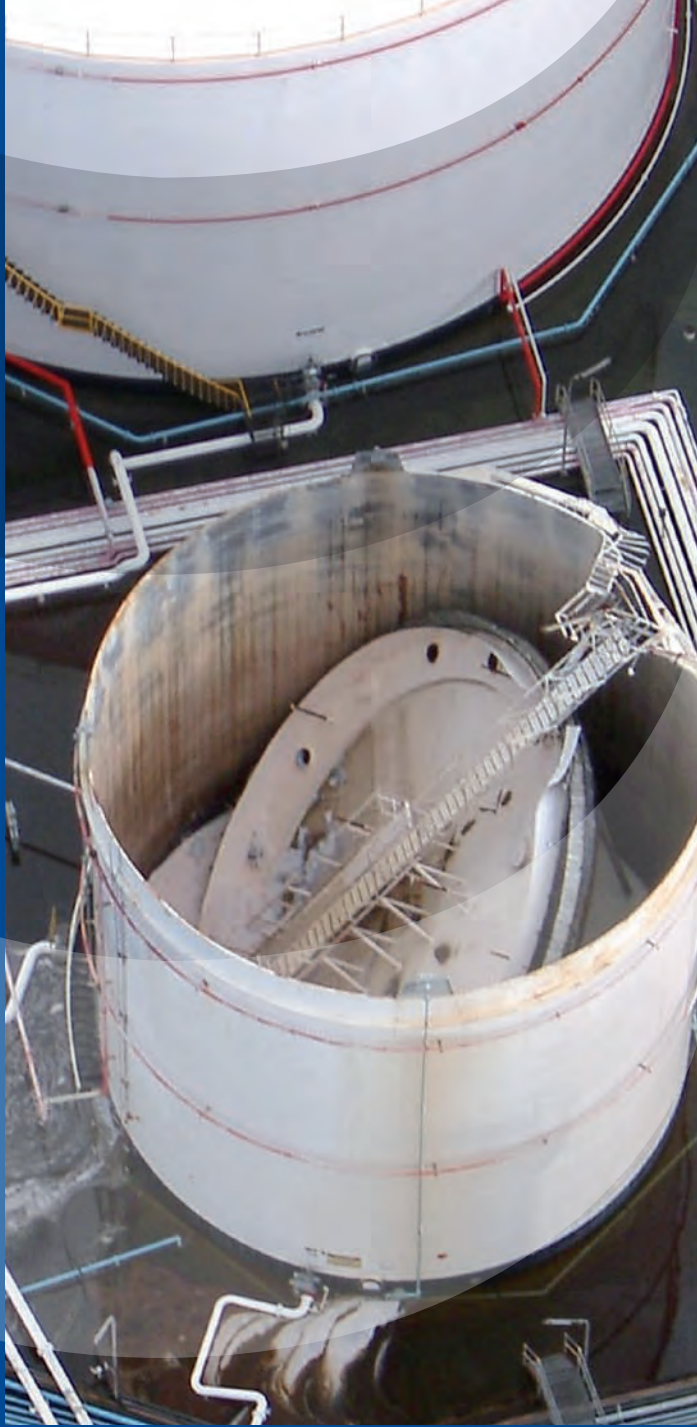




A training, assessment and certification scheme for tank integrity assessors and others with responsibility for process safety management involving fluid containment and in-service storage tank integrity

tankassessorTM





Become a certified **tankassessor**[™]

Certificate of Competence in the assessment of storage tank integrity according to the EEMUA 159 User Guide

Sicco Jager, Shell Global Solutions

“... a good technical course – enjoyable, well structured and delivered in a thorough way that helps enable you to pass the exam successfully!

Attending EEMUA's **tankassessor**[™] course has given me the insight to understand in more detail the design, installation, inspection, maintenance and repair of conventional storage tanks. I use the knowledge on a daily basis for my job as a storage tank expert.”



Why **tankassessor**[™]?

Oil and petrochemical industry feedstocks, refinery products, general chemicals and other products have been stored in above-ground, vertical cylindrical tanks for many years. At first sight these tanks appear of simple design and construction with innocuous working environments. However, this is not the case in practice, as testified by the many accidents associated with such tanks that have occurred around the world over recent decades.

The **tankassessor**[™] scheme aims to train, assess and certify as competent, those who have responsibility for the inspection, assessment, maintenance and oversight of tank storage operations.

Based on internationally recognised User Guides developed by EEMUA and other industry publications, as well as regulations and formal standards, **tankassessor**[™] delivers two levels of training and examination:

Level One leads to a **tankassessor**[™] Certificate of Competence in tank assessment;

Level Two leads to a **tankassessor**[™] **advanced** Certificate of Competence in tank assessment.

It is also possible for suitably qualified industrial personnel and others with an interest in the subject to attend the training only and choose not to enrol for the examination.

