



Presentación de empresa



# Carta de Presentación

## LETTER OF INTRODUCTION

Dear client:

ASHES is nowadays a company well-known in the market by the great majority of professionals of the sector: public institutions, insurance companies, manufacturers, installers, etc., which means an immense pride for us.

This position is the outcome of a positive valuation by the market, which has been always a constant obsession for us: the quality and the professional rigor in our work.

We are convinced that the people represent the only long-term competitive advantage of the companies, and even more on service companies like us. But to get to surround itself by the best ones is not easy task. Our team is highly qualified and is able to take to practices that dedicated strategy of continuous improvement that characterizes to us.

All order supposes for ASHES an authentic challenge: to surpass the expectations of the client, and for it we worked on two aspects:

- a) High quality guarantees of ours professional features, based on solid knowledge, experience and control of the made works.
- b) Satisfaction of our clients, with those who we tried to maintain a relation based on the confidence and the empathy. We worried to listen to him and to know its business, its necessities. Thus we can propose effective solutions to him.

Our enterprise conduct, as well as the action guidelines of all and each one of our professionals, is based on strictly ethical concepts. We do not respond to interests of trade names or construction and contractor companies. Our commitment is based in provided you with a solution objectively, adapted to suit your needs and not third parties needs.

Our independence allows us to work in a coordinated way, at the request of the client, with: architects studios, another engineer's studios, insurance companies, etc.

Our professional team allows us to offer to our clients a consultancy services, perfectly coordinated in contents of: passive fire protection, egress and fire protection systems.

Thanks for your confidence and as your fire consulting engineers we will make an effort in offering the greater security, tranquillity and benefit for your organization.

Justo Adámez Gallego  
Managing director



## INNOVATIVE COMPANY

In ASHES we always pay attention to reality, the market and its trends, by small that these are, broadening our horizons and adapting to changes and new trends with the objective to benefit our clients.

That attitude, invariable from the beginning, is the one that allow us to be a firm of fire engineering and consulting which trust your projects.

The ASHES business model is based on the most experienced and advanced international fire engineer models.

We are an innovative company, and proof of it is that we were pioneering in:

- ✓ We introduced into Spain the advanced software AutoSprink, virtual reality software of intelligent solids that allows an economic and efficient sprinklers installations, with a real 3D design, including a precise hydraulic calculation, measurement, budget and the fabrication report of the installation, under an only software system that make all the processing in real time.
- ✓ Promoting the computer simulation, being the Fire Modelling applications, used for fire simulation and virtual egress informatics models, our vision of future, and nowadays a reality in which we worked excited.
- ✓ The engineering congress organization, organizing the I and II fire engineering conference (2001 y 2003), with a high level of lecturers, some of them international, with an attendance by congress superior to the 300 professionals. In the year 2005 ASHES transferred to APICI (association of this sector) the organizing rights of the congress.
- ✓ The training courses organizing of NFPA standards out from the U.S.A., and Spain was the country where more attendees was trained in the first year NFPA expansion to Spanish-speaking countries. We transfer the continuity of this training in the year 2004 to associations of this sector.

our clients have always known to praise that anxious spirit who takes to us to innovate concepts and methods continually, establishing guidelines, taking risks. They show his appreciation with the confidence placed in our firm, and that's what really matters to us.

*Pioneers in the use of computer tools of: calculation, design and simulation, apply to fire protection systems.*



## AUDITS

### Surveys Risks

By means of this service is carried out a thorough analysis of the installations, which specific objective is the one to evaluate the efficiency and efficacy of the measures and fire systems operating, and use it to take decisions that could correct deficiencies, if it's necessary. That's possible in reference to:

- Levels of risk in each scene.
- Degree of fulfilment of the used norm of reference.
- The systems efficiency conditions based in the design codes (UNE, NFPA, FM).
- Conditions of assembly.
- Conditions of maintenance and preservation.
- Budget of correcting actions.
- Plan of investments.

