



## Industries & special risks

Technology and skills  
at the service of Fire Safety



[www.def-online.com](http://www.def-online.com)

Solutions and services for fire safety systems





# Understanding your operating context and the stakes.

Today, security is a real challenge for businesses.

The security issues faced by businesses are increasingly complex and global. The tightening up of regulation, improving fire-fighting technology and the multiplying of services linked to solutions are all challenges to be met by industry.

Faced with this operating context and these stakes, DEF has the vision to accompany you in your search to reduce risk and optimize your protection. Our solutions and services cover all industrial sectors and all special risks. We are committed to building innovative solutions, to deliver made-to-measure know-how, and to offer a comprehensive service, adapted to each of your industrial sites.

Reknown for technical excellence, our core business is helping clients to evaluate and reduce their fire risk while respecting regulation, the specific risks linked to the operating site, and environmental constraints.



Drawing on its extensive experience as a constructor, DEF contributes in a unique way to progress in Fire Safety solutions and services.

## Combining technology and skill



## A broad product range for made-to-measure solutions

DEF has a range of flexible solutions, which can be adapted to your site, from design to systems maintenance.





# Combining technology and skill



Our expertise allows us to offer solutions adapted to each industrial site, combining our teams' wide experience and the latest technological know-how.

DEF's range of solutions and services rely on its skills and expertise and constitute a continuous response to the increasingly complex technological and regulatory environment of Fire Safety.

Thus, our experts develop solutions that take into account the entire production context and stakes of your industrial site.

## Extinguishing

As a natural complement to an efficient detection system, automatic extinguishing protects your strategic locations and hotspots, safeguards your equipment, and therefore the value of your business.



### Skills

DEF designs, installs and provides maintenance for automatic gas extinguishing systems\*, Inert and Clean Agent, as well as foam, water-mist, powder, and water deluge extinguishing systems. APSAD 113-certified for inert (DEFInert®) and clean-agent (FE13®) gas extinguishing, and through its many products, DEF has proved its expertise in the main extinguishing techniques. We also are able to answer your requests under foreign FM and NFPA standards.

\*Only under maintenance for inhibiting gas FE13® following chapter III (placing on market and restriction of rules) article 11 §4 and appendix III of the document JOEU - Rules (UE) 514 / 2014 of 16th April 2014.

## Detection



Fire detection is our core business. Thanks to our thorough knowledge of the kinetics of fire, you can benefit from the latest technology on the market to detect an incipient fire as soon as possible.

You will have access to an entire product range of panels and detectors adapted to the operational limitations of your industrial site (architecture, set-up, maintenance, operation, explosive zones).

Our gas detection solutions are an efficient complement in managing fire risk.

The company's expertise and skills offer a continuous response to the increasingly complex technological and regulatory environment of Fire Safety.

Our experts develop solutions that take into account the entire production context and stakes of your industrial site.

### Skills

DEF has always had a strong commitment to the APSAD approach, and has been certified as a Fire Safety Systems installer and maintenance provider for 55 years.

The company also displays FM approved and NFPA standards solutions to meet the specific requirements of many countries.



## Evacuation

Whatever the risk, "warning" and "alarm" are the key phases in protecting human life and implementing fire fighting methods. Thanks to expertise in the latest electronic solutions, DEF can offer you high-performance, flexible solutions, in accordance with standard and regulatory requirements.

### Skills

Our design and development teams can meet your obligations, be they Labour Law or French (APSAD) or overseas (FM Global) Insurance-orientated.





