



Approved IEC Ex Gas Detection Equipment

**The benefits and advantages for the
installation and maintenance in France,
in conjunction with ATEX certified personnel**

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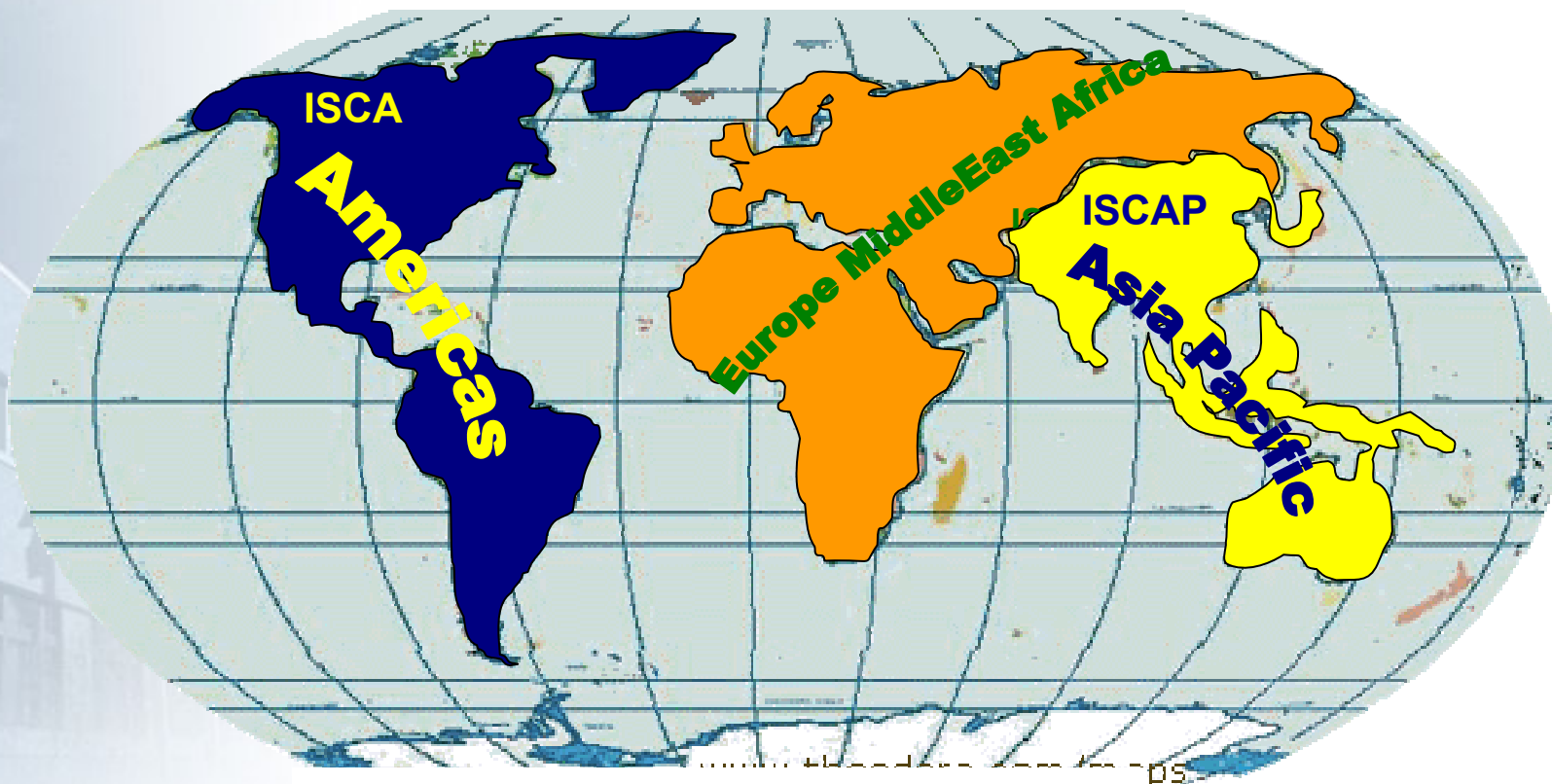
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SCIENTIFIC**

Our MISSION

Preserving human life on, above and below the earth.

