

Military Specification/Standards Reform

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In 1994, the new Secretary of Defense, William Perry, instructed the Department of Defense (DOD) to stop imposing Military Specifications that dictate business practices. The purpose of that notice, dubbed "The Perry Directive," was to remove the cost burden of "business system" Mil-Specs from defense contractors. Instead, the contractor was required to provide his own system for assuring the military that contract requirements were being met.

At the same time, the Cold War ended, and the military was forced to reduce its spending (and purchasing as well). It was also forced to cut personnel. Fewer people were available to process specifications. At this point, with "business practice" specifications on the block, a large number of PM&P (parts, material, and process) specifications also came under scrutiny.

A decision was made that when a Mil-Spec has what DOD determines is a parallel "non-government standard", DOD will cancel the Mil-Spec and accept the non-government standard. To meet contract requirements, industry was allowed to use "best commercial practices" and non-government standards.

However, industry adopted a large number of these PM&P Mil-Specs as de-facto national standards. In fact, they were not national standards. Because the initial DOD position was that industry use of Mil-Specs was inconsequential, the federal government began getting rid of many PM&P Mil-Specs (initially without industry input).

Canceled specs hit aerospace

The first major impact to the aerospace industry of an invisible (at least to the industry) cancellation of a Government specification was dealt by QQ-A-200. This was the primary specification of aluminum extrusions for structural applications and, in the case of the aerospace industry, for primary aircraft structures. The cancellation notice has the words "...future procurement should refer to...". This means that "If you are bidding on a new contract with the federal government, you can use...". Note that "should" is a suggestion, and not a requirement.

Generally, the specification cancellation notice has been interpreted as a supersession: "This is not good any more. Go get that." Most of the time, the net result of a supersession, when a specification is canceled, is that the ability to procure to that specification disappears. The reason is that vendors are understandably reluctant to supply to a canceled specification.

In the case of QQ-A-200, Boeing disagreed with the suggested replacement, and launched an effort to get QQ-A-200 reinstated. When that failed, the industry members of the Aerospace Industries Association (AIA) formed the "Early

Warning Project Group," to make sure that industry is pre-informed of proposed cancellations. Boeing has also been able to assure that supplies of QQ-A-200 will remain available indefinitely.

Note that this ignores the issue that ISO 9000 prohibits procurement (or supplying) to a canceled specification.

The QQ-A-200 cancellation misses the point that different industries are differently affected by the identical specification. If it were stated as "...shall refer to..." DOD would have to determine that every application of the canceled specification would be satisfied by the "replacement." Thus, direct supersession would expose DOD to legal liability.

Technical equivalence

In an agreement between an aircraft manufacturer and the FAA called a "type certificate," the FAA licenses a specific design for a specific aircraft as designed by a specific manufacturer. The agreement requires that materials and methods of manufacturing will not be changed without a complete engineering review of the potential impacts on "fit, form, and function" of the aircraft.

At Boeing, it was decided that no changes to specifications will be allowed unless the replacement specifications demonstrate a one-for-one technical equivalence with the specifications they replace. Everything in specification A is also in specification B (no requirements added, no requirements deleted). Primarily, this has a regulatory impact (a type certificate issue, such that the design is not changed without engineering review).

As for Boeing, the cancellation of a specification does not affect its material procurement, since we require compliance with both our drawing and purchase order. Boeing realizes that its contractors routinely subcontract portions of their contract. If we assume that you are a subcontractor to our contractor, how are you affected? Quite simply, the requirements on the purchase order to our contractor must "flow down" to your level.

They are responsible for verifying your compliance to our requirements. In other words, the drawing (as reflected in the purchase order) is the final authority.

The bottom line

Manufacturers of parts for commercial aircraft, be careful. If you interpret a Mil-Spec cancellation notice as a supersession notice, the result of using the replacement material as indicated in the Mil-Spec cancellation notice might result in rejection of the parts you produced. Since the parts you made do not meet our design (the material used to fabricate the parts is not the material specified by the drawing), you may also incur the financial burden of re-making the parts.

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