How are **tankassessor™** participants assessed?

Assessments are both practical and written: each candidate is required to demonstrate their competence through multiple choice test papers and a calculation assessment. Successful candidates will be awarded an EEMUA Certificate of Competence (Level One or Level Two).

Only possessors of a valid Level One Certificate of Competence are eligible to sit the examination for the Level Two course.

Candidates who opt to participate in the training, but not the assessment and those who are unsuccessful in examination will receive a Certificate of Attendance.



Who should attend?

The **Level One** course is suitable for both newly qualified engineers and also operational personnel – supervisors, technicians, inspection personnel, and so forth – who have several years' relevant experience with storage tanks and require an improvement in their understanding of, and/or to become qualified in, assessing the integrity of tanks and their associated ancillary systems, bunds and foundations.

The **Level Two** course will be appreciated by maintenance engineers, managers, inspection and other site personnel who require an improvement in their understanding of, and/or to become qualified in, assessing the integrity of tank storage facilities, and who need to be able to calculate and make operational recommendations at all stages throughout tank life.

Course entry criteria are summarised in the charts overleaf.

How can I register?

A registration form* should first be completed and forwarded to EEMUA via email, post or fax, where it will be checked to ensure that your experience and knowledge meets the relevant entry criteria for the course.

Once eligibility has been confirmed, you will be contacted and advised to proceed with making payment. Alternatively, if you are confident that you satisfy the entry criteria, you can proceed with immediate payment (see the registration form for details). Should EEMUA thereafter determine that you do not qualify, the registration fee should be duly refunded.

*Registration forms are available to download online at www.eemua.org

What are the course objectives and content?

tankassessor™ Level One

The **Level One** course describes many of the key features of tank design and the common problems that can arise in service. The course identifies many of the actions that may be taken to avoid operational problems or remedy the effects.

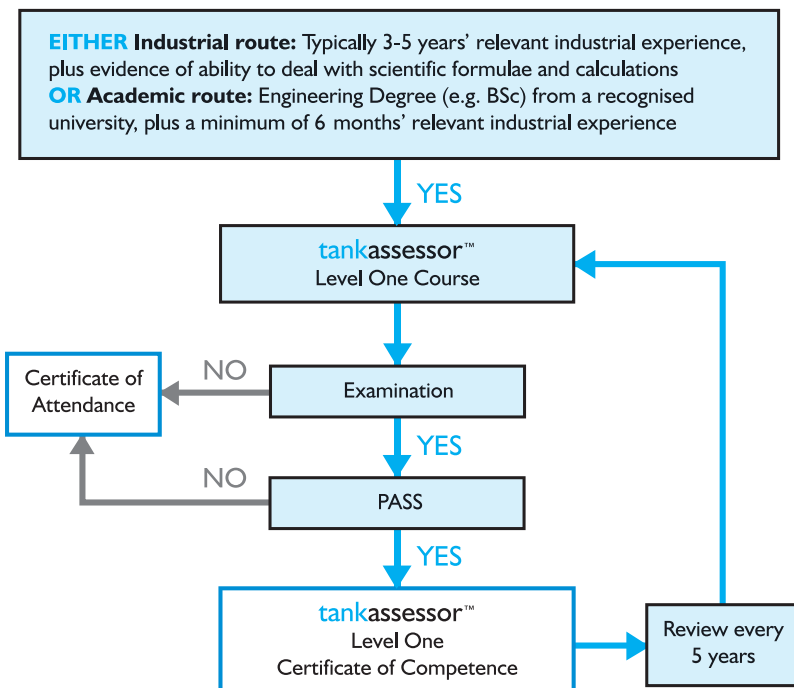
The objective of the Level One course is to enable participants to:

- Gain an understanding of the design, material and fabrication aspects of tank construction with respect to repair or restrictions of use after degradation in service
- Understand the principles, output and limitations of inspection methods and techniques
- Be able to make a sound assessment of the integrity of a storage tank and foundation and offer guidance on the need for repair, its urgency and methods of effecting such repair
- Understand requirements for overflow protection
- Understand requirements for secondary and tertiary containment

Course content includes the following:

- An outline of the type of products that might be stored, codes of practice, tank types, materials, design parameters, venting, settlement, jacking and insulation
- An understanding of EEMUA Publication 159 (user guide), integrity assessment, methods of repair or restrictions of service
- In-service problems, such as corrosion, erosion and wear
- Visual and NDT inspection, reporting and evaluating results
- Case history and failure studies
- Repairs, welding processes and qualifications, quality control and testing
- Use of EEMUA 154 (tank demolition) and EEMUA 180 (frangible roof joints)

On successful completion of the course and the examination, candidates are awarded a **tankassessor™** Certificate of Competence in tank assessment.



tankassessor™ advanced Level Two

The **Level Two** course deals with the theory behind the Probabilistic Preventive Maintenance (PPM) methodology, which is based upon two underlying methodologies: Risk-Based Inspection (RBI) and Reliability-Centred Maintenance (RCM). Course participants are guided through the implementation of these methodologies for storage tanks.

