

Case story

Improved Machine level productivity, monitoring & control with Partner's IoT solution with Danfoss Drives

The Background:

The Leading Cotton Mills in South India was incorporated in March 1980. The Company has been expanding and modernising its plant over the years. It has expanded its spindlage from 16,120 spindles in 1980 to the present level of 53,664 spindles.

The Cotton mills needed a technology partner to drive efficiency in their spinning processes and to achieve energy savings and improve productivity transparency, Remote online monitoring and machine level control throughout their plant. TEXSERVICES, one of the reliable business partners of Danfoss, offered the expertise and the quality of Danfoss products efficiency in their operations, commissioning, and the support.

The Challenges:

- Retrieving data on Real-time production & transparency in receiving the relevant insights to improve the quality of the production from any location.
- Online access & machine control to improve productivity
- Change the speed instantly in all the machines during peak hours from any device including mobile phones.

How it Worked?

IOT for AMIS+ (ADVANCED MANAGEMENT INFORMATION SYSTEM) Controller with Danfoss Drives

TEXSERVICES have installed AMIS+ controllers with Danfoss Drive in 44 spinning machines. This web application communicates with AMIS+ Production monitoring & Speed controller with Danfoss Drives installed in Ring Spinning Machines. By accessing the menu options of the specific machines, the data of the selected machine can be viewed in the Browser.

How we helped:

The manual data access and monitoring were completely eradicated and now the data of the spinning machine settings can be viewed and accessed remotely from anywhere highly secured. Danfoss Drives helps modulate the speed of the spinning machine and helps to monitor electrical parameters and modulated the speed of the spinning machine according to the varying load conditions and it helped to bring down maximum demand in peak hours, improved productivity and reduced OPEX cost.

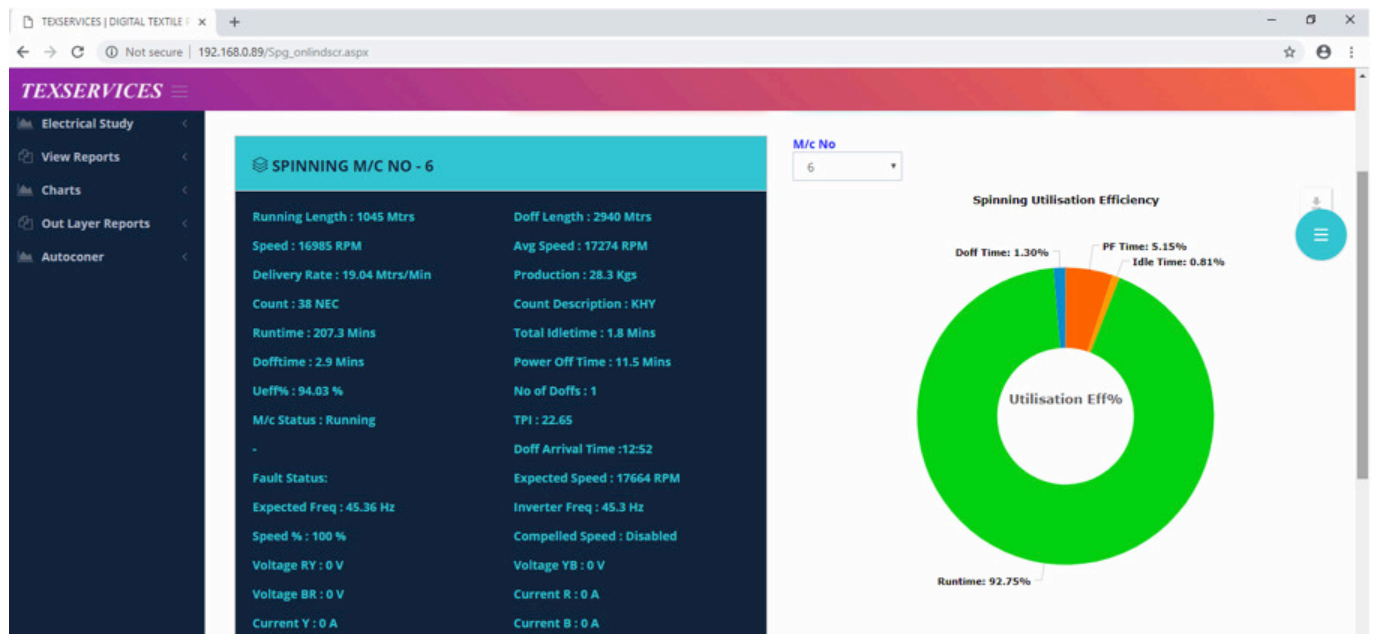
Benefits of installing IoT for AMIS+ Controller with Danfoss Drives