### Revision of projects as third party

The singularity of some projects, as much of building as industries, make advisable for the developer that this projects were verified by independent consultants, at least on so critic aspects as fire protection, as step towards permission or offer request processed to contractors.

With the provision of this service the antecedents are verified, plans, standards point of view, project's coherence, hydraulic calculations, specifications and final budget. After the revision, is emitted a report detailed for its adjustment and update, reducing significantly the margin of uncertainty for the promoter, as much on legal aspects as building budgets.

*By means of the audit you will get all the important information on the conditions of protection of its building or industry.*



## **FIRE PROTECTION CONSULTING**

### **Report for advising to the Public Authority**

The Local Authorities have to face the approval of more unusual new constructions daily, and they must to watch the adaptation to the constructive standards, between them, the fire security standards.

The independent information of advising to the Public Authority elaborate by ASHES, are a service that we come lending to the City councils and Local Corporations, in order to facilitate special technical support that sometimes they could need about questions relating to fire security, as much to analyze objectively the constructive solutions displayed by architects and engineers, like contributing to alternative solutions which will cover all the required necessities.

### **Fire security's management system**

The master plan that ASHES provides is a work plan with different formats and approaches, developed to provide a vision and frame of reference on fire security on your establishments. The kind of works could be:

- a) Preliminary studies of installations cost's estimate, before project and work development.
- b) Internal code of features and quality to value existing installations and to direct the growth during a period of time.
- c) Corporative handbook of fire security.

*The Local Authorities have to face the approval of more unusual new constructions daily.*



## DESIGN ENGINEERING

### Projects

All our projects are elaborated by engineers specialized on fire security. They are creative and count with construction and assembly details on 3D. Also we used the most modern tools of hydraulic design, calculation and simulation, in order to get modern projects, obtaining therefore the highest levels of efficiency and reduction in costs.

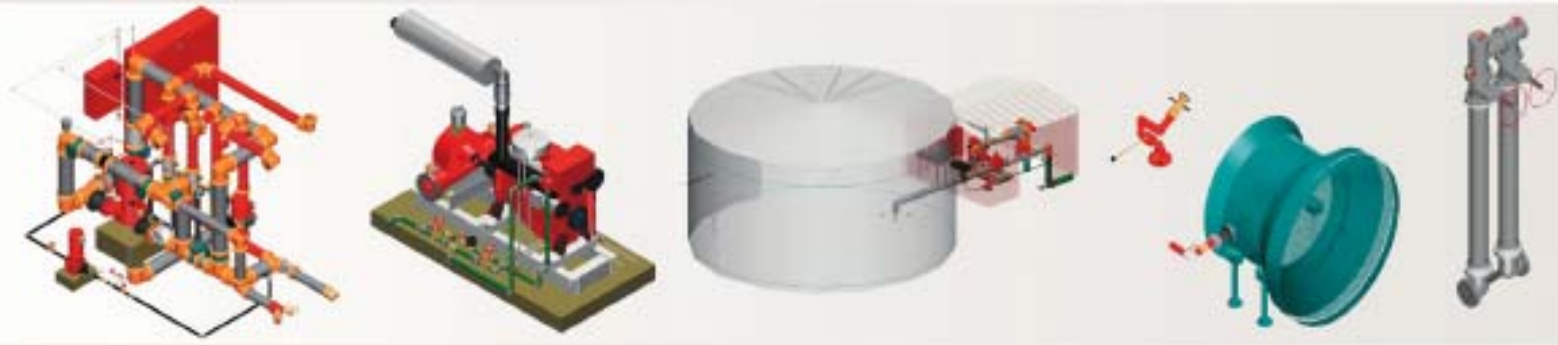
### Systems design

Our exclusive specialization on fire protection systems includes the design, by our staff, of whatever solution as much in passive fire protection as whatever fire protection system available on the national and international market, based on standards and codes, or under criterion of performance based design.

