



Services

Consulting Service for Hazardous Locations

SCOPE OF CONSULTATION SERVICE

Expo Technologies provides specialized consultation services for technology in the application of electrical apparatus in flammable atmospheres to North American, European and International (IEC) Standards and Codes.

These services cover the following areas:

- Assistance in obtaining approval/certification from authorized Notified Bodies for electrical apparatus intended for operation in flammable atmospheres (Gas and Dust).
- The design of electrical equipment for use in flammable atmospheres (Gas and Dust).
- Installation practices in classified locations.
- The provision of testing services.
- The validation of CE Marking for electrical apparatus for use in flammable atmospheres.

CERTIFICATION / APPROVAL CONSULTANCY SERVICE

Expo Technologies has been involved in the manufacture of hazardous area equipment since the late 1960's and interacting with "Notified Bodies" such as IECEx, European, UL, FM, CSA, etc., since this time. Several employees of the company are members of National and International Standard Committees, which are responsible for the writing of Standards for Hazardous Area Equipment. In the early 1980's this knowledge was first used to help manufacturers and users to gain certification/approval for their products with the help of Expo Technologies "Consultancy Team".

The Expo Technologies Consultants are highly experienced practical engineers, with extensive knowledge of the design, manufacture, approval/certification process and the application of explosion-protected apparatus/standards.

Benefits to Manufacturers

By taking advantage of these Expo Technologies Consultation Service, manufacturers and end-users will benefit in the following ways:

- + **Reduced time to market.**
- + **Freedom from the need to learn and apply unfamiliar technologies, enabling the manufacturer to concentrate on its own specialities.**
- + **Elimination of design restrictions which may otherwise be introduced through unfamiliarity with the approval process.**
- + **An approval formulated to allow the maximum flexibility in applicable options in the approved design, within the limits allowed by the type of protection chosen.**
- + **Reduction of direct and indirect approval costs through efficient preparation and presentation of data.**



www.expoworldwide.com



ISO 9001



CASE HISTORY 1.

Approval Assistance

A major manufacturer of oilfield drilling equipment engaged Expo Technologies for assist in obtaining CENELEC approval program for its pressurized Top Drive Drilling System. The objective was to secure approval in the shortest feasible time to facilitate prompt entry to the market.

Expo Technologies supervised the preparation of application drawings and documentation, as well as the specification of performance parameters within the desired approval. Expo Technologies also acted as liaison between the Notified Body and the manufacturer while participating in the approval tests.

By presenting the correct information in an immediately acceptable form, the need to rework the drawings was largely eliminated, allowing the Notified Body to complete testing and issue the approval promptly. This, in turn, reduced both direct and indirect costs to the manufacturer.

CASE HISTORY 2.

Design for Explosion Protection

An international LNG tanker operator had problems with corrosion and short service life with the Pressurized Fluorescent Lamps installed in the bilges of one of its ships, an area where the atmosphere is frequently flammable. Expo Technologies was approached to identify and procure more durable lamp replacements. The specification included a number of special features, including the use of captive fasteners throughout.



Using their extensive knowledge of available products, Expo Technologies was quickly able to locate a suitable unit and modify it for EEx p pressurization. Large numbers of these lamps have now been supplied, and they are operating to the customer's satisfaction.

CASE HISTORY 3.

Installation Practice for Flammable Atmospheres

A pharmaceutical plant in Ireland encountered problems with flammable atmospheres for the first time following changes to their production processes. The plant personnel lacked experience in the explosion-proofing technologies involved and turned to Expo Technologies for advice.



Following a survey of the areas, Expo Technologies produced a report that recommended the optimum methods of protection as well as a schedule of materials to fulfill the requirements of the installation practice standards governing the site. The customer was then able to bring the plant up to a "safe" condition with minimum delay.

CASE HISTORY 4.

Purge Tests, Pressure & Leakage Tests

CENELEC EN50016 requires apparatus protected by Purge and Pressurization to be tested for effective purging as a "type test," as well as for structural integrity and leakage as a "routine test." This is also recommended for pressurized equipment built to IEC 60079-2 & North American regulations.

When a major Finnish manufacturer of large electric motors presented a pressurized machine to a National Notified Body (NB) for approval, the NB did not possess the equipment necessary for the test. Expo Technologies provided its own test equipment, as well as an experienced engineer to perform the tests at the manufacturer's factory.

A detailed report was produced which subsequently formed part of the documentation associated with the approval. Expo Technologies subsequently became the regular consultant and test equipment supplier for the company.

CASE HISTORY 5.

CE Marking

A major North American manufacturer of petrochemical process analyzers was repackaging one of its instruments for sale in the European market. A significant requirement was compliance with all relevant European Directives leading to the application of the CE Mark.

Expo Technologies was retained to provide its expertise in expediting the application for explosion-proof approval. In addition to preparing documentation and monitoring the progress of the application, Expo Technologies offered guidance on the tests and documentation necessary to achieve compliance with other regulations included within the CE Marking requirements. The most significant of these concerned EMC compliance.

Expo Technologies provided the confidence necessary to allow the adoption of the manufacturer's Technical File which forms the basis of valid CE Marking.



Expo Technologies Ltd

Summer Road, Thames Ditton,
Surrey, KT7 0RH, UK

T +44 (0) 20 8398 8011

F +44 (0) 20 8398 8014

E sales@expoworldwide.com

Expo Technologies Inc

9140 Ravenna Road Unit 3,
Twinsburg, OH 44087, USA

T 888-NFPA-496 (Toll Free)

F +1 440 247 5409

E sales.na@expoworldwide.com

www.expoworldwide.com

Expo Technologies reserve the right to amend data given here without prior notice.
©2007 Expo Technologies. MiniPurge™ is a trademark of Expo Technologies.