



BS, EN & IEC 60079-19
ATEX

Ex Theory & Hands On Training

The Association of Electrical & Mechanical Trades



Internationally Delivered, Internationally Recognised

Trained 90% of all IEC Ex Certified Service Facilities in UK, Gulf and South East Asia

Supported by Oil + Chemical Companies & Motor + Pump Manufacturers

Continued Support With AEMT ATEX and Ex Helpline



SUPPORTING ENGINEERING EXCELLENCE

AEMT Ex Training

To date AEMT have trained staff in over 90% of all IECEx Certified Service Facilities in the UK, Gulf, and South East Asia, as well as engineers from many international oil, gas, and chemical companies. A number of delegates have also gone on to be successfully assessed and audited for their individual IEC Ex Personal Competency Certificates.

Target Audience

The AEMT encourages managers, and/or supervisors to attend the courses so that they become the “Responsible Persons” able to fully understand and take responsibility for their company’s Ex repairs. All staff refurbishing Ex Flameproof and explosion protected apparatus should be trained; a minimum of two electrical or mechanical engineers/technicians should attend per company.

Course Objectives

The aims of the course are to raise the level of delegates knowledge so that they fully understand hazardous zoned areas, and how the different standards of equipment are made suitable for the various areas. The correct procedures and practices to be used for the overhaul of explosion protected motors, pumps, and other equipment, so that they will comply with the original certification to which they were manufactured, and/or comply with the original standards. To ensure that delegates understand the legal requirements, risk assessments, and health and safety requirements, when overhauling and maintaining Ex apparatus, such as motors, generators, pumps, gearboxes etc.

Hands-on

The Module 2 Hands-on course familiarises delegates with the forms and procedures used to repair hazardous area equipment. It has been designed to ensure that managers, supervisors and technicians, who are involved with the repair of hazardous area equipment fully understand the practicalities of ensuring that equipment is repaired to maintain all the safety aspects embodied in the original design certificate and/or standards.

The course is for delegates, who have attended the first module on Hazardous Area Apparatus. During the AEMT Module 2 course they will gain experience of measuring flame paths, air gaps, and volumes, and be assessed on their practical ability to carry out these tasks at the end of the course. The course is vital for any electrical or mechanical engineers repairing hazardous area equipment with most engineers attending Module 1 and Module 2 together.

Refresher

The Refresher Course contains most of the syllabus of the Module 2 Hands on course, but is for delegates requiring a three year refresher course and a reassessment of their ability to update their certificate. Because the attendees are familiar with most aspects of the practical course, they are able to complete this part of the course quicker, and be re-assessed on their workmanship and competency. The course also updates delegates on recent changes in standards, or equipment, and answers any problems encountered by delegates in the group discussions.

Certification



All delegates are assessed throughout the course, with multiple choice questions, and an AEMT certificate issued to all successful delegates. Our course is also certified by the personal development scheme CPD.

Training Courses

- Module 1 - Ex Theory
- Module 2 - Hands On
- Module 3 - Hands On Refresher

Assessment

There is a multiple choice assessment on the procedures covered as well as a practical assessment involving the use of the AEMT repair sheet to take



Nandan Pillai
TEMTEC, Oman

“ The training was very useful for me. It helped to refresh my knowledge and provided good experience in the repair of Ex motors. Our company and I are very thankful to you. We look forward to training with you again in the future also. ”



Module 1 Theory

- The original BEAMA/AEMT Code of Practice.
- Ignition Sources in Flammable Gases, Vapours, and Dusts.
- Principles of Ex protection for Gas, and Dust.
- Temperature classification and groups of apparatus.
- Certification, standards and marking.
- Requirements and procedures of ATEX, DSEAR, and BS EN 60079 19.
- The principles and repair methods for:
 1. Flameproof Concept, Ex d and Ex de
 2. Increased Safety Concept, Ex e.
 3. Incendive sparking concept, Ex n, and dust Ex tD.
 4. Other methods including: Ex p, Ex o, Ex i, Ex m, Ex q, Ex s, etc.
 5. Mechanical Protection Concepts, constructional safety, Liquid Immersion, etc.
- Installation, Reinstallation, and Testing of Ex Apparatus.
- Reports and records for ensuring the quality and management of repairs.
- Legal requirements and safe working practices.
- Assessment.

Booking

Please make all bookings through the website or by contacting us on the details provided below. The Course Fees cover all lectures and demonstrations, lunch and refreshments each day, the comprehensive course manuals, delegate assessment, and certificates. The course fees do not include accommodation.

YouTube Videos



Watch our collection of YouTube clips outlining what you can expect from our training courses.

Visit www.theaemt.com/training

or [click here to visit our YouTube channel.](#)

If you would like to speak to us about bespoke or in house training, please contact us using the contact details on the right and we will be happy to find an arrangement that suits you and your company best.

Module 2 Hands On

- Health and Safety aspects including “Certificates of Safety” relating to the actual equipment being received.
- Best Workshop Practice: including the procedures that should be in place to repair Ex equipment.
- Procedures to be used on receipt of the apparatus.
- Dismantling: Recording Motor, Pump, apparatus details. Customer information. Dismantling procedures.
- Nameplate Details. Initial Tests. Internal and External visual inspection. Terminal layout and inspection. Rigid flanged joint surfaces. Spigot joint gaps. Flame paths. Drilled holes. Bearings. Axial alignment.
- Including welding and metal spraying advice. Tightening of fasteners, and recovery parameters.
- Final inspection & Reassembly.
- Core Tests, Winding Tests, Phase Balance Tests
- Insulation resistance Tests, Flash Tests.
- Final Reporting, Records and Labelling.
- Tool, equipment, and standards requirements.

Refresher:

Updates on revisions to ATEX, DSEAR, Standards, equipment and procedures that have occurred over the past three years.

Course Dates

Our course dates are published and kept up to date on our website.

Visit <http://www.theaemt.com/calendar/course-dates>

Contact Us

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