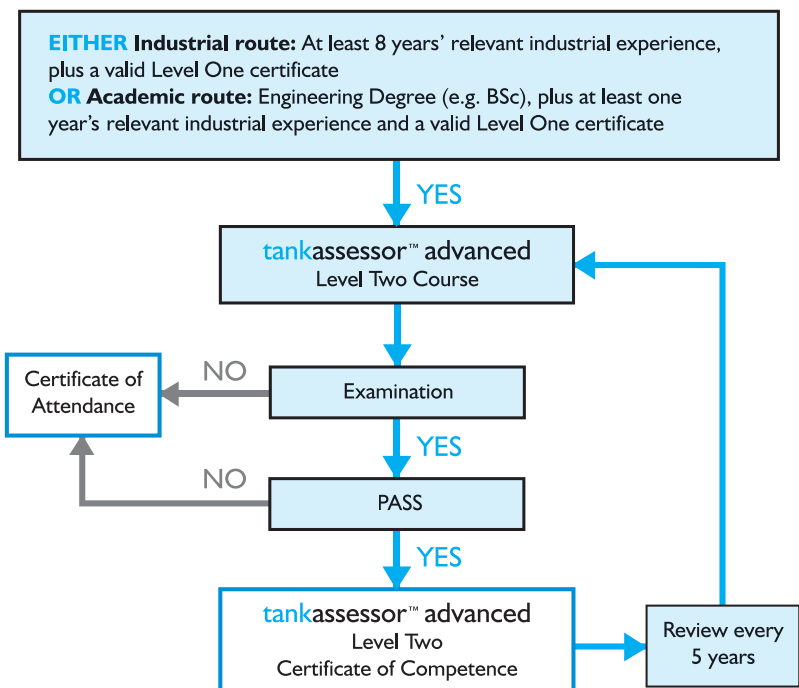
The objective of the Level Two course is to enable participants to:

- Understand the design and operational aspects of the use of storage tanks
- Understand and implement detailed inspection and maintenance plans, based on RBI and RCM methodologies
- Make a sound selection between the various models for maintenance of storage tanks (time based, condition based or risk based)
- Set budgets for inspection and maintenance tasks
- Schedule maintenance tasks in a structured way, similar to that for shut-downs on capital equipment

Course content includes the following:

- An understanding of EEMUA 159, integrity assessment, methods of repair or restrictions of service
- Operational aspects of tanks
- Tank integrity maintenance systems
- Availability and reliability of RBI, RCM and PPM techniques
- Budgeting of inspection and maintenance tasks
- Management of inspection and maintenance activities
- The use of international codes and standards
- Case history studies

On successful completion of the course and the examination, candidates are awarded a **tankassessor™ advanced** Certificate of Competence in tank assessment.



FAQs

Who runs **tankassessor™**?

The courses have been developed and are administered by the Engineering Equipment and Materials Users' Association (EEMUA), a European industry Association with headquarters in London. Visit www.eemua.org for more details.

How long is a **tankassessor™** certificate valid?

Both certificates are valid for a period of five years, and may be renewed after that period, either by re-taking the course and exam (recommended) or sometimes by log-book evidence.

How long are the courses?

Both courses are run over 5 days. This includes a final half-day for the examination and assessment. Course notes and a complimentary copy of EEMUA Publication 159 are included in the course materials.

When and where will the courses be held?

Courses in English are typically held at a variety of UK locations. Full details are available on the EEMUA website: www.eemua.org/t_stanks.htm.

Courses in Dutch are also held in the Netherlands.

The development of EEMUA **tankassessor™** courses in France (delivered in the French language) is under active consideration: more details will be posted (when available) on www.eemua.org.

Courses are occasionally held (in English) in the Asia-Pacific region, and in other parts of the world, whenever there is sufficient demand: contact EEMUA to discuss the possibilities.

Is in-house training available?

Requests for in-house training will be considered by EEMUA on an individual basis; however, this is not the preferred arrangement. The course fee structure means that an in-house course is unlikely to be more economic than attending one of the public courses. Also, experience has shown that an off-site residential course is far more effective for the course delegates. For these reasons, the public courses are strongly recommended. Discounts may be available for group bookings.

Contact EEMUA on +44 (0)20 7621 0011 or info@eemua.org.

Established in 1995, this scheme has become recognised internationally by leading companies in the chemical and oil industries. Hundreds of candidates have successfully completed the courses since that time.



Photographs courtesy Koninklijke Vopak N.V. and other EEMUA Members.