*Delivering highest quality, best customer service.
Every transaction, every time.*

ISC in the world



100% for gas detection business

Portable Gas Detectors and Docking stations



EX 2000



GASBADGE



M40



MX 2100



MX 6



DS2: Docking Station Bump test / calibration



BM25

Fixed detectors and transmitters



OLC(T)10



OLC(T)20



CEX 300



CTX 300



OLCT 40 series



OLC(T)50



OLCT 60A



OLCT 80



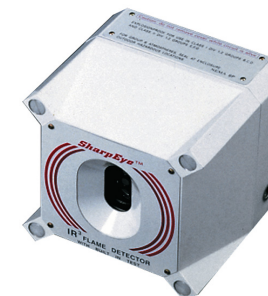
I Trans

Infra Red technology



OLCT IR

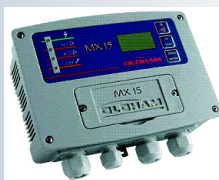
Flame detector



Sharp eye

Control units

1 channel



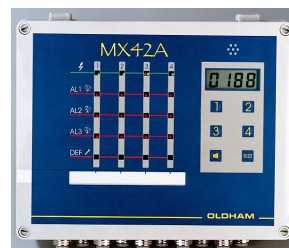
MX15

2 channels



MX 32

4 channels



MX 42A

8 channels



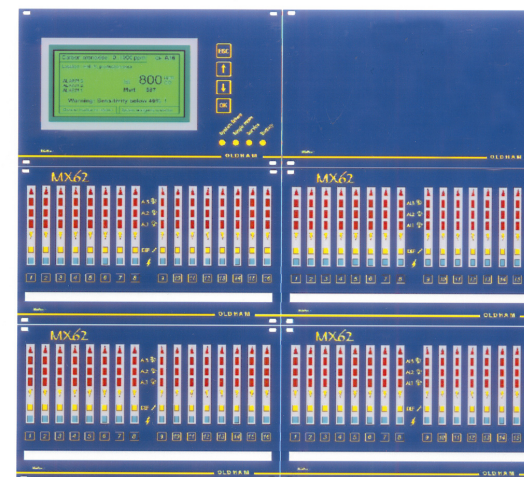
MX 48

16 channels SIL2



MX 52

64 channels SIL3

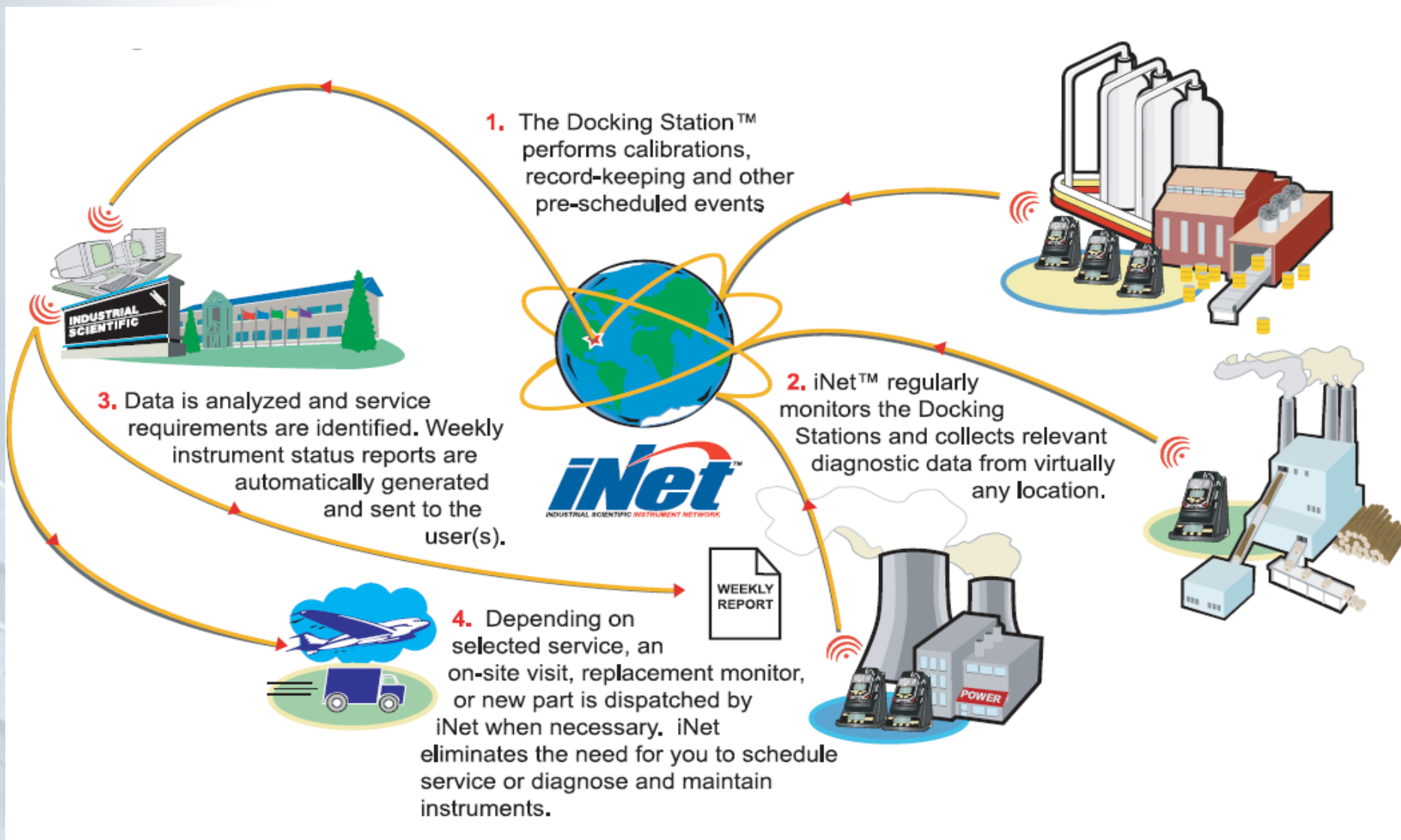


MX 62



CPS

iNet Monitoring Service



Certification Policy for ISC Products in ATEX (Atmospheres Explosives)

- Industrial Scientific is selling Ex Gas Detection instruments and Service worldwide, mainly in:
 - US / Canada
 - EUROPE
 - China / Australia / India
 - East Europe: Russia, Ukraine, Kazakhstan
 - Brazil

 need of Global Ex approvals

Certification Policy for ISC Products in ATEX (Atmospheres Explosives) con't

- Framework of approvals for ISC Products
 - Intended to be used in Explosives atmospheres by Gas and Dust
 - 3 mains domains of requirements for the certification
 - Ex Explosion proof: i, d, e, m
 - Performance: gas detectors = safety relevant devices as measuring devices. Extra requirement for digital units
 - QA: notification of the production
- Almost all ISC products are certified for ATEX, including control units in safe area considered as associated apparatus

Approach to obtain the certification