# A wide product range for made-to-measure solutions

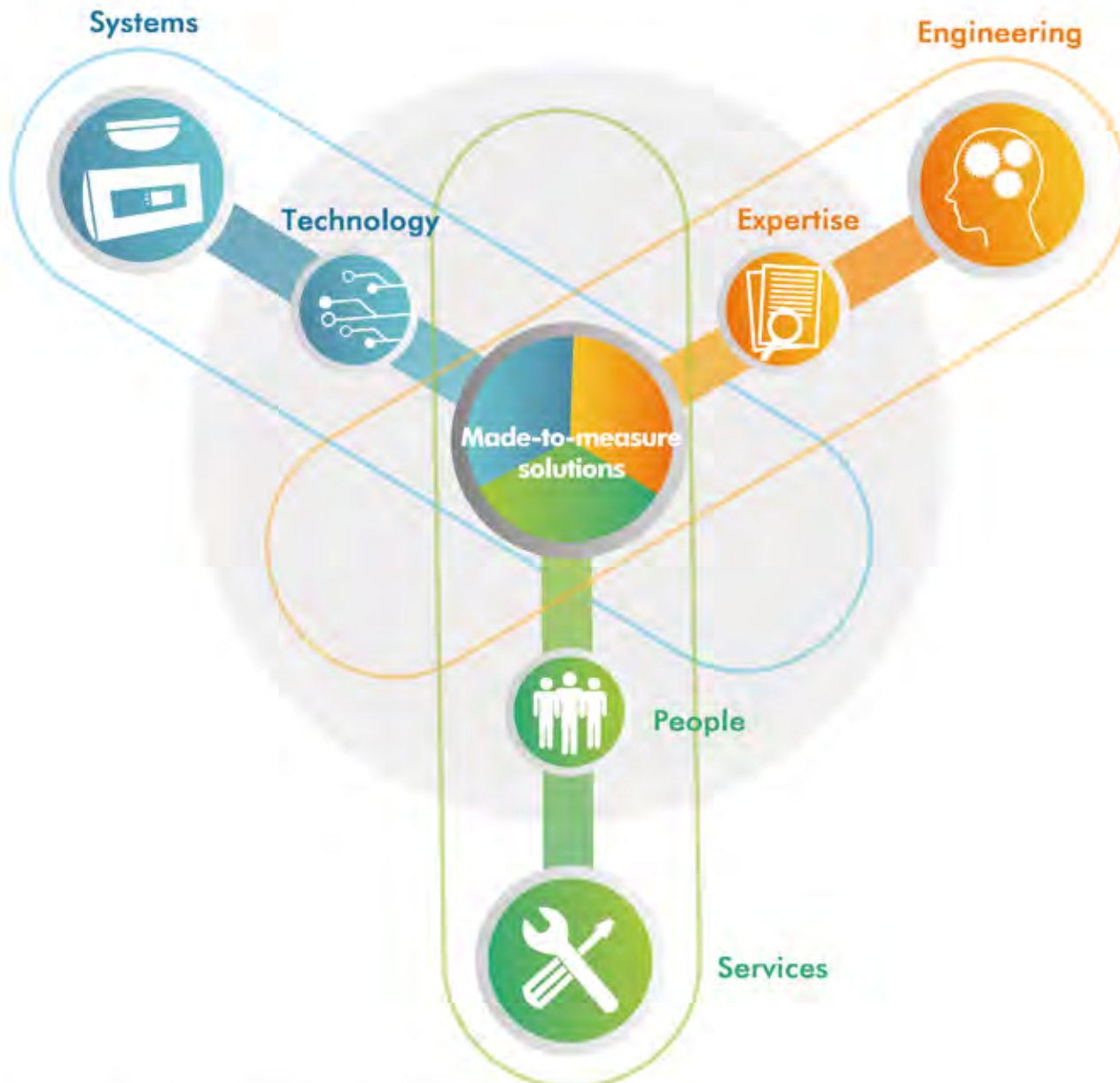


## Detection

DEF implements optimised detection and automatic extinguishing solutions adapted to operational risks and constraints. By combining the latest technology and our teams' experience, we provide step by step support to our clients, from the design through to the maintenance of the Fire Safety Systems.

The point of a fire detection system is to pick up on and report the outbreak of a fire as soon as possible, minimising the time taken to implement fire-fighting measures, and so limiting the impact of the fire.

DEF is dedicated to helping its clients evaluate and limit their Fire Risk, whilst respecting regulatory standards, specific operational risks and environmental constraints.



▶ Heat detectors and high-sensitivity smoke detection systems and accessories designed for industrial protection, are adapted to electrical risk protection, dry or braising, issues often associated with industry.

▶ Triple-technology infrared flame detectors are suitable for hydrocarbon-based fires, such as petrol, alcohol, solvents...

▶ Connected to its control and signaling equipment, each element transmits detection information, safeguarding the site and/or industrial process.



Flame detector  
3IR / UVIR



Manual call point  
Protection rating IP66



Aspirating  
smoke detector



Fire control panel  
CA 3000

### Qualifications



Detection adapted to the constraints and specific risks of an industrial site is essential in its safeguard as well as in preventing operating losses.





