AS 2304:2019

Water storage tanks for fire protection systems

This Australian Standard® was prepared by Committee FP-008, Fire Pumps and Tanks. It was approved on behalf of the Council of Standards Australia on 20 December 2018.
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The following are represented on Committee FP-008:

- Association of Hydraulic Services Consultants Australia
- Australasian Fire and Emergency Service Authorities Council
- Engineers Australia
- Fire Protection Association Australia
- Insurance Council of Australia
- Master Plumbers Australia
- Pump Industry Australia
- Specialised Textiles Association

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Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Australian Standard®

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PREFACE

This Australian Standard was prepared by Standards Australia Committee FP-008, Fire Pumps and Tanks.

The objective of this Standard is to set out the minimum requirements for the design, construction, installation and commissioning of bolted steel circular and rectangular water tanks for the storage of water for fire protection systems. This Standard also provides guidance on water sources and qualities that influence tank design and construction, together with water conservation measures.

Section 11, the provisions for maintenance of water storage tanks for fire protection purposes, has been removed in this revision. The maintenance provisions are now detailed in AS 1851 *Routine servicing of fire protection systems and equipment*.

Other minor changes have been made covering side access manways and platforms and external ladders, as well as the provision of a Commissioning Checklist and Completion Certification (Appendix F) and baseline data (Appendix G).

This Standard was developed taking into consideration local and international Standards.

The terms ‘normative’ and ‘informative’ are used in a Standard to define the application of the appendices to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

This Standard includes a commentary on some of the clauses. The commentary directly follows the relevant clause, is designated by ‘C’ preceding the clause number and is printed in italics in a box. The commentary is for information and guidance and does not form part of the Standard.

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FOREWORD

This Standard has been developed to provide reliable water storage for fire protection purposes. Water storage tanks that are not designed correctly nor adequately maintained are prone to failure.

Design provisions for bolted steel tanks are covered in this Standard. Design provisions for tanks made from other materials are not covered by this Standard and may be included in future editions.

This Standard applies to suction tanks for sprinkler, hydrant and hose reel systems as well as for break tanks and dual-use fire protection storage tanks.

Steel tanks consist of a floor (either steel, concrete or liner), cylindrical or rectangular shell fabricated from steel plates joined together, and a roof, all of which rest upon a foundation. Tanks are filled with water from an outside source. Water is withdrawn in emergency situations through piping connected to a pump. Accessory items are provided to fill and drain the tank, monitor the water level, gain access for inspection and repair, provide means for accessing the water and to prevent positive or negative pressures, etc.

For tanks manufactured from materials other than bolted steel and bolted cast iron, the accessories and maintenance provisions of this Standard apply.