- Accurate real time data to monitor the production, avoid unnecessary stoppages
- Easy interface with existing ERP, which reduces paperwork & human errors
- Continuous Curve Manipulation and smooth changeover of speed with many stages of spindle Speed vs Yarn Length wound in COP, increasing productivity
- Reduced machine down time and maintenance by converting existing variator to flat pulley.
- Alarm for TPI deviation and VFD over temperature.
- Under winding can be precisely controlled.
- Interconnection of AMIS+, Drives, Energy meters, Sensors and any devices with communication using IOT.
- Data Reports Generated for every process stages with Multi-level secured encryption and data backup

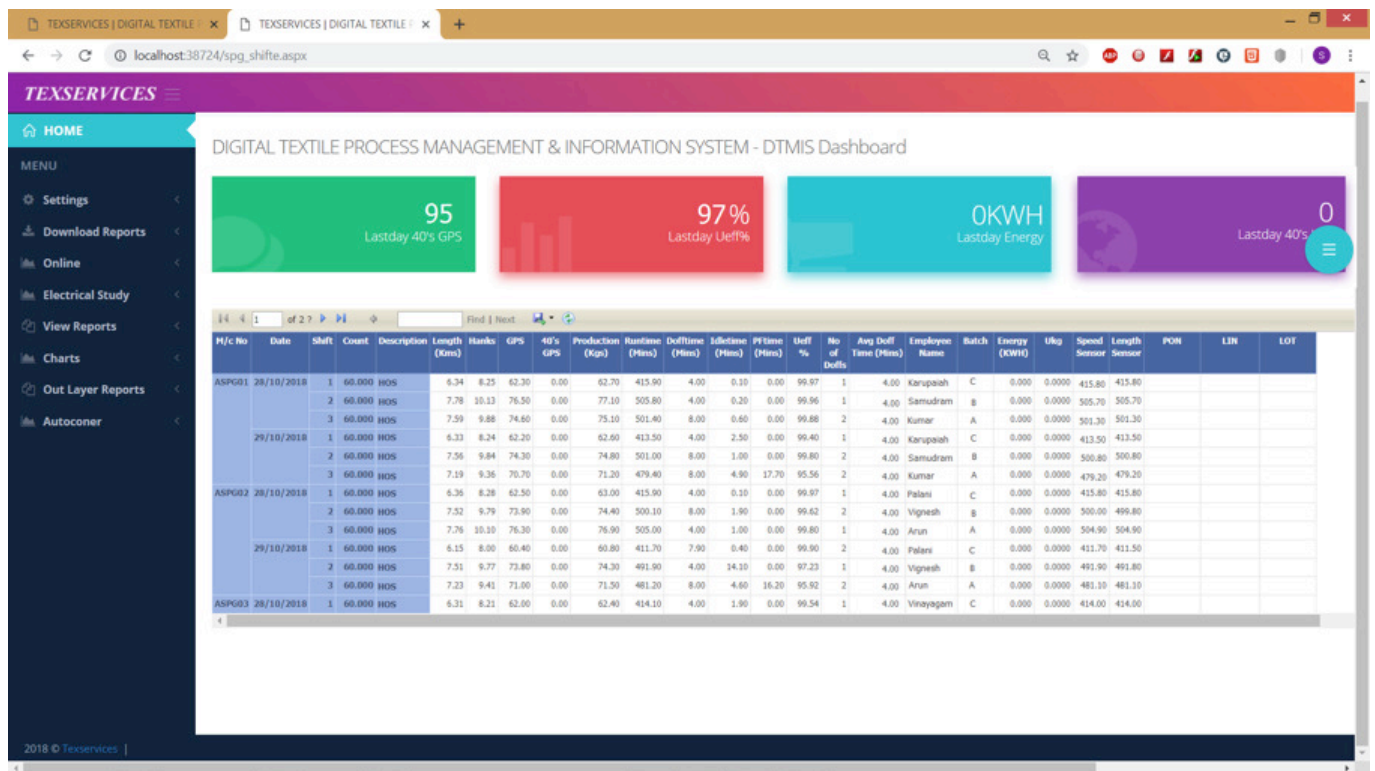
ONE OF OUR INSTALLATIONS IN THIS CUSTOMER SITE



ONLINE UTILISATION EFFICIENCY CHART



SPINNING SHIFT REPORT



Conclusion:

The AMIS+ controller with Danfoss Drives retrieved data on real-time production & is transparent in receiving the relevant insights to improve the quality of the production from any location. The machine is controlled online to change the speed instantly in all the machines during peak hours from any device including mobile phones.

The spinning machines were operated under optimized speed during the multiple stages of Length wound in COP, which resulted in high energy savings, improving the quality of yarn due to reduced downtime.



We are so happy with the results and planning to recommend Danfoss to all our counterparts and also prefer choosing Danfoss for all of our expansion projects.

A leading Cotton Mill in South India

