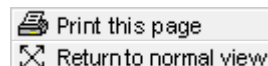




## Interview

August 2006



### IECEX - an international solution for TOTAL



What are some of the reasons that make a French energy giant like [Total](#) want to be involved in IEC's system for certification of equipment used in explosive atmospheres, IECEX\*?

In this month's interview, Head of Total's Electrical Department, Patrick Leroux, explains why he and his company are embracing the Scheme and shares his views on current safety systems programmes for those working in hazardous environments.

**TOTAL**

#### ***How did you become involved in IECEX and when?***

I have only recently become an active participant in the [IECEX Scheme](#). At Total, I was also taking part in the implementation process of the ATEX European Directives for our facilities.

Regarding IECEX, I started about a year ago to further my knowledge in this field by reading papers, attending the HazardEx Exhibition and Conference last February in Coventry in the United Kingdom. There I had the opportunity to listen to IECEX Secretary Chris Agius' presentation on the new international assessment and certification programme for explosive repair equipment. Also, as the Vice Chairman of [PCIC Europe](#) (Petroleum & Chemical Industries Committee), which holds a yearly conference on electrical and instrumentation applications in those industries, I have had the opportunity to attend a number of presentations, including one given by Chris Agius last June during PCIC Europe's third conference in Amsterdam. Attending such conferences also enabled me to speak several times with engineers already active in the Scheme.

#### ***I understand that you are participating in IECEX Scheme's management and are a participant of two Working Groups (WGs), ExMCW10 and ExMCW12. Can you describe your role in these WGs and current projects?***

My participation is quite recent but I took part in the latest meetings of these two WGs in June in Amsterdam, The Netherlands. WG 12, which focuses on personnel competency, is a completely new group. During the meeting, the convenor asked me to start to write a preliminary draft, since as an end user who also has a few ideas on this topic I am in a good position to do this. At present my contribution to WG10 (Repair and overhaul) will probably be limited. But I understand that projects are well advanced.

#### ***How important is it for you and your company to be represented and participate in IECEX?***

The [ATEX Directives](#)\*\* are only applicable and valid in Europe. In my view, a company like Total and certainly other oil and gas companies in the world also needed *something* that is recognized worldwide.

For me, this *something*, which did not exist practically until recently, surely is the IECEX Scheme. However, I find it still needs more promotion in Europe, which one can say is completely submerged by ATEX. Also questions such as why have ATEX on one side and IECEX on the other have emerged with no answers yet. This leads to more perplexity for users.

#### ***Are there any particular challenges these working groups encounter to meet their objectives?***

WG 12 needs active participation from end users and operators, which is not yet the case in the IEC WGs. I am sure there is something to do to achieve this as well as to convince users that it's in their interest to be involved in the process and discussions.

#### ***Regarding the need for an international certification system for competency in the Ex field, what factors are being considered to move forward and how advanced is this investigation?***



tiers - electricite

Based on my experience of applying ATEX at Total and on feedback received after my training in this area, I find it necessary to reinforce the expertise of technicians working in hazardous areas. Sometimes, in addition to forgetting basic knowledge, non electricians are less aware of hazards. Bad habits are another factor to consider. To prevent this, periodic technical refreshments are essential. Training should be

adapted, too, to the specific tasks carried out, which I find is not always the case. Also, more formal rules should be put in place, such as those in France for all electricians (outside hazardous areas) and where there are various qualification grades and clearly defined responsibilities. This is formalized by an official document signed by the two parties, the worker and the employer, which also defines legal responsibilities in case of accidents.

***What are some of Total's safety systems for people and especially those working in hazardous settings?***

Those working in hazardous settings receive appropriate training dealing for example with all fire and explosion issues and cases, but also on the types of protection and guidelines in case of emergency. We also have a system of work permits that includes several specificities such as cold, hot as well as special permits for electricians describing tasks, tools, partial shut down requirements and equipment de-energization, to name a few.

Depending on the tasks performed in hazardous areas, a portable gas detector is used, for example, by the "safety man" before the job starts. There may be times when a firefighter is standing close to the worker with a fire extinguisher or even offshore when hazardous tasks are carried out. Fire pumps may also be systematically in operation with the fire hose watering the sea and ready to be re-oriented as required.

***What would you like ExMCWGs 10 and 12 to achieve in the next five years?***

I would like the projects carried out by these two WGs to be "mature" enough so that they can be ready for users.



Patrick Leroux

**Patrick Leroux** heads [Total's](#) Electrical Department, which is part of the group's Exploration and Production unit. Located in Paris, France, the branch is in charge of oil and gas production including onshore and offshore activities throughout the world mainly in the North Sea, Middle East, North and West Africa, South East Asia, Russia and South America. Total currently has exploration and production activities in 41 countries and produces oil and gas in 29 countries.

Leroux's team consists of some 20 electrical engineers located at Total's head office in France as well as in other parts of the world working on construction sites or shipbuilding yards; mainly offshore platforms and floating production, storage and offloading construction sites.

Total's electrical department is mostly responsible for all electrical project development starting from the pre-project stage to commissioning. Other engineers are also involved in research and development activities. In addition to leading his team, Leroux has been involved in training for more than 20 years at the French Institute of Petroleum, within Total's affiliates and in universities.

The company's oil and natural gas production, which consists of almost 2,5 million barrels of oil equivalent per day, is supported by reserves of more than 11,1 billion barrels of oil equivalent and a widely diversified asset portfolio that is one of the fastest-growing in the industry.

\*One major objective of IEC's IECEx Scheme is to facilitate international trade in equipment and services for use in explosive atmospheres, while maintaining the required level of safety. At present, the Scheme counts 25 member countries.

\*\* ATEX (ATmosphere Explosive) is the current mandatory European Directive for all electrical and mechanical equipment used in potentially explosive atmospheres.

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