

Success
story

Siemens precision enables revolutionary new process

CALMEC turns to Siemens for leading-edge technology, backed by strong support, to create breakthrough dual-strip process for manufacturing armoured cable

The challenge

Since 1979, CALMEC has been manufacturing tailored engineering armouring solutions. The Canadian company specializes in process-driven equipment for the continuous roll forming of galvanized steel or aluminum as a protective layer put on top of cable.

The armouring manufacturing process has always involved single-strip machines, with one machine per production line, resulting in a single strip of armoured cable being produced. But in 2011, CALMEC started working on a brand new concept – a dual-strip machine. With just one production line, twice the amount of armoured cable could be produced.

While CALMEC had the expertise to handle developing the mechanical side of the new machine, it needed a partner for the electrical elements – a company offering the products, talent and support needed to bring the whole solution together and turn CALMEC's vision into a reality.

Customer: CALMEC, located in Mississauga, Ontario, Canada

Solution supplied by Siemens:

- PLC
- HMI
- Sinamics S drive
- Servo motors
- Scalence switches
- Siemens gear motors
- Motor control (ICP)

Customer needs met:

- Reduced wiring
- Recipe management
- CAM profile and electronic gearing
- Remote Internet-based communication for troubleshooting
- Servo-based motor controls
- Easy-to-use controls and programming
- Reduced debugging and commissioning time
- Failsafe controls and drives
- Reusable programming and components for other machines with minimal adjustment



"All the hardware and software enabled us to get the performance we were looking for. It was great technical support, engineering support and sales support."

– Marc Fitzner, Owner and President, CALMEC

The solution

In 2010, CALMEC decided to move from an AC vector-driven, single-strip machine to one based on SIMOTICS S Servomotors from Siemens. The idea was to improve the precision, speed stability, and acceleration/ deceleration times for the starting and stopping of CALMEC's single-strip machines. Siemens also provided an automation controller and human-machine interface (HMI) to make the transition possible.

Based on that success, CALMEC decided in 2011 to partner with Siemens on the development of the sophisticated new dual-strip process. This involved creating an extremely complex machine that ran on 13 motors, compared to four in CALMEC's traditional single-strip models.

To make it particularly challenging, it was essential to have synchronicity among all the new machine's motors, with accuracy to within just a few degrees of one rotation. The Servo system from Siemens enabled CALMEC to rely on this extraordinary level of precision.

Siemens also provided an advanced automation solution, with the controller able to be operated remotely. As a result, if any troubleshooting is required, it can be handled from a smartphone wherever the technician is located, with full access to any needed data.

Thanks to the great R&D partnership between Siemens and CALMEC, the first commercial shipment of the dual-strip machine took place, with very positive customer feedback.

"They are very happy with the quality of the machines and the performance of them," says Marc Fitzner, Owner and President of CALMEC, adding that more dual-strip machines are now being developed and built.

The value

Fitzner explains that the products and solutions Siemens delivered were excellent, playing a critical role in the successful development of the dual-strip machine.

"All the hardware and software from Siemens enabled us to get the performance we were looking for," he says.

In addition, he notes that the support he received from Siemens was just as important.

"If we had technical issues to discuss, we always got responsiveness from the Siemens people. They were always there to offer suggestions, with their people coming on site whenever we needed them. It was great technical support, engineering support and sales support," he says, adding that Siemens' financial investment in the project was also deeply appreciated and made a big difference.

"We now want to ship these machines worldwide," he concludes. "And with Siemens being so well-regarded worldwide, to be able to give us technical support on a global basis, that made choosing Siemens even easier for us."

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Printed in Canada
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