

The
JOHNSON GAGE COMPANY

March 8, 1994

Mr. Ivan Selin
Chairman
Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

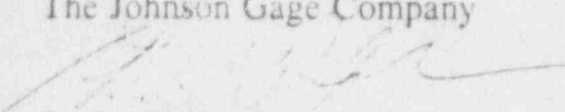
Dear Mr. Selin,

This is to inform you of a serious safety problem within the US nuclear power generating industry caused by the use of a flawed thread gaging system that will allow acceptance and use of dimensionally **sub-standard, non-conforming** threaded product. The National Institute of Standards and Technology has proved that System 21, also called Method A or Go - No Go gaging, is incapable of assuring thread dimensional conformance to our national thread standards and specifications yet this gaging is the most common industry method used to accept threaded product for nuclear power plant applications.

The attached enclosure contains specific details and a proposed solution to this problem.

Respectfully,

The Johnson Gage Company


Stanley P. Johnson
CEO

9405270259 940308
PDR COMMS NRCC
CORRESPONDENCE PDR

QF03
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Per
K. Brunson

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NIST

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

March 10, 1994

Dr. James A. Davis
Office of Nuclear Reactor Regulation
Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Dear Dr. Davis:

I understand that you have had some correspondence with our NIST staff on the issue of dimensional conformance for screw threads, and that you are unclear as to the NIST position. For the record, the NIST position is:

"System 21 (plug and ring) acceptance methods do not assure dimensional conformance with the material limits specified in ASME B1.1, MIL-S-8879, MIL-S-7742, and Federal Standard H-28."

This is a long and strongly held position at NIST and has not changed.

Sincerely,

Richard H.F. Jackson
Deputy Director
Manufacturing Engineering Laboratory

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March 31, 1994

Mr. James Davis
NUCLEAR REGULATORY COMMISSION
1 White Flint North
7-D4
Washington, DC 20555

Dear Mr. Davis:

This letter should serve as official permission to place the IFI copyright publication into the Public Document Room. This publication is entitled:

"RECOMMENDATIONS FOR FASTENER THREAD ACCEPTABILITY"

The subject of screw threads and gaging procedures have received far too much attention in recent decades in terms of the actual screw contribution to joint integrity. The "real issues" have been and remain mechanical and performance characteristics which relate to quality in the manufacturing process control of materials in manufacture and related heat treatments.

Sincerely,

A handwritten signature in cursive script that reads "Charles J. Wilson".

Charles J. Wilson

Director of Engineering

CJW/mal

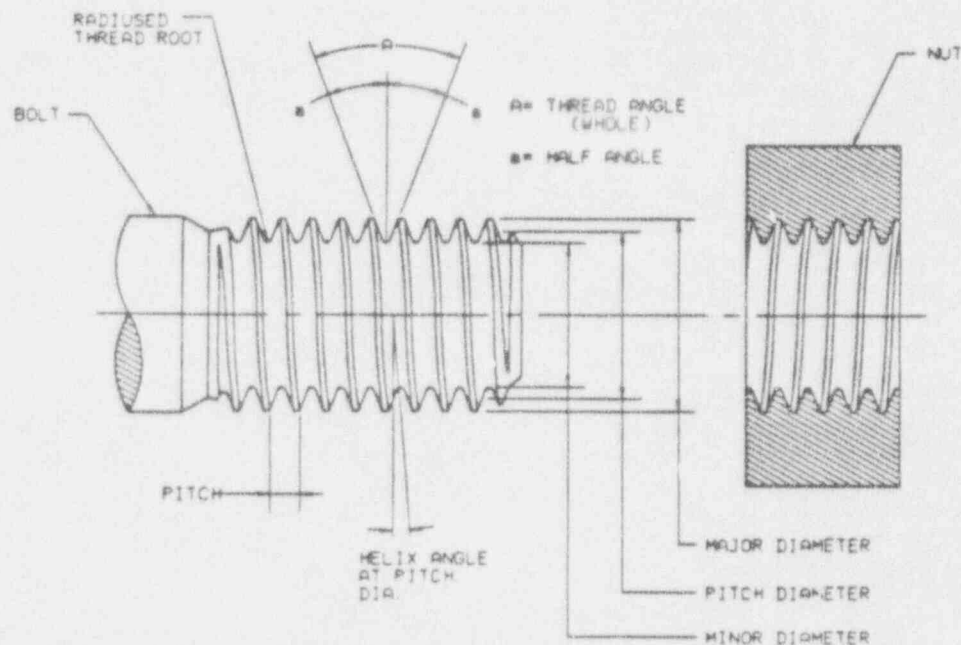
cc: Pat Henriksen, Chairman, P&I Committee
Eli Schwartz, Chairman, B1
Ken McCullough, Chairman, B18
Jack Pekar, Chairman, F16
Steve Vass, Chairman, Standards & Technical Practices Com.

INDUSTRIAL FASTENERS INSTITUTE

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RECOMMENDATIONS FOR FASTENER THREAD ACCEPTABILITY



- Threads must FIT and FUNCTION to be acceptable.
- Thread Acceptability System 21 (Method A) is most practical for all threads, except for Class 3A external threads where System 22 (Method B) is recommended.
- Thread acceptability System 23 (Method C) should not be used as a routine inspection of threaded fasteners. These requirements should be limited to research and analysis as recommended in FED-STD-H28/20A.
- When higher quality confidence levels are required, sampling plans should be adjusted or statistical process control should be required instead of adding thread characteristic measurements.
- Fastener buyers should not modify existing procurement specifications to improve quality when supplier non compliance has been the real issue.



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