

WAGNER® 

Impulse

The WAGNER Group GmbH customer magazine

COVER STORY

Maintenance is a must!

Ensuring fire prevention systems
are ready for service

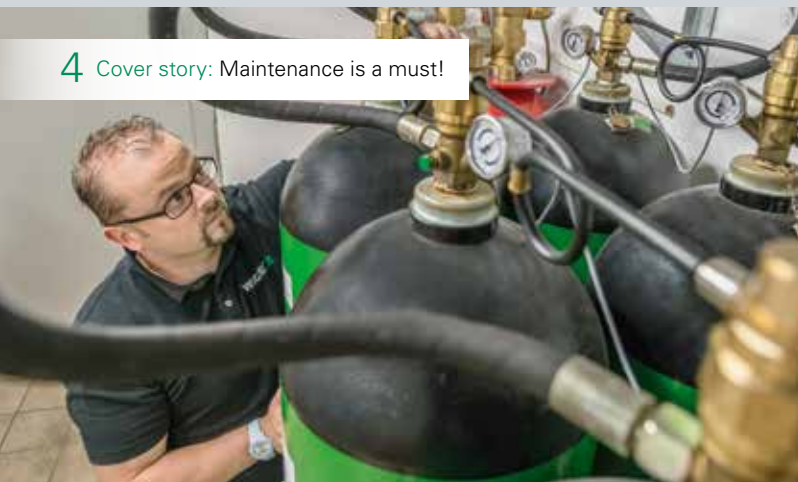
**INTERVIEW WITH
TORSTEN WAGNER,
MANAGING DIRECTOR**

"Our customers think increasingly
in terms of processes."

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IMPERIAL AUTOMOTIVE
LOGISTICS GMBH**

Optimum protection
around the clock

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▲ Visit us at Security Essen 2016, in Germany from 27 to 30 September in hall 3, stand 3D44 – we look forward to seeing you!

LEGAL NOTICE

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Dear readers and business partners,

the previous edition of WAGNER Impulse focussed quite fittingly on our company's 40th anniversary. Having explored WAGNER's history, we would now like to draw your attention to the present day and the future.

As a technology leader we are continuously developing our products. Our family of TITANUS® air sampling smoke detectors has recently been expanded. We have also further developed the VisuLAN® X3 risk management system which provides an integrated, vendor-neutral system for safety, building and communications technology.

This issue of WAGNER Impulse describes and illustrates these developments. Would you like to get up close and personal with these and other innovations? Then why not pay us a visit at Security Essen, the world's leading trade fair for the security industry over the last 40 years – we look forward to seeing you there!

Changing the subject, did you know that the maintenance of fire prevention devices is an important obligation for operators? Our article about maintenance will tell you more about what you should be especially concerned about. And our expert feature contains the most important information on qualified fire protection officers.

We hope you enjoy an interesting read!

Best regards,
Torsten Wagner

Best regards,
Werner Wagner

Managing Directors of the WAGNER Group GmbH



Maintenance is a must!

If a fire breaks out in your production facility you want your fire prevention systems to work flawlessly. Professional maintenance plays a very important role here. There are serious consequences if the systems fail to work due to lack of maintenance – not least for the operator, who could be held liable. For this reason there are clear guidelines concerning what types of maintenance should be carried out when and by whom.

Commercial and industrial company operators are bound by workplace and industrial health and safety ordinances and by respective German Federal Sta-

te building regulations to ensure that fire protection measures are fully functional. This includes, not just the correct installation, but also the maintenance of the relevant equipment.

In practice the situation is often very different. For example, the fire prevention systems required are planned and installed in line with regulations, but are often neglected afterwards. The reasons range from cost savings, ignorance and unrealistic risk assessments through to not registering structural modifications that could affect the effectiveness of the fire prevention systems that were originally designed and

installed. These types of neglect can be expensive – if the operator has not met maintenance obligations it can invalidate insurance cover in the event of a fire. If the fire resulted in injury or death there could be criminal consequences for the operator.

Standard compliant maintenance

It stands to reason, fire prevention systems can only fulfil their purpose if they are kept fully functioning with professional maintenance. According to DIN 31051 maintenance is divided into four basic areas:

- Inspection,
- Maintenance,



◀ Professional maintenance in compliance with current standards is essential to ensure that fire prevention systems work flawlessly all the time.



- Repair and
- Improvement.

Inspection serves as determining and assessing the target condition and can be referred to as a function check in the broadest sense. Maintenance includes measures that ensure the target condition is met, e.g. replacing worn parts and cleaning tasks. Repair refers to a defective system being fixed so that it can resume operations. Improvement combines all measures to improve functional safety.

Legal basis

Different guidelines apply to the maintenance and testing of fire prevention systems:

- Manufacturers' maintenance instructions,

- Property insurance guidelines,
- Building regulations of the relevant federal state,
- Relevant insurance provisions.

For example, for technical fire protection solutions from manufacturer and installer WAGNER Group the following guidelines are particularly important; VdS 2093 (fire extinguishing systems with gaseous extinguishing agents), VdS 2380 (fire extinguishing systems using non-liquefied inert gases), VdS 2381 (fire extinguishing systems using halocarbon gases), VdS 3527 (oxygen reduction systems) and DIN VDE 0833 (danger and fire alarm systems). The corresponding data sheets detail the inspection periods and all the actions to be performed as part of the maintenance (see box). The manufacturer's maintenance instructions and the

guidelines apply as agreed by the operator, the installer and the insurer.

As a general rule, it can be stated that the operator is obliged to regularly monitor the facility and ensure that all required maintenance has been carried out. This starts with self-monitoring carried out daily, weekly or monthly by the operational supervisor responsible for the fire protection equipment or the fire protection officer – precise control plans for each device can be obtained from the respective manuals. Inspections and maintenance should always be carried out by certified companies. Expert testing in accordance with the building regulations for the facility should be done by an independent expert from a testing organisation such as VdS, Dekra or TÜV.