Two main approaches, done in parallel
during the product design



Europe, Eastern Europe, China,
Australia, Brazil

- First: IEC Ex scheme according IEC standards
- Second: ATEX European Directive 94/9/EC according list of EN Harmonized standards

IEC Ex CB: INERIS / SIRA

US / Canada

- FM / UL standards
- CSA standards

IEC Ex CB: UL, CSA, TSA

Benefits of IEC Ex approved products

- IECEx scheme has attained a level of harmonization that would never have been achieved via mutual recognition agreements or memoranda of understanding
- Definitively, IEC Ex scheme facilitates
 - The products release worldwide, with some complementary works for US/Canada
 - The issue of EC type examination certificate ATEX
 - IEC standards \approx EN standards
 - Few deviations: markings, annexes ZZ, ZA, reference to EN standards to replace IEC requirements (example IEC versus EN series 60079-29-1: EMC / safety of digital devices)
 - QA: OD005=EN13980

Benefits of IEC Ex approved products (con't)

- Major importance of IEC Ex Test reports
 - The technical reports have thoroughly document compliance with the relative standard
 - For the most part, the reports have been readily accepted by the non-issuing certification bodies
 - The issues encountered have been relatively minor compared to full certification projects.
 - At the disposal of the manufacturer (# EC ATEX)

Considerations for the future

Some points to improve or develop:

- Recognition of IEC Ex scheme worldwide, as a repetition of EC ATEX success
- Works to reduce the interpretation of standards inter laboratories (example of issues with ISC detectors)
- Provide the capability for the manufacturer to group audits to save time
- Harmonization of standards in the frame of Gas Detectors Performance testing (EC, CSA, FM, UL...)