### Our specialization in design

- Detection and fire alarm systems.
- Sprinklers systems.
- Water mist systems.
- Control and smoke extraction.
- Automatic extinction by gaseous agents.
- Foam systems.
- Water supply systems.
- Manual systems of extinction.
- Emergency lighting and signs.
- Performance based by design.
- Analysis of virtual egress.
- Fire modelling.

*All our projects elaborated by engineers specialized on fire security. They are creative and count with construction and assembly details on 3D.*



# AutoSprink

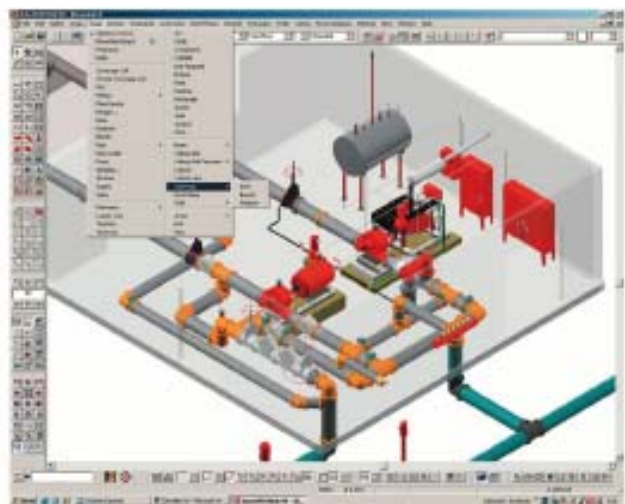
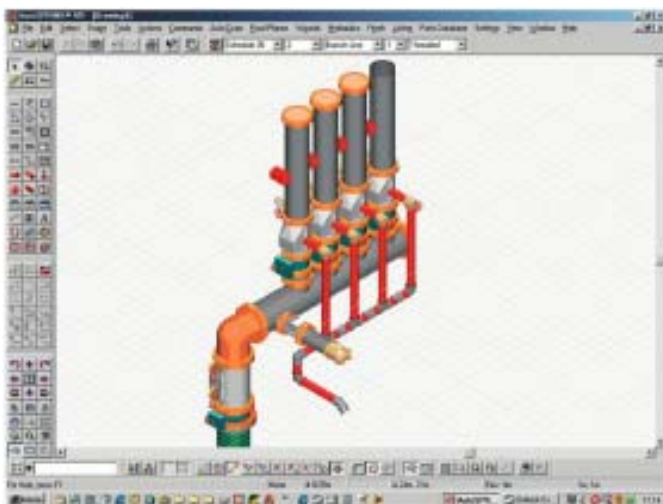
## AUTOSPRINK

