Directory

Track & Infrastructure

ZÖLLNER

Safety Solutions for Track Worksites

Another segment of our company focuses on keeping people safe on track worksites and one way to do so is with the help of our Automatic Track Warning System.

Made up of flexibly combinable modules, the Mobile Radio Warning System MRWS can be adjusted to each worksite situation and the specific works carried out meaning maximum safety while keeping costs and efforts as low as possible. Due to this flexible nature, the MRWS has been deployed on thousands of worksites across Europe and Australia.

Technology with the Highest-Possible Safety Integrity Level

As a SIL4-certified system, the MRWS is 'failsafe'. The SIL – safety integrity level – is a measurement of a system's safety and reliability. SIL4 is the highest of the four SIL levels defined in functional safety (according to standards such as IEC 61508/CENELEC) and sets the most rigorous requirements for a system's safety and reliability standards. We develop our systems in-house meaning that our teams have worked strenuously to meet the required analysis, planning, testing, implementation and validation to guarantee the highest possible risk minimisation.

The Principle of a ZÖLLNER Track Warning System

The system is developed to be easy to handle, flexible and user-friendly. A warning system always consists of a train detection method (a device or a person), a control unit and a number of warning devices. In case of the ZÖLLNER MRWS, train detection can either be realised using a track sensor, a lookout or via the signal from the interlocking. The MRWS family includes a variety of different warning devices which always allows each worker to be warned in a way best suited for their work. The Autoprowa® effect, built into all our warning devices, ensures a warning signal volume that is proportional to the surrounding noise, making it as loudly as necessary but also as softly as possible to protect the environment and residents in the vicinity.

When a train is detected, the warning signal is immediately emitted at the worksite, giving all

workers enough time to leave the danger zone. LED lights on each warning device are reminders of the active warning. The warning is cancelled either by the operator or automatically via another track sensor.

New: ZÖLLNER COBRA

The ATWS, can however, also be used in combination with the ZÖLLNER system COBRA (control of balises with remote assistance). COBRA is a new system for remote control of (Euro) balises on ETCS lines and it can be used to stop or brake trains. This means that a train is only able to pass the worksite if all workers have cleared the danger zone and the operator gives permission via the control unit. If the balise is switched to STOP via the control unit, the rail vehicle is braked.

Permanent Warning Systems

Another innovative method to use the MRWS to protect worksites that require regular maintenance access are permanently installed warning systems independent from the interlocking. Examples are maintenance-neuralgic and difficult-to-secure track areas such as junctions, tunnels and bridges. For these types of worksites, inductive train detectors can be installed and are left on track for several weeks, months or even permanently. Other system components, e.g. radio transmitter and warning devices, are brought to site and operated on battery power.

The ZCloud

Tracker information (e.g. location, device status, battery status) of all active MRWS systems can be viewed at all times using the web-based ZCloud. ZCloud uses the device tracker to recognise which components work together and automatically groups them together as an 'active system'. All components in the respective stock of devices that are not currently in use or are not assigned to a system are listed separately. All available data is stored in the logbook and can be called up or exported there. Even when the device is deactivated, the location information is transmitted to ZCloud.
No matter the track worksite situation, the ZÖLLNER product portfolio delivers a solution for securing the worksite effectively and efficiently.

For more information visit **www.zoellner.de** or email **international@zoellner.de**.

ZÖLLNER
signal system technologies