

HERITAGE RAILWAY BOILERS WORKSHOP –

NDT EXPERIENCES

ANDY WRIGHT



BRITISH
ENGINEERING
SERVICES

STEAM LOCOMOTIVE BOILERS - NDT

Heritage & Mainline Steam Locomotives, at their General Overhaul: NDT requirements,
what's the difference?



10 year General Overhaul from the Competent Persons prospective.

- **Scope of NDT requirements i.a.w. the PSSR 2000 Written Scheme of Examination.**
- **NDT company operator(s) undertaking the work;**
 - **Qualified**
 - **Experienced**
 - **Comprehensive NDT report(s)**
- **Initial NDT to determine scope of work (cost implications)**
- **Ongoing NDT visits dependant on extent of boiler repairs**

10 year General Overhaul from the Competent Persons prospective.

- Preparation of the boiler prior to NDT survey – what needs doing / where / how?
- NDT company operator(s) initial site visit not liaising with the Competent Person;
 - Completing their own scope of work
 - Competent Person requiring more NDT due to their findings
 - Further initial NDT required

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How do I prepare my Boiler for the NDT examination?

- Visual examination by the Boiler Smith and Competent Person will identify some repairs required.



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The obvious places to undertake NDT examinations

■ GROOVING:



- Corrosion fatigue type mechanism
- Lap joints
- Foundation ring to firebox
- Throat & Backhead radii



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The not so obvious places to undertake NDT examinations

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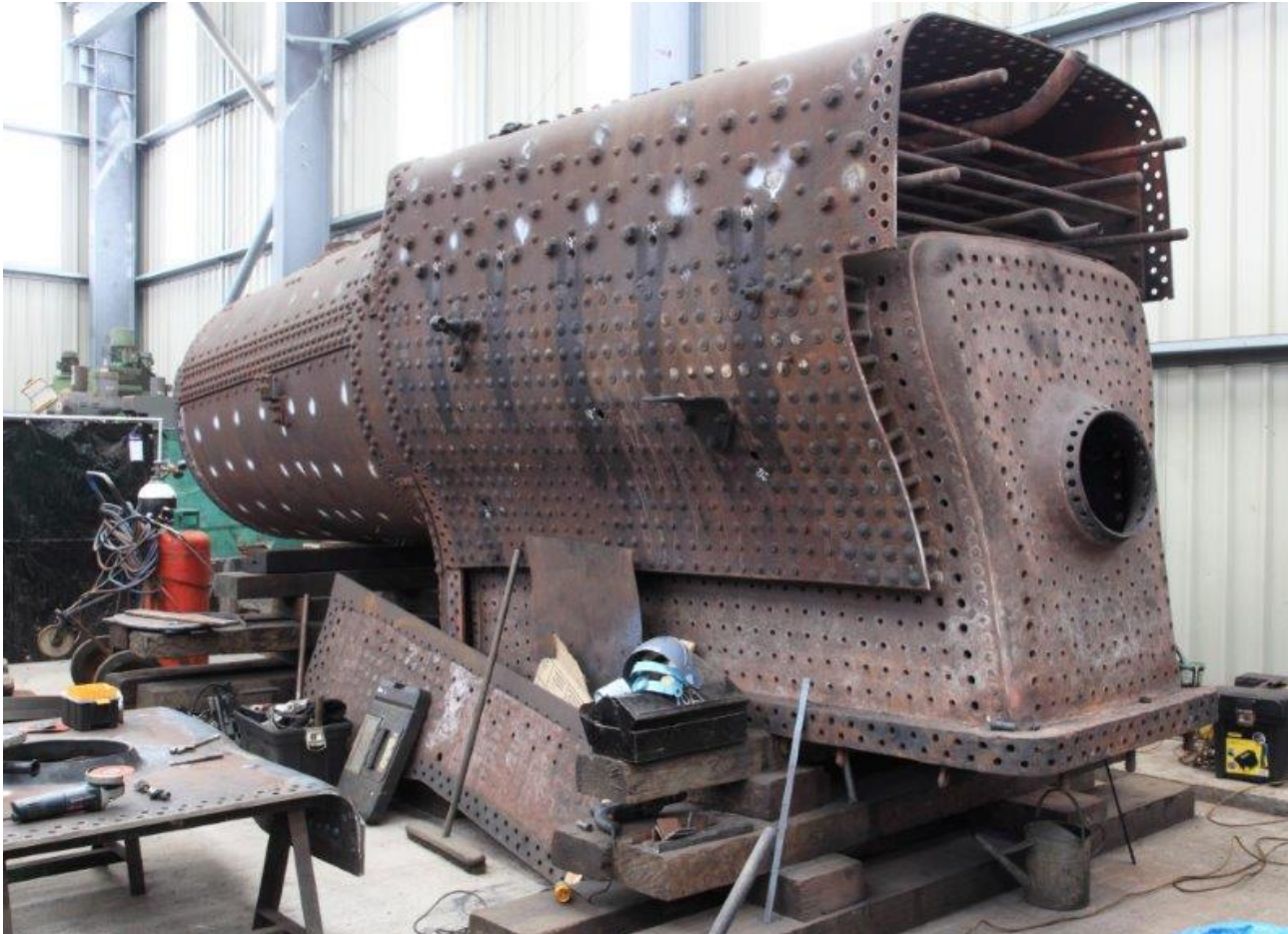


Don't forget the superheater header & main steam pipe NDT examinations



Don't forget the flue tube bottle neck weld(s) NDT examinations

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**On going repairs
will require further
NDT examinations**

**Removal of plates
may reveal further
defects. NDT
doesn't reveal the
full picture**

In Summary:

- **Approved NDT operator(s) by the Competent Person**
- **Approved scope of NDT examinations required by the Competent Person**
- **Owner/user informed of what needs doing / where and how**
- **Closer liaison with the NDT operator(s) and Competent Person**
- **Production of comprehensive NDT reports**