SIGNAL CONTROLLED WARNING SYSTEM

- A fix installed automatic warning system connected to an interlocking
- Highest operation availability of the infrastructure while maintaining safe operations
- Reduces cost and duration of railway construction while providing maximum safety for construction crews
- Provides a universal warning system for all types of applications
- Achieves Safety Integrity Level SIL 4

Connecting and warning via GSM-R/GPRS
- Allows multiple work zones to be protected simultaneously

FIELD ELEMENTS

FIELDTRAC 6392 SCWS
Signal Controlled Warning System
If the minimum evacuation time cannot be met, the warning centre activates the warning of the workers and simultaneously causes the local interlocking to delay clearance of the departure signal until the minimum time can be met. A good example is when a construction site is directly after the station departure.

In Austria the required minimum evacuation time of the construction site is 30 seconds. At the moment the system is being extended by realizing an interface to RBC (Radio Block Center) for lines equipped with ETCS Level 2, which optimizes the accurately prediction when the train arrives at the construction site. Warnings are sent to mobile warning devices via GSM-R/GPRS.

MAIN REFERENCES

• Pilot Project: seven warning centres within the operating control district of Gänserndorf
• Roll-out for entire ÖBB network in parallel with construction of operating control centres in Innsbruck, Salzburg, Linz, Villach and Vienna

TECHNICAL CONCEPT
The product family FieldTrac 6392 SCWS was developed in cooperation between Thales Austria and the German company Zöllner. The system is based on a modular concept combining the Thales-designed warning centre with Zöllner-designed autonomous warning devices. The system concept is based on providing a local warning centre for each interlocking system. The warning centre is connected either to the electronic interlocking system over a serial data connection or to a relay interlocking system over a parallel interface. All train movements are reported to the warning centre from the interlocking system over this interface in real time. Train movement information is combined with knowledge about the location of the workers in the danger zone, which allows the warning centre to calculate the optimal moment for providing the warning. The warning centre allows multiple work zones to be protected simultaneously within one interlocking system range.

The warning centre sends a signal via a data bus to the warning devices located in the construction area. These devices then warn the workers acoustically and optically in time to clear the site before arrival of the approaching train.

SYSTEM OVERVIEW SCWS 2.0