

IP 94 MPIG SWG POSITION

The following IP 94 'SSI Selection' was presented by EASA during last IMRBPB.



"IP 94 Apr 08[1].pdf"

The following is the EASA proposed amendment (*text added, in red*) to current MSG-3 document;

1. Significant and Other Structure

Structure can be subdivided into items according to the consequences of their failure to aircraft safety as follows

*a. A **Structural Significant Item (SSI)** is any detail, element or assembly, which contributes significantly to carrying flight, ground, pressure or control loads, and whose failure could affect the structural integrity necessary for the safety of the aircraft.*

If assemblies are selected to be SSI, all relevant load bearing elements need to be included and analyzed, this may include bearings, bushings, bolts, fasteners, retainers etc. based on the amount of load carried by this element and the effect of failure.

Therefore multiple standard fasteners like standard rivets attaching a stringer to the skin do not need to be taken into account, while single load path fasteners (e.g. single bolt attaching a pylon diagonal brace) need to be included.

SSIs must not be confused with Principal Structural Elements, PSE (FAR 25.571); however, all PSEs must be addressed by the SSIs.

*b. **Other Structure** is that which is judged not to be a Structural Significant Item. It is defined both externally and internally within zonal boundaries.*

INDUSTRY POSITION:

Industry acknowledges that there could be instances where some structural elements that, while complying with the SSI definition, could have been missed during the SSI selection and subsequent analysis.

Industry highlights that these omissions;

[a] are not generalized for all aircraft and parts; as it could be interpreted from the statements contained in the description of the IP

[b] they, in no case, should relate to PSEs; as it is clearly stated in the SSI definition paragraph that all PSEs must be selected

[c] during the SSI selection phase and SSI analysis phase, all opportunities are given to ISC and SWG to request the addition of potential missing elements.

From Industry's point of view, the sense of the paragraph could be valid; but it is considered that the current wording of the SSI definition included in the MSG-3 provides the ability of the manufacturer, the ISC and the SWG to include these items in the SSI list and ensure that they are adequately analyzed.

On the other hand, it is considered that adding notes/paragraphs to the text of the MSG-3 document dealing with very specific cases could lead to losing the general sense of the paragraph and focusing on details.

In summary, for the case of this IP, Industry position is that current MSG-3 wording is adequate and does not need to be revised. Proposed paragraphs providing additional guidance could be part of specific PPHs.