# A wide product range for made-to-measure solutions



## Maintenance

### Extinguishing

#### ► DEFinert Matrix®

The DEFinert® extinguishing solution in a centralized facility ensures rapid extinguishing of the protected premises, whilst preserving the integrity of the human environment and equipment.

Its innovative matrix attachment system allows the cylinder frame to be adapted to the architectural constraints of a site, optimizing ground surfaces and fitting the shape of the premises as best as possible.



#### Advantages

- A clean pure and harmless gas: ODP=0; GWP = 0
- Rapid effect (under 60s)
- Even and efficient distribution of IG55 over all volumes
- Optimal maintaining of the extinguishing agent in the premises
- No abrupt fall in temperature within the premises = no thermal shock risk
- No decomposition products
- Perfect visibility during and after gas discharge

#### Certifications

EN 12094-1



#### ► Water-mist



Open mist nozzle

Thermal bulb nozzle  
(Pre action:  
air or water-filled system)

Water-mist is an unavoidable part in the extinguishing or fire suppression process in certain industrial risk environments. It has the specificity of displacing oxygen whilst cooling down the machine, which results in reducing the risk

that the fire relights.

With certain types of fire, adding surfactants can allow a floating film to be deposited on the protected object, thus isolating the fuel from the oxygen, ensuring efficient extinguishing.

#### Advantages

- A safe and clean solution
- No greenhouse effect nor impact on global warming
- Inexpensive
- Can be used in premises in which there is human presence
- Low maintenance costs
- Protection of open volumes and point protection

#### Certifications



### DEF manages the entire life-cycle of your facilities



#### Qualifications

- ISO 9001, 2000 version
- ISO 14001
- ASPAD I7, F7
- ASPAD I13, F13
- AFAQ – IQ NET
- NF reconditioning label

Meeting your expectations is our priority. Thanks to our knowledge of the business, our quality standards, and meeting our commitments, we can earn and maintain your trust. To do this, we are committed to providing priority support in case of facility malfunction, and our

technicians are ready to intervene 24/7 to guarantee service throughout the country. We ensure all regulatory and normative Fire Safety System maintenance.

#### A personalized maintenance solution including :

- Maintenance
- Functional verification
- Intervention on a malfunctioning fitting within a pre-determined time frame
- Maintaining the highest level of functioning possible before needing fixing
- Drawing up a state of systems' deterioration
- Identifying pre-determined levels of deterioration, at which point an action is initiated
- Optimizing and simplifying Fire Safety operations
- The I7/F7, I13/F13 service commitment
- A duty to advise clients





## Our network of offices



Industry - Special risks - Health - Tertiary  
Public buildings - High-rise buildings



## Our expertise, our references



- ▶ ANDRA
- ▶ BP Castrol
- ▶ Blue Solutions
- ▶ EDF, Nuclear power plant
- ▶ EDF, Thermal power plant
- ▶ EPR TAISHAN
- ▶ MFR (Market of Fire Refurbishment – 22 units)
- ▶ ORYX GAZ
- ▶ Sonatrach
- ▶ Sonelgaz
- ▶ Total
- ▶ Totalsolar
- ▶ Aventis Pharma
- ▶ Bayer
- ▶ Borealis
- ▶ Ipsen
- ▶ La Roche Posay Laboratories
- ▶ Sanofi Aventis
- ▶ Solvay
- ▶ Honda
- ▶ PSA
- ▶ Renault Tanger
- ▶ Houdebine-Davigel
- ▶ Kermene
- ▶ Lesieur
- ▶ Nestlé
- ▶ Thiriet
- ▶ Triballat
- ▶ SITA South
- ▶ SKF
- ▶ Snecma
- ▶ Thales
- ▶ Krampouz
- ▶ John Deere
- ▶ Ciments du Maroc
- ▶ KEROUAN Cement Plant
- ▶ CMA CGM







Combining people and technologies  
to build leading-edge solutions and services.



[www.def-online.com](http://www.def-online.com)

HEADQUARTERS : Parc d'Activités du Moulin de Massy  
9, rue du Saule Trapu - BP 211 - 91882 Massy Cedex France  
Tel : 01 60 13 81 81 - Fax : 01 60 13 81 00 - e-mail : [contact@def-online.com](mailto:contact@def-online.com)



Solutions and services for fire safety systems