



# Talking prevention with Diot-Siaci

## ASRS - Automated storage and retrieval systems

Until the end of the 2010s, apart from the development of plastic goods and packaging (and so increasing the combustible load), the risks encountered in the logistics sector changed little:

- The way goods were stored had remained much the same for several decades;
- Recognized sprinkler fire protection systems had been tested, approved and applied to this activity;
- Even in the context of a hardening insurance market in terms of prevention and protection, the risks were considered to be under control, particularly in France where regulatory requirements in respect of compartmentalization and protection work in the insurers' favor.

In recent years, however, the logistics business has undergone a transformation, and although traditional storage methods are still very much in evidence, new challenges have given rise to new risks, including the famous ASRS. Behind this generic term lie various manufacturers and technologies which would take too long to list here. But the main principles are as follows:

- A storage system (shelving or stacking);
- Crates, usually made of plastic, where the goods are stored;
- A handling system combining robots and autonomous shuttles, conveyors, etc.;
- PLCs and management software.

These systems are costly to set up but offer a number of advantages, including denser storage (more stock for the same building surface area/volume), productivity gains, and often energy savings. These systems are particularly well suited to the constraints of e-commerce.

It is therefore logical that ASRS should be on a roll. But they also present a number of challenges when it comes to the management of fire risks.

Firstly, they generate a sharp increase in insured values linked to:

- storage densification;
- the intrinsic value of the ASRS (in no way comparable to standard racking);
- business interruption, which increases with productivity.

Secondly, they create new risks in warehouses:

- the shuttles are loaded right in the midst of the stock and are generally equipped with Li-ion batteries (see our previous letter on this subject);
- critical PLCs whose failure can shut down the entire chain and therefore hold up perishable goods;
- fewer employees also means less supervision of the facilities and therefore an increase in other types of loss (malicious damage, water damage, etc.).

But above all, these technologies have developed faster than fire engineering and the deployment of fire protection can become a real challenge depending on the configurations and goods involved.



### When ASRS are involved in fire

**July 2002:** a fire at a printing plant in Wisconsin. The collapse of the ASRS helped accelerate the spread of the fire, which claimed the life of one person.

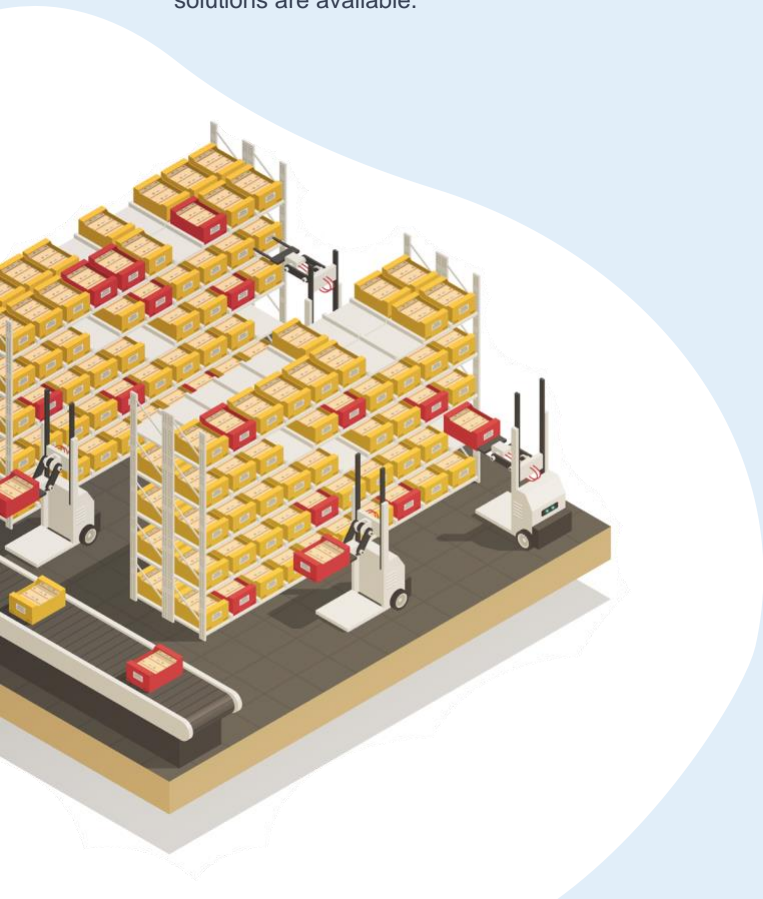
**February 2019:** a fire at a logistics warehouse in south-east London. The facility, which handled 30,000 orders a week, burned for 4 days despite the intervention of over 300 firefighters and the existence of a sprinkler protection system.

