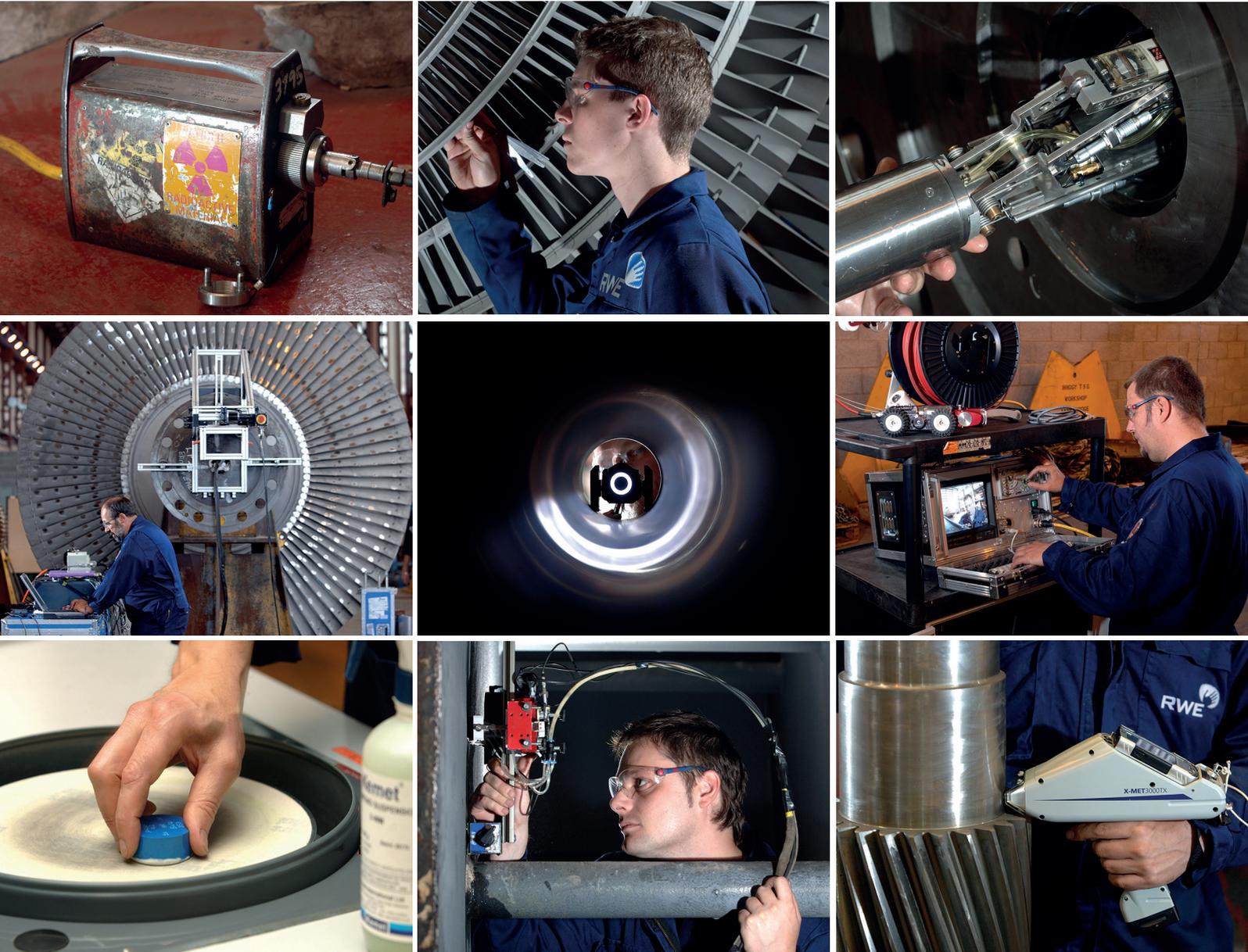


Non-Destructive Testing (NDT) Apprenticeships – Guidance on the preparation of the project report and associated project presentation

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Preface

This document has been provided to offer guidance to apprentices and employers on the preparation of the project report and project presentation. The project is a significant part of the apprenticeship and should include as many of the knowledge requirements, skills and behaviours as reasonably practicable. It will be a start-to-finish project that requires the apprentice to carry out some research, determine the inspection methodology, prepare NDT technique sheets, carry out the inspection and report the findings. Although it is anticipated that most projects will be created and performed in the workplace, allowing the employer to fully benefit from the outcomes, there is no reason, subject to agreement, why some projects could not be set on external non-work-related plant items, such as bridges and structures, steam railways, cars or motorcycles.

