a 3D model of all aspects of the job was created in detail. Virtual walk-throughs prior to and during construction aimed to help operators put a better system in place once it was up and running.

Says Eva Nordvall Jonsson, senior process engineer at Södra Mönsterås, “As it turned out, the virtual screening model concept was the perfect approach during the pandemic – allowing the entire team to make decisions and modifications, wherever they were located. Since human interactions on the mill floor were restricted, Sodra and AFT team members could make changes in the design and construction phases, minimizing risks from Covid. We had no incidents at all during the project! And now, transformative practices are here to stay.”

Notes Simo Koskell, AFT’s team leader in Sweden, “The actual new screening area, combined with the virtual screen room, delivered a new level of control and flexibility to enhance ongoing quality improvements.”

Adds AFT’s Juha Iso-Herttua, project leader, “Ongoing interactions and personal communications have always been important. During the project, when travel was severely limited, Teams and similar communication platforms kept everyone updated and tuned in.”



All eyes on the prize

From the beginning photos captured the existing screen room location in minute detail. Followed by laser scanning, all was in place for a 3D CAD model to be generated.

Continues Iso-Herttua, “This was a very good solution because we got all visible items in our CAD environment. In rebuilds the layout solution is critical. Having basically everything visually available created an easy vehicle for dialog with the Sodra team and contractors. Issues were resolved in plain site of the 3D model, which we shared on our computer screens. Solutions happened quickly. Because the new AFT solution was integrated in the existing construction with utmost accuracy, we were able to specify and decide upon possible usage of all dismantled parts and select appropriate ones for reuse.”

Koskell is proud to point out that two old screens were rebuilt. “Saving money and doing what’s right for the environment are smart. Reusing and repurposing parts are an important part of the AFT philosophy.”



Södra’s Eva Nordvall Jonsson and AFT’s Juha Iso-Herttua often meet virtually to address critical issues.

“In a very hands-on active way, operators and maintenance people were able to check and verify everything before any solution was finalized. For example, as a team we identified some service route issues in the early stage and modified the design accordingly,” according to Kristian Wernersson, operations engineer with Södra Mönsterås.

“We have had many Teams meetings with the Södra operators, maintenance people and contractors – walking through the installation concept, the job in progress, always looking for the best possible solutions and potential value-added modifications.”



According to Jonsson, “The screen room space feels like it grew. With fewer, more effective screens and related equipment and piping, our screen room doesn’t feel crowded like before.”

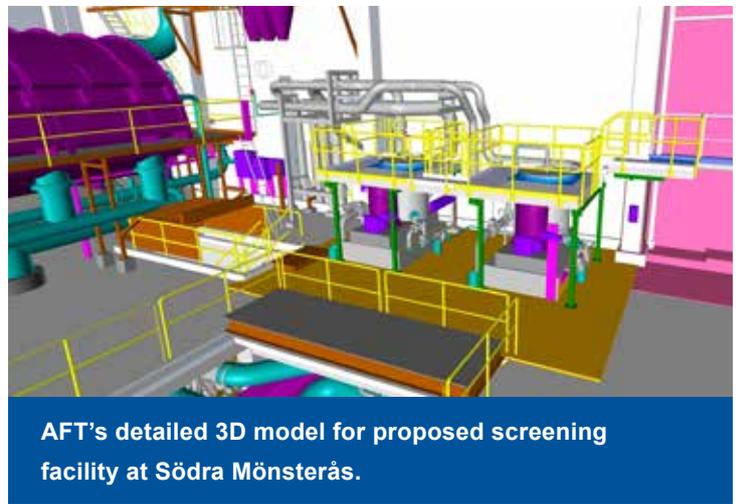
Iso-Herttua suggests that virtual dismantling of equipment and revealing the open space potential is invaluable. “Building upon our basic 3D design, an outside engineering resource refined it. Always with the same 3D model, we were not losing the information/data after every stage.”

According to Koskell, “This engineering flow went well and was very efficient. This project was mechanical turn-key and our contractor met all construction requirements according to the plan and agreed upon time schedule.”



Aikawa Fiber Technologies
Email: sales@aft-global.com

Tel: +358 207 429 200
Fax: +358 207 429 280



AFT’s detailed 3D model for proposed screening facility at Södra Mönsterås.

Training bonus

The virtual screen room model allows new operators to get to know the installation before they actually walk through it. For example, they are able to check the position of instruments and check access for required areas. Södra operators are able to help new team members get up to speed quickly.”

Notes Wernersson, “Training took a valuable step forward because operators could be introduced to the big picture and details with the model. New hires can learn remotely, combined with eyes-on experience in the actual facility.”

Project details

TM4 post screening capacity was increased to 1800 ADt/d. AFT’s modernization included detailed basic engineering, aiming to utilize existing equipment and piping when possible, and improving the efficiency of operations in all phases of screening. Only the primary screens and final screens were replaced, upgrading to AFT MXF1200s and MXS700 along with rebuilding two older screens. AFT’s MacroFlow2 cylinders operate throughout, in combination with energy smart GHC2 rotors. The final stage MaxSaver fiber recovery screen is also equipped with an energy saving GHC2 rotor.

In addition, Fiberclone™ high consistency cleaners, process pumps, piping, valves, motors, and platforms were put in place as part of this project.

Koskell comments, “The 3D model helped the team make wise choices throughout the design and installation process. In addition to superior screening and minimal fiber losses, Södra gained space to move around more easily, as well as a safety bonus of having new platforms around the screening units.”

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