► Continued from page 5

Selecting a certified installation firm

It is risky if equipment is not passed through the relevant expert testing or if the testing is not done by a VdS recognised installer. Operators often

rely on companies that are not certified for their maintenance. This can cause problems as these firms often have insufficient knowledge about the type of equipment and do not have direct access to spare parts for repairs. It is

▼ The installation company is the first choice for maintenance of fire prevention systems.



5 reasons for having maintenance done by the installing company

When it comes to the maintenance of fire prevention systems, the installing company should be first choice because:

- ✓ for each system type they are certified in accordance with DIN 14675 and are recognised by VdS,
- ✓ they have personnel trained to carry out professional maintenance in line with current standards,
- ✓ they stock spare parts or can source them quickly,
- ✓ they can provide emergency assistance around the clock,
- ✓ they can support operators with any queries they have about fire protection.

Fire extinguishing systems with gaseous extinguishing agents, oxygen reduction systems, fire detection systems and air sampling smoke detectors: as the following overview shows, they all have different maintenance requirements depending on the type of equipment.

System type	Fire extinguishing systems with gaseous extinguishing agents	Oxygen reduction system to prevent fire	Fire detection systems	Air sampling smoke detection system
WAGNER systems	FirExting®	OxyReduct®	FPA 1200/5000W	TITANUS®
Rules, directives, data sheets	VdS 2093, VdS 2893, BGR 134, VdS 2380, VdS 2381	VdS 3527	DIN VDE 0833, part 1, VdS 2095	DIN VDE 0833, part 1, ZVEI 82022, VdS 2095
Controls by operator	daily, weekly and monthly (visual inspections)	daily, weekly and monthly (visual and functional tests)	daily, weekly and monthly (visual inspections)	daily, weekly and monthly (visual inspections)
Inspection by certified specialist company	–	4 times a year	4 times a year	4 times a year
Maintenance by certified specialist company	min. once a year	min. once a year	min. once a year	min. once a year

playing with fire in the truest sense – if an operator engages an under-qualified maintenance company and the device then fails in the event of a fire, the responsibility lies completely with the operator. In a worst case scenario, he himself would be held liable for any damage caused. Accordingly, in accordance with VdS 2038, the general safety procedures of fire insurers for factories and commercial premises apply, in that through maintenance it should be ensured that fire protection equipment is in constant readiness for use, otherwise insurance cover may be invalidated.

It is no surprise then that the VdS, for example, recommends that maintenance is carried out by an installation firm that knows the system. Operators must set an example. It also means that in the event of a failure spare parts supply is not a problem. And exemplary fire protection will pay off – with the protection of people, equipment, buildings and the environment. Having a maintenance contract with a recognised installation company does not just guarantee that equipment is constantly ready for use, it also means that compulsory inspection and maintenance dates are not missed. Changes in the equipment are noticed immediately and are repaired straight away, which preserves and prolongs the value of the whole system. Another advantage: annual maintenance costs are clear and easily calculated as they are detailed in the contract. ■



▲ An EU conformity declaration is often required for the whole system or for individual components.



EU CONFORMITY DECLARATION

The safe operation of a fire extinguishing system must be guaranteed at all times – in emergencies as well as in everyday standby mode. An EU conformity declaration is often required of manufacturers for the whole system and for individual components. However, EU conformity is not always necessary. The Bundesverbands Technischer Brandschutz e.V. (bvfa) [German Association of Technical Fire Protection] in their position paper “CE-Konformität von Feuerlöschanlagen” [EU conformity of fire extinguishing systems] in conjunction with the VdS clarifies in which instances a declaration of conformity is required and which conditions need to be met.

rators of extinguishing systems an overview. There are a number of standards and directives to be aware of, for example DIN EN 54, the Pressure Equipment and Low Voltage Directive.

As fire extinguishing systems are made of various components, it is normal to expect that part of one or more European directives must be complied with. The manufacturer should make any certificates of compliance for equipment components available. In particular for equipment that is subject to the Pressure Equipment Directive, EC labelling must be displayed, as due to pressurisation there is a higher risk of danger. ■

For the European Union the regulation 765/2008 has been applied since 2008. It states that is sufficient for the manufacturer or distribution company to declare that the product meets the requirements by attaching EC labelling. This regulation also applies to fire extinguishing systems and individual components. The bvfa's position paper summarises the technical framework conditions and the applicable EU provisions, in order to give manufacturers and operators

FURTHER INFORMATION



The position paper is available online at www.bvfa.de or as a download if you scan the QR code.



“Our customers think increasingly in terms of processes – just like us.”

As a school boy he handed out flyers about the establishment of the company and spent his summer holidays assembling circuit boards with electronic components. As a student, with his fellow students, he installed cables for intrusion detection systems. Torsten Wagner has been one of the WAGNER Group’s managing directors for the past ten years. We discuss his plans for the future, the role of family companies and working alongside his father.

Did you ever consider not joining the family business?

I have asked myself that question. In particular, where would I go instead? As far as I could tell there was not a company that could give me more. So the decision was easy.

Did your father influence your choice of career?

He has never controlled it. Of course, he was, and is, my role model. But right from the start I enjoyed electrical engineering. So after leaving high school, I studied at Hanover university. Engineering is a very interesting profession, you can design things, develop new things.

Did you have it easy because you were the boss’s son?

No, quite the opposite. I think I always got the really difficult tasks. To start with I worked in the order centre, entering orders onto the system. Then I worked my way gradually into sales and was eventually responsible for special projects. It was exciting to become a manager.



