

SPECIAL REPORT

Safe lockage with new control system



Photo: Rasmus G Höglund

Last year work began on connecting locks and movable bridges along the Trollhättan Canal to a new control and monitoring system in the then newly opened canal centre. This autumn the last of the six locks and three movable bridges will become part of the system. The old control pulpits with push-buttons and lamps were replaced by a modern, computer-based control system with graphical interfaces. Aside from a better working environment with an improved overview there is also the ability to control equipment remotely from several places.

-The new system enables us to remotely control all of the locks and movable bridges from the new canal centre, says Börje Jarl, Project Manager at the Swedish Maritime Administration. The new control system with its graphical interface also provides a better overview and simplifies control maneuvers.

Modern remote control solution

Trollhättan Canal is around 50 miles long, of which six miles are man-made while the rest comprises a natural navigable channel in the Göta River. Height differences totaling 145 feet are overcome by six locks; one at Lilla Edet, four in Trollhättan and one at Brinkebergskulle in Vänersborg. There are both fixed and movable bridges across the navigable channel for road and rail traffic. The chain of locks is passed by around 10 freighters per day year round, and by an additional 4,000 leisure craft during the summer months.

Until now, lock operations were controlled by means of conventional push-button pulpits with change-over switches and lamps, one pulpit per station, but now operations have taken steps toward a modern solution that provides several advantages:

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Many systems working together

There are a number of different technical component systems that must work together for lockage to work properly. Apart from the lock gates themselves there is a system of valve ports that are used to fill and empty the locks. There are also booms and signals for pedestrians and canal traffic and supply systems such as hydraulic equipment. There is also a system of bubble curtains used to prevent ice formation close to the gates during winter.

In order to control the locks remotely it is necessary to see what is taking place on site so a new TV monitoring system has been installed to provide operators full control. The TV monitoring system is connected to the operating system so that the right camera is always connected when the various maneuver functions are activated.

-We have long experience of this type of operating system, says Ninni Erixal, Project Manager at Infracontrol. It all started back in 1994 when we installed the system for the Göta River Bridge in Gothenburg. It's great to see how well-designed systems really make life easier for users.

About Infracontrol

Infracontrol was founded in 1993 as an independent system integrator, specialising in infrastructure IT. Since then, and in collaboration with our customers, we have created an ever-more Intelligent Infrastructure that makes life easier for us all. Our customers are primarily public procurers for the state and municipalities.

We help society function better by means of more user-friendly, useful and smarter IT solutions. We make sure technology is here to help people and not vice versa – as is so often the case – through our special focus on usefulness and utility. The result is user-friendly support systems that lead to increased safety, reduced energy consumption, improved working environment and better utilisation of investments.