As an example, it may be that the apprentice is given a weld configuration, casting, forging or other material and is tasked with determining what steps are needed to fully inspect the component. In contemplating this, the apprentice will need to consider:

- What type of NDT procedure and technique sheets need to be created?
- What inspection authority is mandating the inspection?
- What national or international codes have to be complied with?
- What equipment is required?
- What defects are being sought?
- What material(s) is the component made of?
- Does the specification require surface inspection, volumetric inspection or both?
- What methods should be selected to undertake the inspection?
- Does the selected method of testing have any limitations?
- Are there any special NDT processes required, such as techniques, consumables or probes?
- What are the reporting requirements?

The Project Report

The project report should be no more than 3000 words of text (in Times New Roman, 12 pt), not including appendices, for the NDT Operator apprenticeship (about four pages) and no more than 5000 words of text (in Times New Roman, 12 pt), not including appendices, for the NDT Engineering Technician and NDT Engineer apprenticeships (about seven pages).

The use of images, diagrams, graphs and tables is encouraged in order to add clarity to what is being proposed and what is being achieved. If images, diagrams, graphs and tables are used then they should be numbered/named in sequence, for example 'Figure 1 – Caption for the image', 'Figure 2 – Caption for the image' and so on; this will make it easier to make reference to the images, etc, in other parts of the document. The use of images, diagrams, graphs and tables does not reduce the number of words that should be included in the report. Peer review of the report is allowed provided that the peer reviewer does not contribute towards the detail of the report. References should follow the IEEE referencing style.

A good report is easy to recognise. It has a precise and informative title, a clear and well-organised layout, is easy to handle and opens flat to reveal both text and diagrams. It is written in a fluent and concise style; headings clearly indicate the content of each section and images, diagrams, graphs and tables are clear. The reader of the report should find it easy to follow, being clear, concise and informative, with a detailed understanding of its content. We cannot give you a detailed, absolute and immutable set of rules for producing reports because the project's purpose should determine what the report contains and how it is constructed. What we can give are some guidelines:

- The reader is the most important person
- Organise the report for the reader's convenience
- Write in a concise, fluent style
- Incorporate images, diagrams, graphs and tables in the right place for the reader with the correct titles
- Summarise the report's aims, objectives, findings, conclusions and recommendations at the beginning in the form of an executive summary, which should be no more than half a page in length
- Give complete and correct references
- Check the report thoroughly for technical accuracy, typing errors and inconsistencies

- Ensure that the report is clear, concise and informative. Avoid unnecessary, superfluous text, images, diagrams, graphs and tables.

Recommended Content

- Executive summary
- Introduction
- Scope of the project
- NDT methods used
- NDT procedures and technique sheets prepared for use
- Other knowledge and skills used during the project
- Equipment used
- International standards used
- Initial findings
- Variations as a result of the initial findings
- Validation of the project outcomes by NDT inspection
- Conclusions
- References
- Acknowledgements
- Appendices.

The Project Presentation

The project presentation should be compiled in Microsoft PowerPoint, other similar presentation software or as a printed version; the use of employer-branded software is permitted. The format of the presentation should be notified to the assessors prior to the presentation and assessment taking place to ensure smooth running on the day.

The presentation could include text, pictures and graphs, etc, but the amount of detail given on each slide should be limited in such a way that it allows the assessors time to read and observe what is being presented.

The time allowed for the presentation is 30 minutes and the number of slides should be representative of the project undertaken and should capture the project in full, from initiation and development, through application and delivery, to conclusions and further recommendations (if applicable).

The apprentice must be prepared for extensive questioning by the assessors following the presentation.

The project will be assessed on:

- Preparation
- Planning
- Execution
- Project tasks and continuous review
- Project completion
- Inclusion of the knowledge, skills and behaviours listed in the apprenticeship standard.