A BRIEF PROFILE



As a school boy **Torsten Wagner (49)** helped with his parents' company, before he went on to study electrical engineering. On 1 January 1996 he started working in WAGNER Group's sales department and after three years moved on to product management, where he later became manager. At the same time he was managing director for the whole of the TITANUS® delivery business, later becoming managing director of the WAGNER Group. Today, as managing director he is responsible for technology and logistics. Torsten Wagner lives with his family near Hanover.

to found the ZUKUNFT INC. initiative. We are represented jointly at jobs fairs with companies such as Bahlsen, Sennheiser and Kind Hörgeräte. This makes us more interesting to potential applicants. And we work very closely with high schools, we offer grants and placements, we have student trainees and issue master theses. So, we are very active.

Mr. Wagner, thank you very much for the interview.

Where is WAGNER heading?

The demands on us are changing because the way in which we live and work today is changing too. More and more energy is needed in companies due to increased automation and digitalisation, which in turn increases the risk of fire as the energy is often converted to heat that needs to be dissipated. 30 years ago operational disruptions were not too critical. Today, customers expect their goods to be delivered the next day and online banking to function around the clock. This has made fire prevention extremely important in the logistics sector and in computer centres. Our customers recognise this and think increasingly in terms of smooth, efficient processes, just like us.

At the Security trade fair WAGNER is launching a new air sampling smoke detector. What is so special about it?

The TITANUS® *MULTI-SENS* is a self-teaching air sampling smoke detector. Up to now we have been able to detect fires very early and with high immunity to nuisance alarms. With the TITANUS® *MULTI-SENS* we cannot only tell that something is burning but also what is burning – for example a cigarette. This means that we can make different decisions in order to avoid nuisance alarms due to customer-specific disturbances such as cigarette smoke, theatrical smoke or dust.

Wagner focusses on innovation and unconventional ideas. How do you develop ideas?

We have just introduced agile development. When we have a development project we no longer throw everything at it. Teams develop in short cycles and come to independent agreements. As a rule you cannot say from the outset what a product should look like. Then it would, indeed, be almost finished. Often we do not know until the end of the development process how the product will look.

Do you have a R&D department or do you have specialists?

We work in a holistic way, but on very different products, and we have different skills and knowledge within the development teams. You need different employees for the production of nitrogen for an OxyReduct® than you do for an air sampling smoke detector. Our aim is that a team develops their own product. But, of course, they can also make use of knowledge from other teams.

What is in store for the company over the next few years?

It is important for us to remain a family company and therefore we will continue our organic growth. We want to keep control of things, with short decision-making paths and close proximity to our customers.

It is often said that there is a skills shortage in the economy. How does this affect WAGNER?

This is an area of concern for us right now. When we are looking to recruit engineers we are competing with big companies such as Continental or Siemens. So we decided, along with other companies in the Hanover area,



TITANUS® *FUSION* – the affordable high-end air sampling smoke detector

TITANUS® *FUSION* is a new air sampling smoke detector from WAGNER Group GmbH which combines innovative engineering with decades of experience: designed for monitoring medium-sized areas of up to 3,200 m², the new smoke detector rounds out the product range of the proven, successful TITANUS® family to detect the tiniest particles of smoke with great sensitivity, even under the toughest conditions.

This affordable high-end air sampling smoke detector has been designed to monitor equipment such as servers, high rack storage systems and machinery, as well medium-sized rooms in museums, libraries, EDP facilities, storage areas and production facilities. The system is also suitable for areas to be monitored that are difficult to access, such as tunnels, raised floors, suspended ceilings, cable ducts, lifts or conveyor belts. Its range of applications covers operating temperatures from -30 °C to +60 °C and it is suitable for even the most demanding conditions, with heavy dust, moisture,

electromagnetic radiation or intense air conditioning. A Silent version featuring a very low sound pressure level of just 23 dB(A) is available for noise-sensitive areas.

The great degree of planning freedom enables pipe lengths of 2 x 160 m with 20 air sampling points each. Three main alarm sensitivities, 0.015 % LT/m, 0.10 % LT/m and 0.50 % LT/m, can be selected depending on the requirement. Two detection modules and pipelines can be planned in order to establish dual detector dependency or separate monitoring of two areas with a single detection device. A range of accessories certified in accordance with DIN EN 54-20/ISO 7240-20 rounds off the modular system. A staged alarm signal with pre-alarm and main alarm is available as an option.

The plug & play system ensures extremely simple planning and commissioning and includes the advanced detection quality of the TITANUS® family, such as LOGIC-SENS for nuisance-alarm-proof smoke development

pattern recognition, and the optical detection method with high-power light source (HPLS) for a long service life. The TITANUS® *FUSION* is equipped with precise air flow monitoring ($\pm 10\%$) in the measuring chamber for maximum functional reliability. The affordable detector also offers low operating costs thanks to its low current consumption from 140 mA. ■



Application from -30°C to $+60^{\circ}\text{C}$ (SILENT-Version 0°C to 40°C)



Can be used in very dusty environments thanks to filter concept (optional)



SILENT version from 23 dB(A) for noise-sensitive application areas



TITANUS®-Aspirating Smoke Detection

Reliable smoke detection at the earliest possible stage

This is the principle behind the TITANUS® air sampling smoke detectors from WAGNER: The air sampling smoke detectors actively take samples from the air in the room via pipelines with aspirating holes. The technology recognises even the slightest traces of pyrolysis particles by means of the "High Power Light Source" optional detection process. Just two grams of material undergoing pyrolysis is sufficient for this purpose. This makes TITANUS® up to 2,000 times more sensitive than

conventional point-type detectors. Due to the time benefit counteractive measures can be taken quickly and purposefully in order to protect areas from fire and consequential damages.