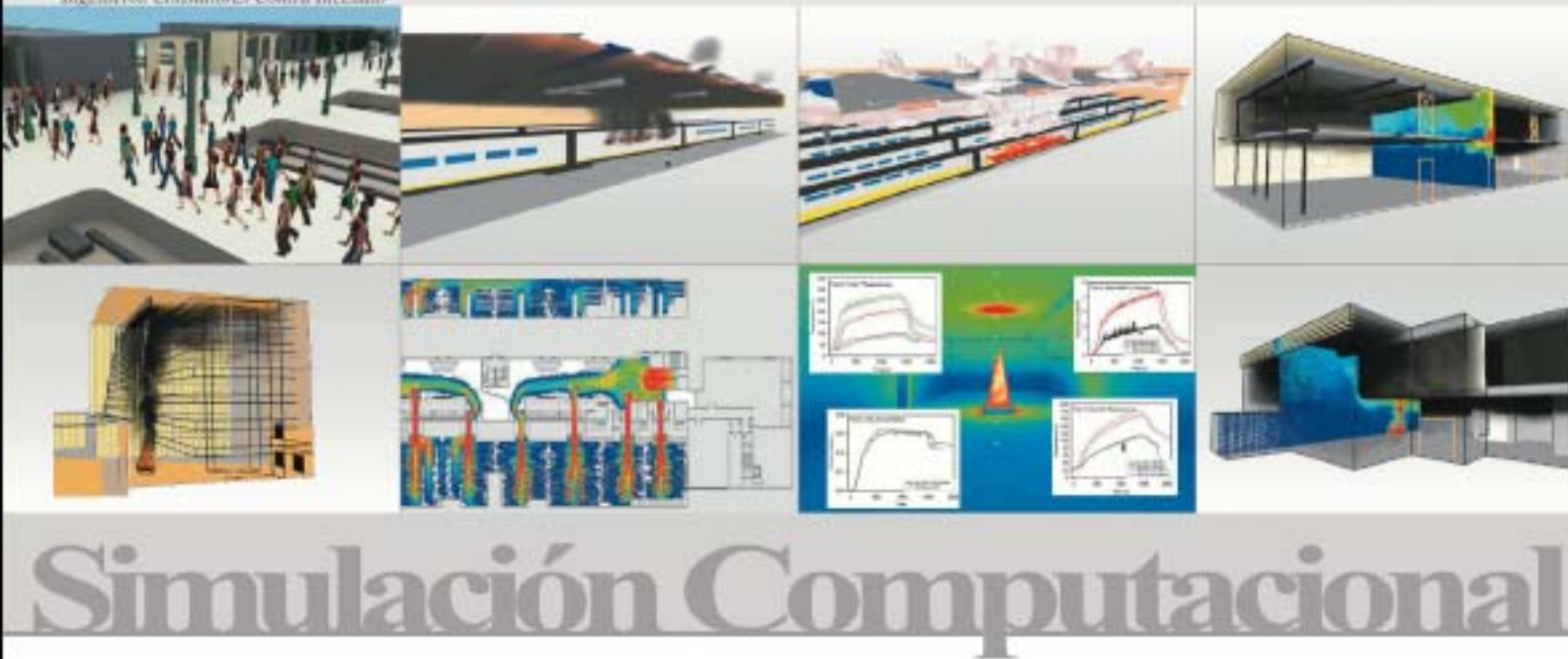
Ashes make designs and calculations of the fire protection installations using the most advanced software made for fire installations, based on the intelligent solids technology and virtual reality on 3D, allows constructive designs to the minimum detail, as much technical as economic.

The hours of engineering dedicated to the detail design multiply the saving in hours of assembly, optimizing the hiring costs and shortening the times of duration of works.

The Hydraulic projects made by ASHES are translated in savings in the hiring superior to 25%.

*AutoSprink, the most advanced software designed for fire protection systems installations.*





## COMPUTATIONAL SIMULATION

### Fire modelling

ASHES use the fire modelling as analysis tool to predict the evolution and consequences of fire on singular buildings and complex geometry, providing information and visualising on 3D the smoke movement, toxicity levels and darkening, flame dispersion, temperature reached in the structure, etc.

The most used model in our studies for fire analysis is the Fire Dynamic Simulator (FDS), numeric model of Computational Fluids Dynamics (CFD), made by the NIST, specific for applications of fires in closed enclosures, that solves the dynamics fluids equations, which use for the turbulence the simulation technique of large eddies (LES – Large Eddy Simulations).

### Virtual egress simulation

The computational simulation allow to increase the analysis of the people mobility inside the building, calculate the egress times, identify exits with agglomerations, conflicting transitions, better roads for egress, etc.

The models we use in our studies for the analysis of the movement of people, in case of egress are: Legion, Exodus and Simulex32, making a virtual behaviour of the crowd into a building, simulating how is going to be an egress in case of emergency, based on norms of human behaviour, updating this information periodically, and validate it through information taken from analyzed videos and recording.

