From fault to repair in 20 seconds!

SAAB Radically shorter downtimes at Saab Automobile in Trollhättan

A unique alarm system for downtime registration called Larmsaab developed by Novotek for Saab Automobile in Trollhättan has, in just a few years, radically improved Saab's control over production times, failure causes and repairs with several highly positive effects.

"We went directly from paper and pen to a fully-automatic alarm system in one step," says Niklas Adolfsson who works with maintenance and flow control at Saab's assembly plant in Trollhättan, Sweden. The entire production of Saab 93 and Saab 95 models is monitored by the alarm system that tracks and indicates all production downtimes. This means that at least 2,500 different machines are monitored by around 25,000 I/O. All data are collected in a database on an SQL server that allows all involved to access and analyse various alarm data.

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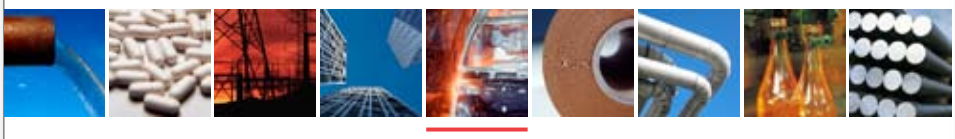
Niklas Adolfsson, SAAB Automobile, Trollhättan, Sweden

SUBSTANTIAL IMPROVEMENTS

"We used to average 15 minutes from when a fault was discovered in a production until it was fixed. We're down to two minutes now. It seldom takes more than 20 seconds from the time our operator receives an alarm until the closest available repairman is contacted and en route to the fault," says Niklas Adolfsson. "Our total uptime has climbed dramatically since we started using Larmsaab in 1997. We're at 96% today and it doesn't get much better," concludes Niklas Adolfsson.

CONVENIENT SYSTEM

All disruptions and faults are transmitted as alarms and event descriptions to an SQL server, where they are logged in tables in a database. An operator receives the alarm on a screen complete with the necessary data about what has happened, when and on which machine. The operator can separate pure process stops from material shortage and other causes for the alarm. He then dispatches the alarm to a suitable repairman. The repairman can both pull up complementary information and provide feedback via terminals located out in production.



VALUABLE INFORMATION

"One of the most valuable features of Larmsaab is all the data that can be analysed afterwards," says Niklas Adolfsson. We can see how intervals between various types of downtimes vary, for example. This provides valuable information about the degree of wear. It is also easier to reduce irregularities in production, which directly has a positive impact on quality. Maintenance receives downtime analyses every day with information about location, cause and how the faults were dealt with in different areas of production. This is priceless information for maintenance planning. Production receives information about alarms related to material and personnel disruptions and can address these issues quickly. All measures are then entered into the database. "We are very pleased with the system and often host visits from others who are very impressed," concludes Niklas Adolfsson.

SYSTEM OVERVIEW LARMSAAB

Larmsaab is built around the control system detecting faults in plant sections. The fault triggers a deviation signal in a PLC linked to the master system, Proficy iFIX, which updates an internal database. Proficy iFIX also acts a concentrator for connecting several PLCs to the same computer. A logging program regularly reads the Proficy iFIX database via DLL calls. If the program registers a deviation signal, it checks a reference table to ascertain if it is an alarm or an event. In the case of an alarm, an entry is created in the SQL "Alarm list" table together with a detailed information form. A search number linked to the relevant shift is issued, and an alarm signal is transmitted. In the case of an event, the measures stop at the table entry "Alarm list" and the detailed information form. The most important feature of the system is the SQL server and its database. It contains the tables where all alarms and events are stored. The database can be accessed by all computers connected to the network. Larmsaab is the last part of the system and the only part that a regular user needs to know about. Users can collect, enter and create data in the database via Larmssab. A log-in system makes it possible to link alarms to specific users.

SUMMARY

COMPANY

SAAB Automobile

SOLUTIONS

Automation solutions

- HMI/SCADA
- Fully automated alarm system
- Downtime monitoring

PRODUCTS

- Proficy iFIX

BENEFITS

- From 80% to 96% up time
- Reduce irregularities in production
- Identities need för maintenance
- Separate process stop from material shortage
- Find the root cause of fault

For more information on our smart solutions, please visit our website www.novotek.com

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