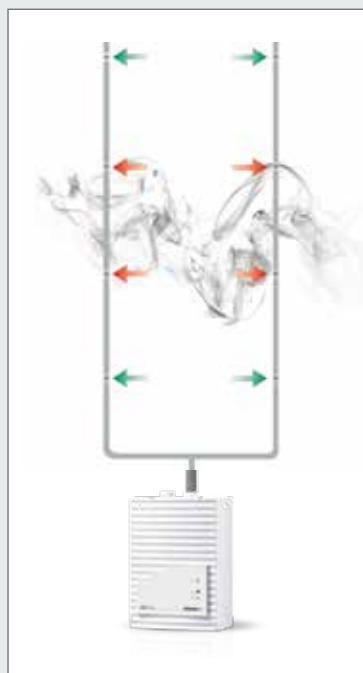
Nuisance alarm immunity

All models have smoke development pattern recognition with the patented LOGIC·SENS technology: Smoke particles are reliably analysed for smoke patterns, interference factors due to environmental conditions are recognised, and nuisance alarms are thereby avoided.

KEY BENEFITS

- **Highly sensitive smoke detection with nuisance-alarm protection for medium-sized areas**
- **Monitoring area of up to 3,200 m², max. pipe length of 2 x 160 m with 2 x 20 intake openings**
- **Precise airstream monitoring in the measurement chamber ensures the highest functional reliability**
- **Low operating costs due to very low electricity use, from 140 mA depending on device type**
- **Optional adjustable pre-alarm**
- **Plug-and-play system for the simplest possible planning and installation**
- **Certified accessory range in line with DIN EN 54-20/ISO 7240-20**

CUMULATIVE EFFECT INCREASES THE SENSITIVITY



◀ A cumulative effect is achieved by having multiple sampling holes in a room that extract any smoke that arises simultaneously. In these conditions the sensitivity of an air sampling smoke detection system offers a huge advantage.

Essential for each company: a qualified fire protection officer

Protection against loss of life and injury must always be the top priority when it comes to fire protection. At the same time, the economic benefits of effective fire protection for companies cannot be overemphasised. As well as the potential damage caused by the fire itself, the consequential effects of fumes and the often long-term disruption to, or even complete shut-down of, operations is often underestimated.

The employer is responsible for fire protection, but as with all safety issues, the preventative fire protection measures must be adopted and implemented by the employees. It is therefore important that they are well-informed

and well-trained. This is particularly important for the fire protection officer (FPO). The appointment of a fire protection officer is often explicitly required – as part of planning permission, through building regulations such as the Industrial Building Directive or particular state construction regulations. Often a FPO is also expressly required by the fire service or insurance companies. It makes sense for every organisation to have a well-trained FPO as they can make a long-lasting contribution to overall safety.

In their role the FPO takes on one of the employer's most important protection obligations. Although, in the event of an incident, overall responsibility re-

mains with the employer, the FPO can also be held liable if they have neglected their duty of care. In the event of an emergency this could result in civil proceedings and, in cases of gross negligence, even criminal proceedings against them. Moreover, in the majority of cases the FPO takes on their fire protection duties in addition to their main role. This makes it all the more important that they have suitable qualifications for the role and continuously expand their knowledge and keep themselves up to date.

The VdS training centre, which is celebrating its 25th anniversary this year, has been providing thorough and practical training for fire protection officers

▼ The VdS training centre offers practical training for fire prevention officers.



Information and impressions from
25 years of the VdS training centre:
www.vds.de/25bz

” For us the most important thing is the quality of the training. This includes continuously developing our training courses and keeping them up to date in terms of actual cases of damage, new hazardous situations or changes to guidelines. “

Ingeborg Schlosser, Head of the VdS training centre

for a long time. The two-week seminar is available in Cologne and in five other cities. It has received very good feedback from companies and participants over the years.

VdS's training model is in line with the relevant fire protection officer guidelines from Germany's fire protection association (vfdb) "Appointment, functions, qualification and training of fire protection officers" and the identical provisions of the DGUV [Association of occupational accident insurance funds] (as representative of the commercial trade associations) and with VdS loss prevention. At the VdS training centre successful participants receive a VdS course certificate as well as an internationally recognised certificate from CFPA Europe (Confederation of Fire Protection Associations Europe), who recognise the compliance of the FPO course.

It is also important for fire protection officers to receive regular further training. The VdS training centre offers something for everyone with its comprehensive programme of preventative fire protection training. For 25 years the renowned training institute has had a successful presence in the safety and loss prevention sector and now welcomes more than 7,000 participants a year. The wide range of training opportunities comprise 90 different courses and around 25 conferences on subjects such as fire protection, security, electrical devices, occupational safety, information security and natural hazards (www.vds.de/bildung).



▲ Participants appreciate the practical demonstrations.

"FPO participants appreciate the appropriately qualified speakers and the high practical content of the courses. They also appreciate the visual demonstrations during the courses, such as the 'explosive' experiments demonstrating the physical principles of fires, for example," says Ingeborg Schlosser, Head of the VdS training centre.

The participants have confirmed this with a recommendation rate of 95%. "Thanks to the high level of training provided by the VdS training centre you can be sure that you are always up to date with technological developments," says Daniel Kollross, technical expert in electrical and service installations at TÜV SÜD Industrie Service GmbH.

Schlosser explains: "In general our participant evaluations come back as either good or very good. We would like to thank our visitors for their great confidence in our work. It is a great motivation and incentive for the next 25 years!" ■

A BRIEF PROFILE



Marion Vallentin

designs the VdS training centre courses on fire protection, in particular the

further training of fire protection officers. She is also responsible for marketing and communications for the business sector.

Identifying risks and effectively controlling them

Well-thought out fire protection concepts to increase safety

Fires often have survival-threatening effects: According to the current “Global Claims Review 2015: Business Interruption in Focus” from Allianz Global Corporate & Specialty (AGCS), business interruptions are the top risk for companies in an increasingly interdependent and globalised commercial environment. During the investigated time period, 2010 to 2014, fires and explosions were the top reason for interruptions.

Globally, fires and explosions were responsible for around 60 % of the analysed business interruptions with losses. In Europe it was actually 78 %. On average the damages amounted to €1.7 million. Thus it is hardly surprising that fire is the mostly feared cause of business interruptions by companies.

