

CRITERIA FOR THE ACCREDITATION OF INSPECTION BODIES PERFORMING INSPECTION OF METALLIC TANKS

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1. PURPOSE AND SCOPE

This document covers the criteria for the accreditation of independent inspection bodies performing inspection of metallic tanks .

2. DEFINITIONS

2.1 Approved Independent Inspection Authority

A Company approved by the regulatory authority as an independent inspection authority.

2.2 Tank

Any open or closed vessel which is subjected to no other internal pressure other than that due to the atmosphere.

2.3 Designated Area

Area specified by the Local Authority for specific activities in the Local Authority's area of jurisdiction.

2.4 Inspection

Examination of a product, process, service, or installation or their design and determination of its conformity with specific requirements or, on the basis of professional judgment, with general requirements.

2.5 Regulatory Authority

Authority which is legally charged with the enforcement of the requirements of legislation that relates to storage tanks.

2.6 Verification

The act of reviewing, inspecting, testing, checking or otherwise determining and documenting whether items, processes, services or documents comply with specified requirements.

3. GENERAL REQUIREMENTS

The approval of an independent inspection authority by the regulatory authority shall be conditional upon the following:

- 3.1 The inspection body shall be a registered legal entity with its own company certificate of registration.
- 3.2 The inspection body's registered office(s) shall be in a designated area.
- 3.3 The inspection body shall have the appropriate equipment to cover their respective scope of inspection activities.
- 3.4 The inspection body shall have access to a library for up to date information on appropriate inspection methods and codes.
- 3.5 The inspection body shall develop and maintain operating methods and procedures to cover its scope of inspection activities.

The following is a list of some of the standards, codes and regulations that may be used in the inspection of metallic tanks :

- API 620 : Design and Construction of Large Welded Low Pressure Storage Tanks
- API 650 : Welded Steel Tanks for Oil Storage
- API 651 : Cathodic Protection of above Ground Petroleum Storage Tanks
- API 652 : Lining of Above Ground Petroleum Storage Tanks
- API 653 : Tank Inspection, Repair, Alteration and Reconstruction
- API RP 575 : Inspection of Atmospheric and Low Pressure Storage Tanks
- API 2000 : Venting Atmospheric and Low Pressure Tanks
- API 2015 : Cleaning of Petroleum Storage Tanks
- BS 2654 : Specification for Manufacture of Vertical Steel Welded Non-refrigerated storage Tanks with Butt - Welded Shells for the Petroleum Industry

- 3.6 The inspection body's personnel who undertake inspections shall have the appropriate technical and professional qualifications and experience as outlined in Clause 4.
- 3.7 The organization shall be accredited as an inspection body by a recognized accreditation body.

In assessing the inspection body's competence, the above criteria and the requirements of ISO/IEC 17020 shall apply. The accreditation process shall include an initial assessment stage and once accredited, periodic on-site assessments once a year with a reassessment of its total activities being undertaken once every 5 years. The accreditation process may include a pre-assessment stage before the initial assessment.

4. PERSONNEL QUALIFICATIONS, TRAINING AND EXPERIENCE

- 4.1 **Manufacturing Inspection.** The inspection body personnel who carry out manufacturing inspection applicable to metallic tanks shall have a Diploma/Higher National Diploma (HND) or Degree in any of the following fields:

- Mechanical Engineering
- Metallurgical Engineering
- Industrial Engineering
- Manufacturing Engineering
- Engineering discipline in boilers, pressure vessels or metallic tanks

and shall have a minimum 4 years' relevant experience in manufacturing inspection. The personnel shall also have attended a relevant training course on manufacturing inspection as approved by a regulator and shall have knowledge of the applicable legislation for the scope of their inspection activities.

4.2 **In-service Inspection.** The inspection body personnel who carry out in service inspection applicable to metallic tanks shall either have a Diploma/Higher National Diploma (HND) or Degree in any of the following fields:

- Mechanical Engineering
- Metallurgical Engineering
- Industrial Engineering
- Manufacturing Engineering
- Engineering discipline in boilers, pressure vessels or metallic tanks

and shall have a minimum 4 years' relevant experience in in-service inspection.

OR shall be apprentice trained in the following disciplines:

- Boiler Making
- Welding
- Blacksmithing
- Fitting
- Fitting & Turning
- Engineering discipline in boilers, pressure vessels or metallic tanks

and shall have a minimum 5 years' relevant experience in in-service inspection.

OR trade tested in any of the above fields and shall have a minimum 5 years' relevant experience in in-service inspection.

The personnel shall also have attended a relevant training course on in-service inspection as approved by a regulator and shall have knowledge of the applicable legislation for the scope of their inspection activities.

4.3 **Design Verification.** The inspection body's personnel who carry out design verification of metallic tanks shall have a Degree in any of the following fields as a minimum:

- Mechanical Engineering
- Metallurgical Engineering

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- Industrial Engineering
 - Manufacturing Engineering
 - Engineering discipline in boilers, pressure vessels or metallic tanks

and shall have a minimum 5 years' relevant experience in boilers, pressure vessels or metallic tanks. The personnel shall also have knowledge of the applicable legislation.

5. REFERENCES

- API 620 : Design and Construction of Large Welded Low Pressure Storage Tanks
- API 650 : Welded Steel Tanks for Oil Storage
- API 651 : Cathodic Protection of above Ground Petroleum Storage Tanks
- API 652 : Lining of Above Ground Petroleum Storage Tanks
- API 653 : Tank Inspection, Repair, Alteration and Reconstruction
- API RP 575 : Inspection of Atmospheric and Low Pressure Storage Tanks
- API 2000 : Venting atmospheric and Low Pressure Tanks
- API 2015 : Cleaning of Petroleum Storage Tanks
- BS 2654 : Specification for manufacture of vertical steel welded non-refrigerated storage tanks with butt - welded shells for the petroleum industry

APPENDIX – AMENDMENT RECORD

Revision Status	Change			Approved by	Effective date
	Page No.	Clause	Description of Change		
Issue No. 1	-	-	-	SADCAS CEO	2015-09-29
Issue 1	4	3.7	Paragraph 2, Line 3 : Deleted «surveillance » and substituted with «periodic on-site »	CEO	