ISM-ATEX

a voluntary approach

- Why ?
- Who ?
- How ?
- Implementation within ISC-OLDHAM



WHY ?

(1/3)

Further to the Directive 1999/92/CE relating to workers' safety, two decrees and three bylaws have been voted by the French Government:

Decree #2002-1553 - 2002, December 24th

precautions relating to the prevention of explosions at the workplace

Decree #2002-1554 - 2002, December 24th

precautions relating to the prevention of explosions that must observe the owners during the construction of workplaces

Bylaw - 2003, July 8th

protection of workers potentially exposed to an explosive atmosphere

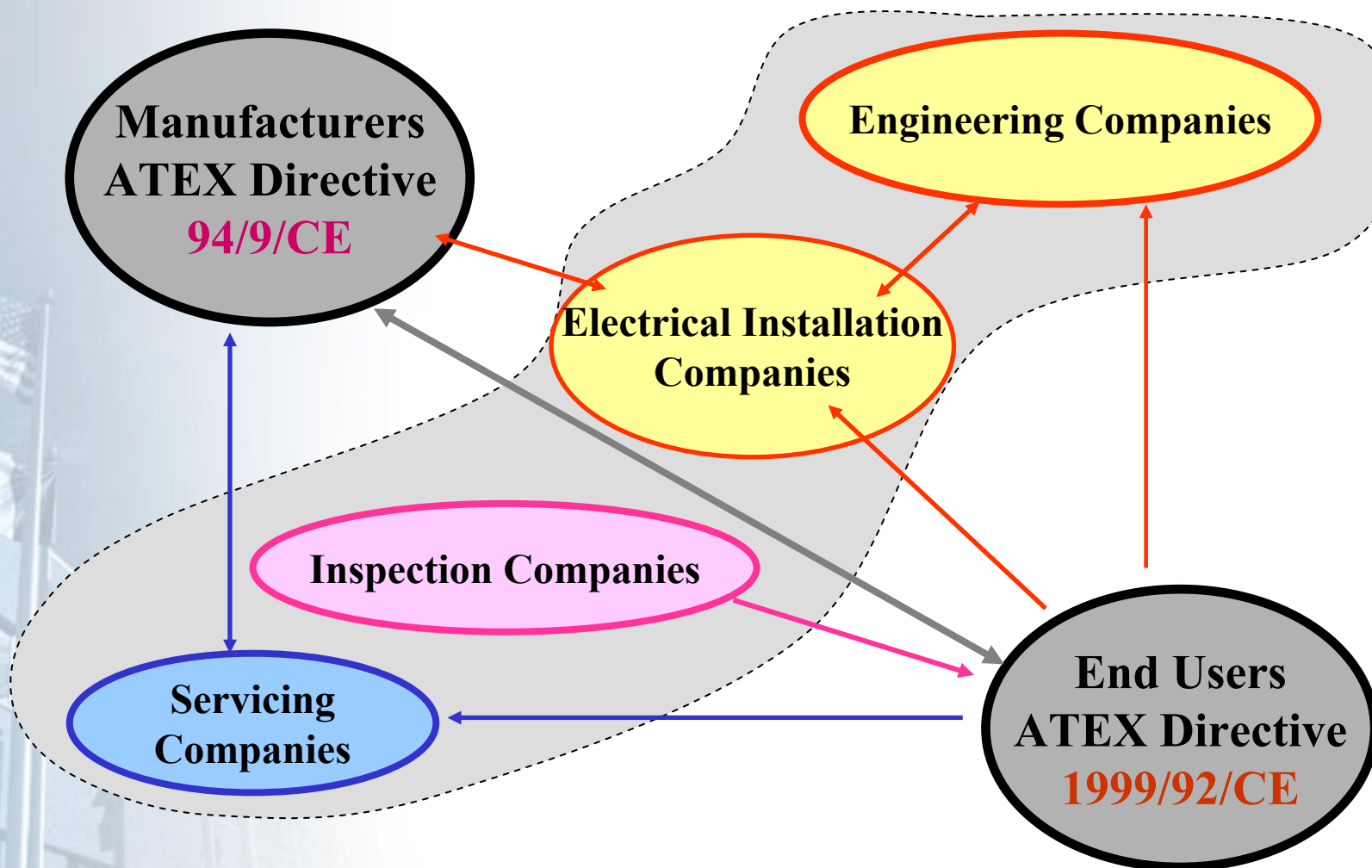
Bylaw - 2003, July 28th

Installation of electrical apparatus in hazardous areas

WHY ?