The mandatory fire protection for buildings that has to be complied with comes from the German constitution and building regulations and is first and foremost about protecting lives. The protection of property or prevention of business interruptions plays no part here. If there are no additional requirements from the insurance company then it is up to the company how comprehensively they want to protect themselves.

The risk assessment

Determining risks as well as opportunities is one of the obligatory tasks for company management. They need to derive suitable measures to manage those risks. A comprehensive risk assessment should, therefore, be a matter of course for every company. In order to determine its own risks, a company must evaluate potential damage and the probability of occurrence. The results of the risk analysis are then used to determine a suitable protection concept to minimise the risk.

Fundamentally, all fire protection measures are viewed as an integral part of a comprehensive fire protection plan. Preventative fire protection is made up of structural, technical and organisational fire protection and then becomes fire defence through the fire service or self-help. However, this alone does not cover all a company's protection interests when it comes to risk management. If, for example, delivery capacity, availability or competitiveness need to be maintained, then standard building regulation compliant fire protection will often not be sufficient.

Technical fire protection can, with a comprehensively graded approach, contribute to the further minimising of risks. For example, automatic fire detection systems with modern air sampling smoke detectors help to reliably detect fires and mean that countermeasures can be taken sooner. Sometimes the intervention of the fire service and the use of extinguishing water can have catastrophic consequences for companies, even resulting in structures needing to be demolished.

A high level of protection is required to prevent business interruptions and to ensure availability, customer confidence and market share, and technical fire protection with automatic extinguishing systems offers a good solution. Wide-spread sprinkler systems are only partially suitable as, in general, they are only activated once a fire is quite intense and then you risk adverse thermal effects, smoke damage and damage from extinguishing water.

Automatic gas extinguishing systems offer a better level of protection. This system significantly reduces adverse thermal effects and smoke damage. However, it is still the case that the systems can only start fighting the fire once it has reached a certain dimension and the area it is protecting has been evacuated.

Active fire prevention

OxyReduct® systems reduce the oxygen level in the protection areas in order to create a fire retardant atmosphere and preventively protect against the risk of fire. ▶



Highest availability required

If the highest level of availability is required and adverse thermal effects and smoke damage need to be largely eliminated then an oxygen reduction system could be used. This system permanently reduces the oxygen level in the area it is protecting and so stops fires from spreading and offers preventative protection. Depending on the chosen design, the protection area can be accessible without restrictions or limited to a specific group of people.

Between the reactive FirExting® gas extinguishing systems for fire suppression and the preventative OxyReduct® systems for preventing fires with permanent oxygen reduction, WAGNER

already has a comprehensive portfolio of multilevel protection concepts for technical fire protection. Combined with highly sensitive air sampling smoke detectors from the TITANUS® family they provide solutions that can be tailored to the precise requirements of each company in order to effectively manage risks. ■



Fire suppression

FirExting® gas extinguishing systems ► offer an efficient solution within seconds and are damage and residue free.



Earliest smoke detection

TITANUS® air sampling smoke detectors ► detect fires very sensitively in the pyrolysis phase.



Optimum protection around the clock

From an automated small parts store in northern Germany Imperial Automotive Logistics GmbH (formerly Hansmann Logistik GmbH) supplies four assembly lines of an automotive manufacturer with cable harnesses. The supplied parts are delivered punctually daily to the production line in the 24 hour factory. A fire-induced interruption in supply would have catastrophic consequences for the logistics service provider and for the automotive manufacturer. Imperial was, therefore, looking for an effective fire protection solution.

320 cable harnesses an hour, all day, every day – this is how Imperial ensures that the assembly production line of the automotive manufacturer is kept supplied. There is a maximum delay of 90 minutes between the product being requested and shipped.

In order to guarantee this, all processes are meticulously coordinated with each other – from the delivery of parts onto the large load carriers, through the entry and exit of goods, to the loading of the HGV and transportation to the plant.

When it came to fire protection the best possible solution had to be found. Two things were particularly important to Imperial. The solution needed to take into account the technical fire protection challenges of an automated small parts store and adapt to them accordingly. Additionally the risk of a fire developing needed to be absolutely minimal in order to guarantee the company's continuous supply capacity.

Difficult conditions

When it comes to fire protection, automated high-bay warehouses often present difficulties: high bays and narrow gaps create the risk that fires will spread quickly under the hall ceiling and cannot be extinguished with conveni-

onal methods such as foam or water. The problem is accentuated by large volumes of highly inflammable storage materials such as paper, cardboard or plastic, which enable an uncontrolled spread of fire.

In Imperial's warehouse the cable harnesses are stored in small load carriers (SLC). These standard, stackable boxes are made from polypropylene (PP) – a material that behaves like a flammable liquid when it burns. Furthermore the burning PP drips and ignites adjacent materials, while the high thermal energy fuels the fire further. Such a fire is difficult to extinguish: water is difficult to apply because it just drips off the plastic surface.

