

ATSRAC Statement of Concern Regarding Wire Separation Design Criteria

Jim Shaw, at that time the ALPA representative and vice-chair of ATSRAC, presented a concern to the Committee at the July 2002 meeting. The Committee unanimously agreed with this concern as detailed below.

An extensive review of wire design resources did not yield any definitive independent source that an aviation engineer can reference to determine what is good wire separation criteria for a given situation, other than some numbers developed in the nuclear power industry. ATSRAC believes that standards from other industries need to be treated with caution given the different environmental conditions and the very different constraints on weight and accessibility that can exist.

ATSRAC Working Group 6 is nearly complete with its work regarding the regulations and Advisory Circulars relating to wire system design criteria, but the creation of separation standards was well beyond the scope of their tasking. Nevertheless, ATSRAC believes that this is an area worthy of further research, and as such submits the following statement to the FAA:

"Until such time as data is developed for a source document that details proper wire separation guidelines for varying conditions, design engineers must rely on "corporate knowledge" when determining what is proper separation. This knowledge varies widely from one design department to another. ATSRAC feels it is important that an independent document be developed which an aviation engineer can reference as to what is proper separation under varying conditions. This will probably require the development of a test program to produce the data upon which this criteria would be developed. It is preferred that an aviation industry Working Group utilizes the resultant data to create an Advisory Circular that addresses wire separation guidelines. Type Certificate and STC holders could then use this guidance material in developing their own internal standards, which would require validation and documentation of all assumptions included. All internally developed standards must then be included in the instructions for continued airworthiness, which are reviewed and updated as changes are incorporated."

ATSRAC would appreciate the FAA's consideration and action upon this concern.

Kent V. Hollinger
ATSRAC Chairman

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