

BINDT Aerospace Group

Objective 3 Working Document on promoting NDT as a benefit, not a burden

Objective 3 is: “To change the perception of NDT into being a solution rather than a burden, by promoting the benefits of NDT methods within the design, production and maintenance communities.”

An aim of this working document is to move towards the creation of a document and associated presentation for distribution to Aerospace company Responsible Level IIIs to assist in promoting NDT within their company as a positive benefit, offering potential cost savings and market edge. This document could be entitled ‘How to recognise benefit from aerospace NDT’.

One of the first tasks is to better understand the reasons why NDT is often seen as a burden, and in what circumstances this is the case. From this understanding it should be possible to propose a method of selecting the applications in which NDT is most likely to be acknowledged as a benefit.

During discussion on 8th July 2010, the following broad points were made:

- If a policy has already been adopted and implemented, especially over a significant period, that assumes no defects are present (eg safe life) then an NDT method that detects smaller defects will not be welcomed and will be an additional burden for the business.
- For ‘safety by inspection’ situations, or where the lifing, design or performance methodology assumes a ‘worst case’ scenario of a defect existing of an undetectable size, possibly in the worst location, then any improvement in the NDT technique to reduce the minimum detectable size will be acknowledged as a benefit in terms of inspection interval, operating cost, performance envelope, or design improvement.
- Being able to match NDT sensitivity/accuracy to requirement (eg for primary/secondary components) is important.
- Increased amounts of characterisation information, or more sensitive detection methods, are only of benefit when adequate materials models exist, or appropriate mechanical tests have been performed, to support making use of the benefit offered.

The following flow diagram attempts to take the above points and integrate them into a decision diagram to determine whether a particular proposed NDT solution is likely to be viewed as a burden or a benefit.