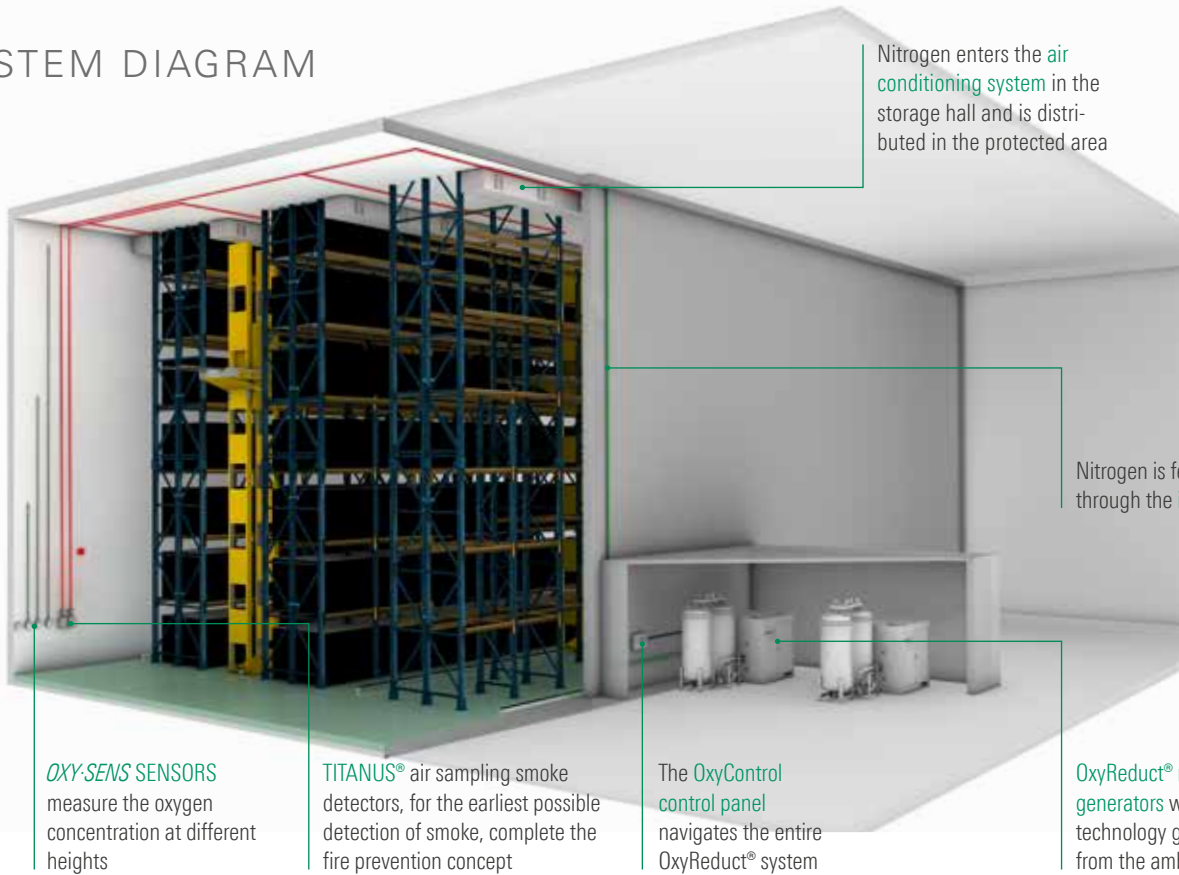
Guaranteeing supply capacity

Imperial's main objective when planning their fire protection solution was to minimise the risk of a fire in order to protect people and the environment as well as investments and material assets. As there is no room for disruption to supply in the automotive supplier's just-in-sequence processes, a sprinkler system was ruled out from the start.

▼ The TITANUS® air sampling smoke detector.



SYSTEM DIAGRAM



Its use would inevitably cause water damage, which in turn would cause an interruption to operations. Instead, the logistics supplier opted for active fire prevention, reducing the risk of a fire starting and spreading by reducing oxygen levels. For this reason the WAGNER OxyReduct® fire prevention system with energy-saving VPSA (Vacuum Pressure Swing Adsorption) technology

was used. Introducing nitrogen to the area being protected reduces the oxygen concentration to under 14.6 vol%. This takes it under the ignition threshold of PP, the material used to make the SLCs. The reduced oxygen level greatly reduces the risk that a fire will be sustained or spread. It also eliminates damage caused by smoke, soot and extinguishing agents.

Protection from a fire-related loss

This example clearly illustrates that an automated small parts storage has particular fire protection requirements. With the active OxyReduct® fire protection technology from WAGNER, Imperial found a solution which constantly protects their warehouse from fire-related operational and supply losses. ■

▼ The small load carrier is made out of polypropylene. This is a problem because in the event of a fire the material behaves like flammable liquid.

▼ If there was a fire the extent of the damage would be enormous: polypropylene drips.





Centrally and transparent managed safety

The Lenbachpalais in Munich, built between 1887 and 1890, consists of a studio and a Tuscan style urban villa and was originally the home of painter Franz von Lenbach. Since 1929 the buildings have been used as Munich's art museum. In order to protect the exhibits the "Städtische Galerie im Lenbachhaus" has installed the VisuLAN® X3 risk management system to network all the safety-related components.

The Lenbachhaus closed its doors at the start of 2009 as decades of use meant that extensive restoration work was required. After renovating the old villa from the ground up and constructing a modern new building, its reopening was celebrated in May 2013. The gallery now has 2,800m² of modern exhibition areas and visitors can also enjoy facilities such as a lecture hall, a museum shop, a café and a restaurant.

Sophisticated fire protection concept

However, there are also many structural modifications which are concealed from visitors' eyes: in order to protect the valuable art collection stored in the

Lenbachhaus from the effects of a potential fire, the four storage areas on the basement floor of the art gallery have been equipped with a comprehensive WAGNER fire protection solution. The solution consists of the Oxy-Reduct® fire prevention system and a TITANUS® air sampling smoke detector for early fire detection.

The basement area being protected is around 500m³ and is where the most valuable works of art are stored in a very confined space. The OxyReduct® fire prevention system reduces the oxygen content in the protected area to a constant 17.0 vol% by pumping in nitrogen. This creates a protective atmosphere which dramatically reduces the fire risk. The rooms remain accessible to personnel in the process. The oxygen concentration is constantly monitored by corresponding oxygen sensors.

Centrally controlled

And the final touch to the system is the VisuLAN® X3 risk management system, to which the fire protection technology and other technical safety components at the Lenbachhaus are

connected. VisuLAN® X3 connects the safety solutions from different providers into one vendor-neutral interface. In the Lenbachhaus the smoke and burglar alarm centres, escape route control, building services and video surveillance were efficiently combined into a single system. This means that all safety-related data can be managed and visualised centrally. It is also possible to access the system remotely using iOS devices.

