Correctional Facility in Tilburg, the Netherlands, Reference





Reliable fire protection in the correctional facility in Tilburg

Correctional facilities represent a great challenge for fire protection because of the special structural features due to operational conditions. In the *Penitentiaire Inrichting Tilburg* correctional facility, it was therefore decided to instigate a comprehensive and networked fire protection concept.

The prison complex consists of 24 buildings and can hold about

560 prisoners. In 2007, a total of 335 cells, 15 solitary cells, office and administration buildings, workshops, sport and visiting areas, a laundry, kitchen, and library were equipped with fire detection technology by ESSER. The project was realized by **Novar Nederland B.V.** within the framework of one change: A penal institution arose from the complex formerly constructed as barracks.



In Tilburg it was necessary to fulfill the special security requirements in the individual areas of the correctional facility and to replace existing old fire detection technology with a homogeneous system linking the buildings. A special challenge was to carry out the installation with no interruption in operation or in the course of everyday life in custody.

In addition, reliable detection had to be guaranteed in all buildings, even during the replacement.

The solution

In order to endow the entire Tilburg facility area with ESSER fire detection technology and to guarantee smooth integration during this period, stages were formed in which, for example, eight cells were each simultaneously refitted. There were 1,151 IQ8Quad optical smoke detectors, 135 IQ8MCP and 344 IQ8Quad O2T multisensor detectors (of which 73 had integrated alarm sounders) used for this. According to operator requirements, aspirating smoke detectors were installed in "high security cells" because of the increased need for security. No furnishing or fixtures were allowed in these rooms: The

prisoners should have no possibility of endangering themselves or prison employees with damaged or misappropriated furnishings or fixtures.

All detector activities are coordinated via more than 19 **IQ8**Control M and two 8008 fire alarm control panels, which are networked via an essernet and are controlled via two master panels. Should an alarm occur, the fire department is informed via a direct connection including specification of the type of triggering, and the on-duty guards receive an announcement on their wireless communication receivers via ESPA interface for immediate intervention. The installation of the entire system took four months to complete.



The benefits

Through the use of different detector types as well as different types of detection, the individual security requirements in Tilburg could be successfully fulfilled. **IQ8**Quad O²T detectors also detect disturbance signals in the cells both reliably and false alarm-proof, as for example vapor from the integrated shower cubicles.

The seven ESSER ARS 70 aspirating smoke detectors used offer the highest levels of sensitivity and early warning, even considering the difficult local factors in the isolation cells relevant to security. Concealed behind wall and ceiling linings, the danger of manipulation and vandalism is reduced as well.

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