



NIST

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-0001

May 19, 1994

Dr. Brian W. Sharon
Director
Division of Engineering
Office of Nuclear Reactor Regulation
Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Dr. Sharon:

This is in response to your letter of 12 May 94 in which you request clarification of the NIST position regarding the effectiveness of Systems 21, 22, and 23 in determining dimensional conformance to specifications.

Our position regarding System 21 has been communicated in previous letters, but for completeness, it is:

"System 21 (plug and ring) acceptance methods do not assure dimensional conformance with the material limits specified in ASME B1.1, MIL-S-6879, and Federal Standard H-28."

While we are firm in this position, we are not similarly able to make any definitive statements about Systems 22 and 23. Unfortunately, there is not enough data to support such conclusions. Furthermore, we do not have anything to add to the ongoing debate over the relation of deviations from specifications of the dimensions of threaded forms to performance. While we have an interest in screw thread metrology, we do not have a program of research in the area. Thus, in matters of product performance, we defer to industry standards committees and government regulatory agencies, and view the responsibility for any safety issues associated with choice of fastener or gauging method to rest solely with the user.

However, we are not unsympathetic to the needs that you and others, especially those in industry, have to obtain definitive answers to these questions. It is with this in mind that we have submitted a proposal to ASME that we collaborate in arranging for a full review of the issues and develop a program of research to resolve the confusion over gaging methods and system performance. This proposal is summarized in the enclosed letter from Dr. Dennis Swyt of the Manufacturing Engineering Laboratory, to Dr. Howard Clark of ASME.

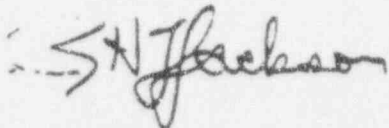
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JPP

I hope this answers your questions. If not, please feel free to contact me.

Sincerely,

A handwritten signature in dark ink, appearing to read "R.H.F. Jackson". The signature is written in a cursive style with a large initial "R" and "J".

Richard H.F. Jackson, Deputy Director
Manufacturing Engineering Laboratory

Enclosure

cc: R. Kanner
D. Swyt