*The computational simulation allows to analyze special scenes, where the application of prescriptive norms isn't the best security solution.*



## **FIRE PROJECT MANAGEMENT**

### **Fire project management**

The fire project management (FPM), it means to ASHES an order of confidence for the management, control and technical-economic pursuit of the projected work. The FPM starts with the management of the hiring, making a comparative analysis of the contractor company's offers, continuing with the work management or work direction, and finish with the field tests, as built documents and finished installations, with the commitment of execution of the anticipated costs, run times decided and projected quality.

### **Work direction**

Direction – in situ – with periodic visits and monitoring meetings with the owner and contractor company, where the project manager inspect the right works execution, the planning of the work and solutions of possible changes, that get sure the compliance of the project and design, finishing with the issuance and final jobs certificate.

### **Work management**

The work management increases the scope of the work direction services to the administration of contracts, of many construction and contractor companies (civil works, passive fire protection installer, fire protection systems installer, etc.) and complementary services like:

- Maximum price guarantee.
- Administration of water supply against fire for the respective company.
- Administration and processing of the dossier for the fire installations authenticated in view of the administrations.

*Commitment of delivery of the facilities within the anticipated costs, run times decided and projected quality.*



# Gerencia de Riesgos

## RISK MANAGEMENT

### Management of the self-protection

The risk's management is understood as the process of measure, establishment and develop strategies to manage risks. The strategies used include normally the transfer of risk, the ways to save and the reduction of his negative effect on particular cases.

The risk's management of fire is centered in the risks that comes from physical causes (for example the fire, bomb warning, vandalism, and different accidents) and in view of the impossibility of transfer it, is necessary try to prevent it and foremost, to reduce its impact, in a way that guarantee to the maximum the people's security on the building and minimize the impact over their activity.

### Self-protection plan

The self protection plans work out by ASHES are full plans, and comply the new Basic Norm of Self-protection (R.D. 393/2007), have great amount of installation photography's, graphics and are specifically done for every company and workplace, counting on all the intrinsic and extrinsic considerations of every location, use and activity.

### Training and fire practice

Needed complements are the training of the emergency teams, and doing egress practices. The benefit that gives the usual "fire practices" (annually), is automate some norms of behaviour by continuous exercises, minimizing some "locking" behaviour faced with a real emergency, getting better strategies in the Plan. On the other hand, by fire practice, the occupants of the building improve their knowledge and identification of the possible escape routes, emergency signs, etc., because the continuous and daily use of a building don't guarantee a right egress in case of emergency.

*The risk's management of fire is centered in the risks that come from physical causes.*

Each one of the potential risks of the establishment must be treated singularly. Even though, before to make a management plan of emergency situations, is usually taking a fire accident as reference, because that risk got massive implications, painful and hard resolutions. That's why the most efficient way to get the objective is the development and establishment of a Self-protection Plan.

# Ashes Ingenieros Consultores contra incendios

## **ASHES FIRE PROTECTION ENGINEERS**

ASHES are nowadays the leader company in Spain into the Consultancy and Engineering of fire security and protection. That solid position of leadership, that is not reached by a chance, is fruit from a continuous effort of beating where is involved each and every one of the professionals and employees of the firm.

ASHES was pioneer in Spain giving specialized engineering services against fire, getting ahead the market demand, guide by an innovator spirit, of overcoming and helping the client, driving force of our motivation, that from the beginning count with the confidence of our clients whom we always want to respond taking on three basics responsibilities of the engineering: innovation, professionalism and ethic.

Get so solid in our business model is our pride, helping our clients to improve the functionality of their fire protection systems, preventing fire accidents that could affect to the people and assets.

In ASHES, engineers and employees are the master pillar of the company and our principal asset, firmly committing to the professionals with a high level of compromise, initiative and responsibility that committed our self to continue to improve and getting ahead the future in benefit of our clients.

**We invite you to know us. Thanks for your confidence.**



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