Sprinkler standards have caught up but do not offer solutions for all configurations, and it is not possible to protect the ASRS retrospectively.

There's also the question of firefighting: it is no longer possible to tackle fires in the midst of the stock when the source of the fire may be literally inaccessible. In some cases, the risk of collapse must be taken into account, especially as these facilities are tending to rise higher and higher in order to reduce their footprint.

It is also important to bear in mind that, even when well protected, the residual loss will be higher than in standard types of storage due to densification, especially if the goods are sensitive to smoke.

Although they're not suitable for all needs, ASRS are likely to become more widespread in the future. It is important to be aware of their impact on the nature of the risks and to involve your broker's prevention department right from the project phase: the earlier the subject is tackled, the more technical protection solutions are available.



## The Diot-Siaci Prevention Team

- 1 integrated team dedicated to placement and client service,
- 7 engineers with over 20 years' experience and varied profiles.

### Our approach:

- analyze the risks,
- adopt prevention and protection initiatives,
- promote business resilience.

### Recognized expertise

### Operations all over the world

### Customized support for over 130 clients

- Fire
- Natural events
- Machine breakdown
- Safety
- Environmental risks
- Marine
- Nuclear
- Special audits
- Project monitoring
- Standard setting
- Training
- Prevention portal
- Management tools
- Technical intelligence

Questions, projects, training needs:  
[prevention@diot-siaci.com](mailto:prevention@diot-siaci.com)



SIACI SAINT HONORE - DIOT-SIACI Group - Insurance and Reinsurance Brokerage Company

Head office: Season - 39, rue Mstislav Rostropovitch - 75815 PARIS CEDEX 17 - FRANCE - Tel: +33 (0)1 4420 9999 - Fax: +33 (0)1 4420 9500. A simplified joint stock company (société par actions simplifiée or SAS) - Capital: €120,555,961.60 - Registered in the Paris trade and companies register under number 572 059 939 - APE 6622 Z - VAT no.: FR 54 572 059 939. ORIAS no.: 07 000 771 ([www.orias.fr](http://www.orias.fr))  
Regulated by the ACPR - 4 place de Budapest - CS 92459 - 75436 PARIS CEDEX 09 - FRANCE

Complaints: SIACI SAINT HONORE - Service réclamations - 23, allées de l'Europe - 92587 CLICHY CEDEX - FRANCE

DIOT - DIOT-SIACI Group - Insurance and Reinsurance Brokerage Company

Head office: Season - 39, rue Mstislav Rostropovitch - 75815 PARIS - FRANCE - Tel.: +33 (0)1 44 79 62 00. A simplified joint stock company (société par actions simplifiée or SAS) - Capital: €1,831,008 - Registered in the Paris trade and companies register under number 582 013 736 - VAT no.: FR 92 582 013 736  
ORIAS no.: 07 009 129 ([www.orias.fr](http://www.orias.fr)) - Regulated by the ACPR - 4 place de Budapest - CS 92459 - 75436 PARIS CEDEX 09 - FRANCE  
Complaints: [reclamations@diot.com](mailto:reclamations@diot.com) - [www.mediation-assurance.org](http://www.mediation-assurance.org)