(2/3)

- The Company has to train her employees who are more prone to work in hazardous areas
- Plants' Managers have to write the Document Relating to Prevention From Explosions (DRCPE in French). They shall list and check that:
 - the premises and work equipments, including safety devices, have been designed, are used and are maintained properly and in accordance with safety regulations.**
- The aim of 1999/92/CE Directive is to improve the health and the safety of workers exposed to hazardous areas



NO CURRENT LEGISLATION REGARDING TO THE THIRD PARTIES !

WHO is concerned ?

(1/1)

- More and more customers ask for a global solution. They want ONE supplier to provide, to install and to maintain the gas detection system.
- However, it is the Customer's liability to be sure that the whole system used in hazardous areas is well designed, well wired and well maintained.
- Therefore, the Customer should be able to rely on all his subcontractors from the design to the commissioning and during the lifecycle of the electrical installation in ATEX.
- **Project managers, Engineering Departments, Electricians, Maintenance Technicians, Inspectors, ... are ALL concerned.**

HOW to choose the right partners ?

(1/4)

As there is no current legislation, notified body INERIS has established qualification schemes of voluntary certification.

There are 3 different certifications suitable for the companies:

- **Design** of Electrical Installations in ATEX
- **Realization** of Electrical Installations in ATEX
- **Maintenance** of Electrical Installations in ATEX



HOW to choose the right partners ?

(2/4)

And 2 skill levels for the staff :

- 1st Level: **‘Agent d’Exécution’** (Worker, Fitter, Wiring arrangement worker, Interim, ...). He reports to the Authorized person.
- 2nd Level: **Authorized Person** (Supervisor, Project Manager, ...). He is responsible for the installation from a technical point of view and is certified by INERIS.

Those trainings and assessments can be done by an employee from the company provided that he has been certified by INERIS as a trainer (3rd Level).

HOW to choose the right partners ?

(3/4)

Those certifications ensure that:

- People are well trained to enable them to operate safely
- Facilities are designed, implemented and maintained taking into account safety and standards

HOW to choose the right partners ?

(4/4)

To comply with ISM-ATEX, you must fulfill :

- 1. Training and assessment of ATEX Authorized Persons (2nd Level)**
- 2. Training / Awareness of workers (1st Level)**
- 3. Audits of the Company and Audits of Electrical installations made by the Company. Those Audits are achieved by INERIS.**



1st manufacturer of gas monitoring equipment certified by INERIS (1/3)

Design

Choice of material

Electrical Drawings

Technical files

Settings, Commissioning

Realization

Mechanical Installation

Wiring arrangements

Settings

Maintenance

Service

Check

Settings

Our 7 branch offices are certified for the Design, Realization and Maintenance (more than 15 Authorized Persons)

Our Engineering Department is certified for the Design and the Realization (2 Authorized Persons and 1 Trainer)

4 Trainers certified by INERIS for in-house trainings and/or certification of our subcontractors for the Electrical Installations.

ISC-OLDHAM our commitment

(2/3)

- All our branch offices are fully certified (design + realization + maintenance)
- Our Engineering Department is certified (design + realization) and coordinates the projects from branch offices
- Employees who are likely to go on site shall be at least 'Agent d'Exécution' certified

Quality – Traceability

- Records management
- Monitoring of interventions
- Records keeping (10 years)
- Dispatch of technical files to the end user
- Registration of complaints
- Assist the inspector to make the Audits easier

Outline Organization

- Appointment of an Authorized person per project
- Outsourcing policy: choice of the subcontractors

Technical requirements

- 'Plans de Prévention', good knowledge of the standards NF C 15-100, EN 60079-14, etc.
- Knowledge of the ATEX guide lines



ISC-OLDHAM our customers

(3/3)

They use our gas monitors in ATEX areas

Gaz de France

Arcelor Mittal

Sanofi Aventis

Renault

Endesa

SPSE, ...

And we thank them for their confidence.

THANK YOU FOR YOUR ATTENTION

QUESTIONS ?

INDUSTRIAL SCIENTIFIC

CORPORATION

Gas Detection Solutions



Check our website at www.indsci.com