

Press release, 4 November 2019

Better roads thanks to autonomous technology

As part of a Norwegian innovation project relating to future road construction Semcon has developed and validated a solution to make a compactor autonomous. The objective is to eliminate difficult work for staff, reduce the time needed to build new roads and enhance quality, resulting in longer lifespan.

When building roads, compaction of the surface layers is crucial for ensuring high quality, resulting in safer roads that last a long time.

“This work requires a great deal of accuracy and experience, but at the same time it is carried out in a limited amount of space. These are perfect conditions for an autonomous solution, where one operator can control several machines that can work at night, for example,” says Thomas Eriksen, technical project manager at Semcon in Norway.

From airports to new roads

Semcon is responsible for making a compactor autonomous as part of the project launched by Nya Veier in Norway, which is being implemented by AF Gruppen. This work is based on a control system developed by Yeti Snow Technology AS, co-owned by Semcon, Husqvarna Group and Øveraasen. The system is well suited to different applications, where operation and maintenance have to be managed safely and with high levels of precision and repeatability. Earlier applications for this system include clearing snow on runways and brushing landing lights at airports.

“This is a good example of how new technology is paving the way for safe, efficient solutions for road construction in the future. In the long run, it will create opportunities to build new roads more quickly and more cost effectively,” says Sebastian Kussel, who is in charge of technology and development at Nya Veier.

Facts

- The “E39 Kristiansand East – Mandal West” project has now completed proof of concept and been demonstrated live on an actual work site.
- The next planned step in the project is to perform tasks autonomously under restricted conditions by the end of 2020.

Semcon is an international technology company that develops products based on human needs and behaviours. We strengthen our customers' competitiveness by always starting from the end user, because the person who knows most about the user's needs creates the best products and the clearest benefits to humans. Semcon collaborates mainly with companies in the automotive, industry, energy and life science sectors. With more than 2100 specialised employees, Semcon has the ability to take care of the entire product development cycle, from strategy and technology development to design and product information. Semcon was founded in Sweden in 1980 and has offices in over 30 locations in eight different countries. In 2018, the Group reported annual sales of SEK 1.8 billion. Read more on [semcon.com](https://www.semcon.com)

- When constructing roads, the compactor has to complete six passes over the surface with a minimum of 20 cm overlap at each passing. With an autonomous solution, the route travelled is established on the basis of GPS positioning for an optimum run offering maximum quality.
- The compactor used is an HAMM H25i. This has a top speed of 12 km/h and travels at an average speed of 2-3 km/h during compaction.
- Safety is currently provided by optical sensors, which detects whether there is anyone or anything nearby and stops the machine. A complete safety solution for safe civil engineering works will be prepared until the system is fully operational.

Nye Veier, AF Gruppen, SINTEF, HAMM and Semcon are all taking part in the research project.

[Find out more about Semcon's Applied Autonomy offering.](#)

[Find out more about the Yeti project's autonomous snowploughs.](#)

[Images and film for download.](#)

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