▼ **VisuLAN® X3 connects systems from different providers into one vendor-neutral interface.**





Combining and evaluating data for the individual systems creates an information pool which enables hazards and disruptions to be identified quickly and safely in a targeted way. The risk management system suggests targeted ways in which to respond to different situations. Therefore VisuLAN® X3 is ensuring maximum safety for the art treasures in the Lenbachhaus. ■

▲ If all the safety solutions are appropriately bundled into one system, then all safety-relevant data can be managed and visualised centrally.

VisuLAN® X3: comprehensive security control center

In the event of a fire, an intrusion or the breakdown of a technical system seconds are often crucial when it comes to the progress and outcome of the event. In order to be well equipped in case of an emergency, all risk situations need to have been considered beforehand and precise control actions determined. For this very purpose WAGNER offers the comprehensive VisuLAN® X3 risk management system.

Its intrusion detection systems, video surveillance, fire alarm systems, access control and the control units of technical installations all ensure increased safety within the company. However, when they work independently from each other they represent stand-alone solutions and there is the risk that reactions and processes in an emergency response would not be consistent.

The solution is VisuLAN® X3: the system from WAGNER that integrates solutions from different manufacturers, from safety, building and communications technology through to IT infrastructure, into one standardised interface and serves as a central display and control unit. Risk situations are fully recognised and targeted countermeasures initiated. ■



NEW GENERATION OF ACTIVE FIRE PREVENTION



Experience active fire prevention with reduced oxygen atmospheres live: space-saving, cost effective and modular – this is the new OxyReduct® generation for the future.

NEW PERFECTLY ORGANISED SAFETY

Needs-based, intuitive and vendor-neutral: With VisuLAN® X3 different types of buildings, technical, communications and safety systems can be managed centrally.



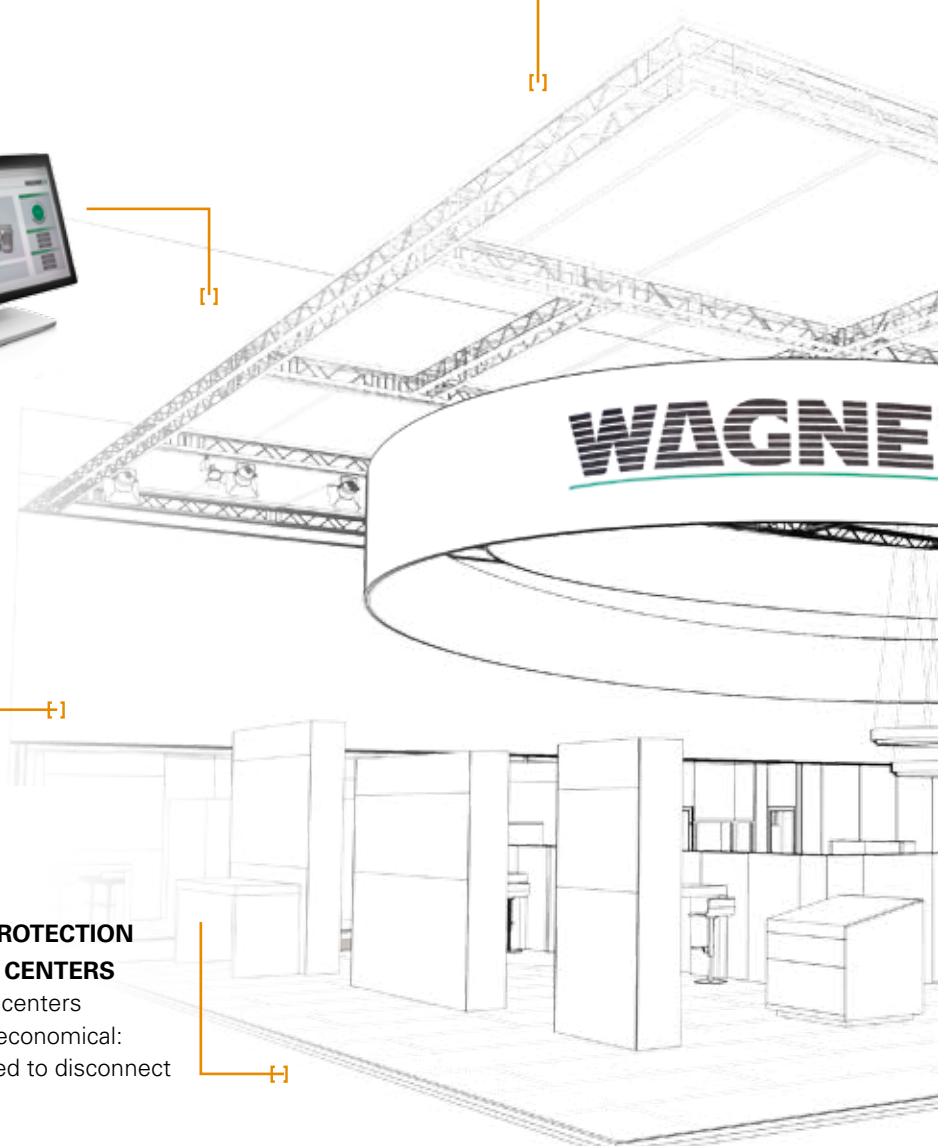
NEW CONCEPT EFFECTIVE AND RESIDUE-FREE EXTINGUISHING



Reliable fire-fighting with the naturally inert gas nitrogen – now possible to refill easily on site!

PREMIER 2-LEVEL PROTECTION CONCEPT FOR DATA CENTERS

Fire protection in data centers has never been more economical: no over sizing – no need to disconnect the power.





WORLD INNOVATION NEW
DETECTION PROCESSES

TITANUS *MULTI-SENS*[®] identifies what's burning and what's not. Business interruptions due to nuisance alarms are a thing of the past. The new air sampling smoke detector recognises customer-specific nuisance alarm sources.



