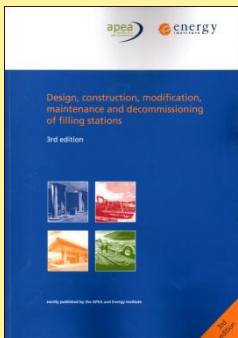


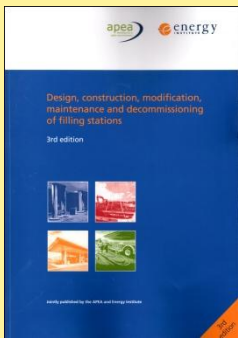
Blue Book 3rd Edition

- Containment Systems
- Covering underground tanks and pipes
- Above ground tanks



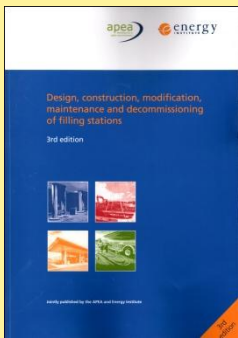
Changes

- No major changes in pipe work
- New reference to the difference between non-conductive pipe and conductive lined pipe.
- Conductive and non conductive pipe work should **not** be mixed in a single installations



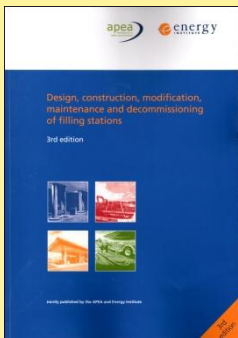
Changes- Tanks

- Reflect current practices and requirements
- Tanks should “normally” be installed underground
- They should **all** be double wall with leak detection
- Tank backfill should be granular, sand or gravel in accordance with the standards, concrete should not be used



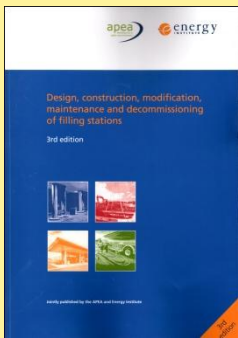
Single wall tanks

- Existing single wall tanks can be reused-
- Providing the tank has a double wall lining installed with a class 1 leak detection system
- All double wall linings to be fully approved to EN 13160-7



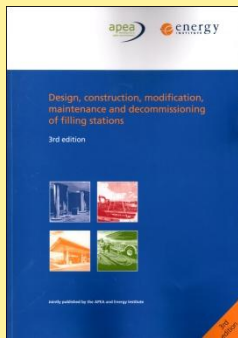
Tanks

- No reference in the Blue Book to the larger tanks outside the present scope of EN 12285-1
- This is being dealt with in a proposed change to the current standard in CEN
- The new proposals may well permit these to be included but with a thicker tank shell



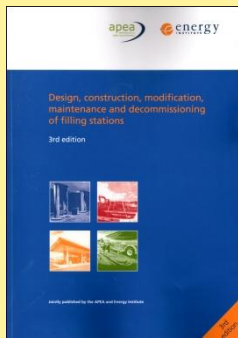
Above Ground Tanks for Petrol

- Above ground tanks should be min 2hr fire resistance conforming to UL 2085
- Closed secondary containment system with class 1 leak detection
- Emergency fire venting provided
- Fixed pump for deliveries of fuel
- Designs to consider dump tanks

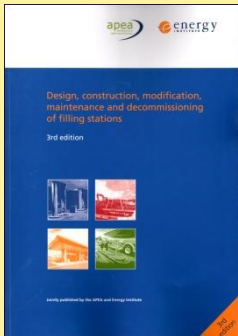


Above Ground Petrol Tanks

- Tanks should not be in bunds
- Tanks should not be positioned inside buildings
- UL2085 not designed for tanks in such places
- Serious health and safety issues in such installations



An above ground petrol storage tank



The transportable fuel station



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Open bunds should not be used

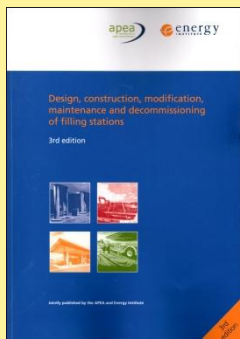


Bunds create fire and explosion hazards by trapping liquid petrol and vapours

It causes major health and safety problems for access, maintenance etc.

Petrol tanks should not be installed in buildings

- Above ground petrol tanks should be installed in the open air in a well ventilated area
- UL 2085 test is designed for petrol tanks in the open air
- Health and Safety issues with petrol tanks inside buildings

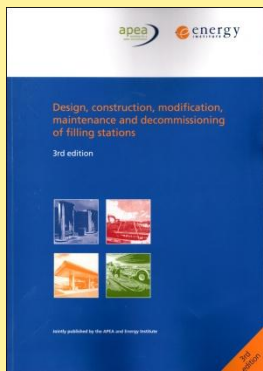


Small petrol refuelling units up to 2500 litres See Annex 8.2



Retail Petrol Stations

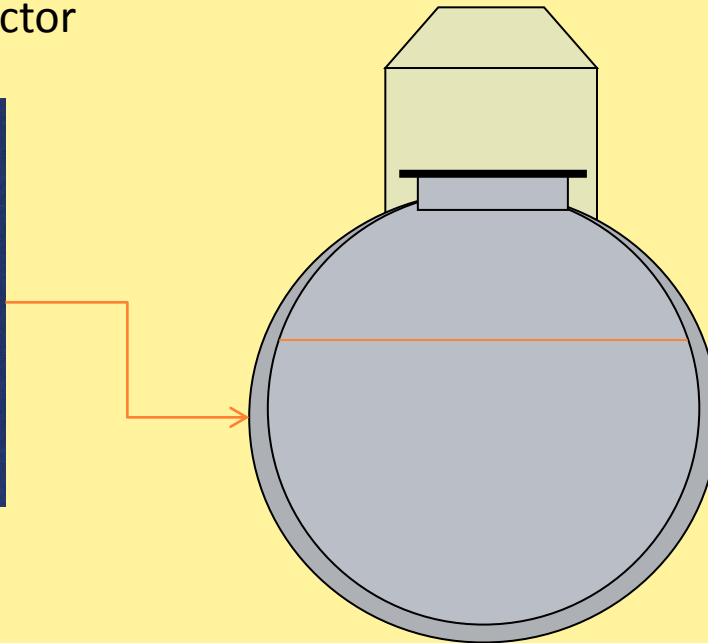
- Retail petrol stations should have the tanks installed underground
- There is no good safety or environmental reason why these tanks should be installed above ground
- The modern double wall installation is high integrity and is considered safer than an above ground installation



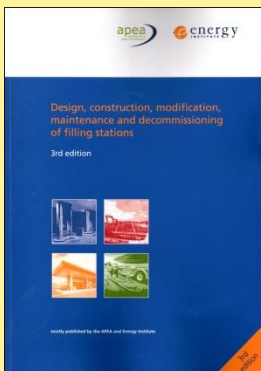
High Integrity

This means the tank and pipe systems are subject to a permanent pressure test for the whole life of the installation

Class 1 Leak Detector



There have been no known releases of fuel from a double wall system in over 40 years experience in Europe



An acceptable UL 2085 arrangement



apea energy

Design, construction, modification, maintenance and decommissioning of filling stations

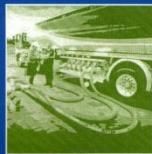
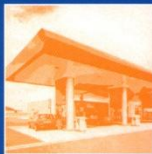
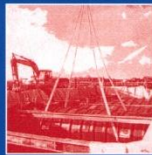
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Questions?

