

The Boiler Test Code 2018

VOLUME 1 - Boilers 3 bar litres to 1100 bar litres

Effective from 1st March 2018

Frequently

Asked

Questions

Prepared by:

10 $\frac{1}{4}$ " Gauge Railway Society, 7 $\frac{1}{4}$ " Gauge Society,
Association of 16mm Narrow Gauge Modellers,
Gauge 1 Model Railway Association, Midland Federation of Model Engineers,
Model Power Boat Association, Northern Association of Model Engineers,
Southern Federation of Model Engineering Societies

Question

Section 1.5 states that the Code shall be considered as the Written Scheme of Examination but Section 3.13 states that the Written Scheme of Examination is both the certificate and the Code. Which is right?

Answer

Section 1.5 goes on to say 'when used in conjunction with the test certificate associated with an individual boiler'.

Question

Section 2.1 says that the Boiler Test Code is for the examination testing and certificating of steam boilers owned and/or operated for hobby purposes only. Section 4.5 says that persons presenting boilers for test shall be members of the club or society under whose name the boiler is to be tested.

If a club boiler inspector runs a business selling locomotives is it in order for him to sell a loco and then get the purchaser to join his club in order that he can conduct a boiler test on the loco he has just sold?

Answer

It is the intention that the Boiler Test Code is used by clubs and societies for hobby purposes only and not for boiler tests undertaken on behalf of, in conjunction with, or in any way connected with, a business. In the example cited any test carried out by the boiler inspector is connected to a business transaction between the boiler inspector and the purchaser of the locomotive. The boiler inspector clearly has a business interest in the locomotive and he should therefore not be testing it.

Question

Is it right that boiler inspectors should be able to test their own boiler (Section 3.9a) even though it has been tested and passed by another inspector?

Answer

It is preferable that equipment in the ownership of a boiler inspector is inspected by another boiler inspector. This concession was included in order to cater for small clubs who have only one boiler inspector and the arrangements permitted under Section 3.9d are not possible, perhaps for geographical reasons.

Question

Section 6.9 says that the test gauge must be calibrated to within +/- 2% but 2% of what?

Answer

+/- 2% across the range of the gauge as per normal practice.

Question

Section 8.1 says: Purchasers of commercially built boilers should make sure that their order states that the boiler is to be tested under this Code and that the boiler has been built in accordance with the Pressure Equipment (Safety) Regulations 2016 No. 1105 (PER) and where necessary carries the appropriate CE marking and that the documentation has been endorsed by the manufacturers Notified Body. What is the appropriate CE marking?

Answer

The appropriate CE marking as per the PER. Details from the PER have not been quoted as they may change before any revised Test Code is published.

Question

Why has Section 9.2 been changed to include the removal of cladding on steel boilers to all steel boilers and not just those over 500 bar litre? Was the change at the insistence of insurers?

Answer

The Model Engineering Liaison Group (MELG), in its position as representing the hobby and giving responsible guidance on the testing and certification of boilers and other pressure vessels, reached a considered opinion that it was unwise to allow steel boilers to continue for their indefinite lifetime without having a thorough inspection and felt that any reasonable person would also agree with that opinion. A reasonable person would interpret a "thorough inspection" as implicitly requiring a view of the exterior of the boiler. The alternative of permitting a steel boiler to continue in service without ever having the exterior exposed was considered to be unacceptable. It should be mentioned that the removal of cladding as detailed in clause 9.2 is normal practice, and deemed essential, for full size boilers as confirmed by both commercial boiler inspectors and the National Traction Engine Trust. The difficulties implicit in the removal of cladding from a boiler, especially for larger models, was acknowledged. However, the MELG took the view that safe operation took priority over convenience. This was not a unanimous view but it was reached by a significant majority, including representatives of societies with larger boilers. It was not a majority composed entirely of representatives with exclusively small boiler interests.

Thus, the discussion is only about the length of time between those major inspections - steel boilers have been seen completely wrecked by poor management in a very few years. The decision to adopt a seven-year inspection period, with an optional extension to 10 years, was seen as a reasonable compromise. A 10 year period could also fit in with the sort of major overhaul period for larger locomotives.

The Boiler Test Code 2018 Volume 1 (BTC2018V1) does not mandate the type of testing required at this interval. Normal commercial/industrial practice requires shell thickness testing, crack testing, a thorough internal inspection (removal of access panels), etc. The BTC2018V1 merely requires a "thorough inspection". The extent of that is left to the discretion of the Inspector.

Failure to comply with the requirements of clause 9.2 (or any other clause) of BTC2018V1 may result in a court of law, insurer or other authoritative body considering any certification issued to be invalid.

The change was not at the insistence of insurers.

Question

Section 9.2 states that for steel boilers the cladding be removed at 7 year intervals, which may be extended to 10 years at the discretion of the inspector. When does the 7 year period start?

Answer

As the Test Code is not retrospective the clock starts ticking for the 7/10 year period 1st May 2018 for boilers currently in service and the date of the first 1.5xPw hydraulic test for boilers put in to service after 1st May 2018. If certificates are lost the boiler will require testing as per 12.9 and 7.2. This will require removal of the cladding.

Question

Section 10.7 says to record the hydraulic test of a superheater on the hydraulic test certificate, where?

Answer

It is agreed that the wording is unclear. The intention was to give a recommendation that superheaters were tested initially at 2xPw. The test can be recorded in the certificate's 'comments' box.

Question

Section 11.7c says that water gauges on smaller boilers do not have to be capable of being blown down. What is the size of a smaller boiler and is it right that they do not need to be blown down?

Answer

It is not possible to define the size of a small boiler. The application of Section 11.7 depends on a number of factors including layout of the backhead etc. The acceptability of water gauges not capable of being blown down is left to the judgment of the boiler inspector as are the other parts of Section 11.7.

Question

Why can't the Northern Association and Southern Federation standardise their boiler record keeping – each require different copy certificates to be submitted to their boiler registrars.

Answer

The Northern Association and the Southern Federation have been asked to investigate the possibility of standardisation.

Question

Section 12.5e says 'Certificates are not valid until both the hydraulic and steam tests have been satisfactorily undertaken' but Section 11.1c says 'A steam (accumulation) test can only be undertaken during the validity period of a hydraulic test certificate'. A chicken and egg situation?

Answer

The heading of Section 12.5 talks about the validity period, ie the period for which the certificate would be valid, not the validity of the certificate.

Question

Section 12.6 says that Test Certificates which include repeat hydraulic test and steam test results issued by professional or commercial organisations are acceptable but goes on to say that it is not acceptable to mix a commercial hydraulic repeat test certificate with a Club or Society issued steam test certificate or vice versa.

Why?

Answer

A view was taken when the Test Code was first drafted that club repeat tests and commercial repeat tests should be kept separate. In addition many clubs would not recognise the format of a commercial repeat hydraulic test certificate and hence may not accept such a certificate prior to doing the Safety Inspection and Steam Accumulation Test.

Question

Section 12.9 deals with lost certificates - if the current owner has 'some' boiler test history e.g. a set of society test certificates going back 3 or 4 years but does not have a copy of the original shell certificate is it correct that it is not necessary to carry out a 2xPw hydraulic test but just a 1.5xPw hydraulic test?

Answer

If you have certificates going back 3 or 4 years but no shell certificate all that is required is a 1.5xPw hydraulic test but if you have no certificates at all a 2xPw hydraulic test is required.