NEW EARLIEST POSSIBLE
FIRE DETECTION

Versatile TITANUS[®] *FUSION* monitors medium-sized monitoring areas up to 3,200 m² with nuisance alarm prevention for low level smoke particles. With a maximum activation sensitivity of 0.015 % obsc./m the latest air sampling smoke detector delivers reliable smoke detection even down to -30 °C. A range of certified accessories and a silent version from 23 dB(A) are also available.



VISIONS BECOME REALITY

WAGNER has shown again and again how to turn visionary fire safety concepts into reality. Our **sustainable solutions** are based on the company's forty years of experience in systems manufacturing, as well as the expertise of its **in-house Research and Development department**.

As **international fire protection experts** we plan, process and construct fire detection systems, air sampling smoke detectors, gas extinguishers and oxygen reduction systems for active fire prevention. Our promise: customised fire protection to the highest level from a single source – because **safety is a matter of trust**. Experience pioneering fire protection in the protection of industrial buildings, computer centres and public institutions.



COME AND VISIT US IN HALL 3.0, STAND 3D44!

“OxyReduct® is the perfect fire protection solution for high-bay warehouses and it offers numerous advantages in comparison to sprinkler systems.”

Frank Siedler



Frank Siedler, President WAGNER Fire Safety, Inc., gave a presentation on active fire prevention at the GCCE.

Global Cold Chain Expo: the meeting point for the refrigeration

The Global Cold Chain Expo (GCCE) combines innovations, specialist lectures and networking for the whole of the refrigeration sector. Around 1,100 exhibitors – from food producers to providers of warehouse logistics, access control and fire protection solutions – showcased their products in Chicago, USA from 20 to 22 June 2016.

Some 10,000 participants visited the GCCE which took place in McCormick Place over two floors and in numerous halls. WAGNER showcased the OxyReduct® and TITANUS® product lines and they were very popular. Frank Siedler, President WAGNER Fire Safety, Inc. gave a presentation on active fire protection. “OxyReduct® is the perfect fire protection solution for high-bay

warehouses and it offers numerous advantages in comparison to sprinkler systems,” says Siedler. “We were very pleased with the interest in active fire prevention and with the related discussions we had. The GCCE is an important event and one that we will participate in again in future years.”

New contacts made at NFPA 2016



The National Fire Protection Association Conference & Expo (NFPA) is the most important trade fair for the fire protection industry on the American continent. This year it took place from 13 to 16 June in Las Vegas. The Mandalay Bay Hotel and casino was an ideal location for the event and with around 5,000 visitors and 400 exhibitors the fair was a great success.

WAGNER’s solutions attracted a lot of interest from visitors.

WAGNER showcased the OxyReduct® fire prevention system and the TITANUS® air sampling smoke detector at the NFPA. “Our products attracted a lot of interest from the specialist visitors,” said a pleased Frank Siedler.

WAGNER also used the fair to make new contacts and deepen existing ones. “The NFPA is an absolute must in our industry, which is why we will, of course, be there again in 2017 – the stand is already booked,” says Siedler.

Very successful seminar on “fire prevention in high-bay warehouses”

As part of the “FeuerTRUTZ im Dialog” series, the seminar “Brand-schutz in Hochregalanlagen” [fire protection in high-bay warehouses] took place in Langenhagen and Hanover on 20 and 21 June. The participants, who included architects, lawyers, specialist planners, experts and operators, looked at different viewpoints within the subject area and discussed the challenges in great detail.

The importance of fire protection in high-bay warehouses was evident from participant feedback on

the first day of the fire tests in the packed WAGNER World auditorium. Exciting and informative lectures the following day rounded off the event with over 100 participants. Working with FeuerTRUTZ to hold these seminars was an ideal platform for WAGNER to present the OxyReduct® fire prevention system to a wide audience. Judging by the number of satisfied faces, the event was a resounding success. ■

▼ Always of great interest: fire tests in WAGNER WORLD.



RECOMMENDED READING

Fire protection officers, remits and training

Authors: Lars Oliver Laschinsky, Uwe Wiemann, 292 pages.

The second edition of the fire protection officer guidelines comments on and explains vfdB guideline 12/09-01:2014-11, DGUV information 205-003 and VdS 3111 in a practical and easy to understand way. These regulations, which have been harmonised for the first time, formulate the standards in relation to tasks, qualifications, training and appointment of fire protection officers. The updated and expanded guidelines give valuable practical help concerning the structured and legally compliant implementation of the numerous tasks.



Published by Feuertrutz
 Verlag Köln, www.feuertrutz.de
ISBN 978-3-86235-240-1,
€ 39.00 incl. VAT.

Innovative fire protection for data centers

Extinguishing without turning the power off? WAGNER has developed a solution whereby a fire is detected very early in its development and is then effectively contained by a two-level extinguishing. Advantages: The power is not switched off, around the clock availability and low operating costs – ideal for data centers with free cooling.

Perfect intralogistics with a feel-good atmosphere

When massive reinforced concrete and trendy beauty products come together it can only mean CNL GmbH's newly built logistics centre with active fire protection.



Easy refilling of extinguishing systems

Quick refilling of ready-to-use nitrogen extinguishing system cylinders. Thanks to the innovative high pressure filling system, nitrogen generated on site can be used to automatically refill fixed extinguishing systems.

- No need to remove and replace nitrogen cylinders
- No need to transport hazardous goods
- No need to purchase nitrogen

Read these articles and more in our next issue of Impulse.

See WAGNER fire prevention solutions!

20/09/2016 – 23/09/2016
InnoTrans, Berlin (Germany)

27/09/2016 – 30/09/2016
Security Essen, Messe Essen (Germany)

15/11/2016
IT Room Infra, Den Bosch (Netherlands)

23/11/2016 – 24/11/2016
Data Centre World, Messe Frankfurt (Germany)

WAGNER World

Hands-on fire protection technology!

Visit us in our training and exhibition facilities in Langenhagen, Germany.



Experience live fire tests!

Further event dates and details of how to contact WAGNER directly are available at www.wagner.eu