

**From:** William Ward  
**To:** Frank Festa; internet:engel@itis.com  
**Date:** 7/19/01 12:12PM  
**Subject:** Follow-up to your response to the RAI

Mr. Festa,  
Ms. Engelhardt,

As I said in my phone conversation with Sue Engelhardt, I have a couple of follow-up questions to the Request for Additional Information response IMS Systems, Inc. sent in. I should be able to complete the certificate after these questions are resolved.

Item 2.3

I will use the data related to the G-18 tungsten alloy as provided in your response and ignore the data for the SM-18 alloy provided on page 4 of your application. However, most of your drawings still show S-18 as the material of use. Please inform us of your intent to update your drawings to reflect the use of the G-18 material. If the only change to the drawings would be to add or change the material listing, there is no need to send in a set of drawings. Instead, send a statement to this effect.

Items 2.5 and 4.1

As a result of our conversation, I understand that the ring (air gap) upon which the source housings are mounted (for example, drawing 5321-022-02) may vary in size from the approximately 405 mm shown on dwg 5321-022-02 to 600 mm as indicated in the drawing, 100780-9 M1, you recently supplied, and to a maximum of 800 mm. I also understand that this size is chosen by the customer, based on the size of pipe intended to be measured by the gauge. In order to accommodate the various ring sizes and pipe sizes, you have different source housing models (Types TIAS 210, 211 and 212) which differ primarily in the angles of the source/detector beams. These source housings also differ slightly in other regards, including the air cylinder mounting plate and thickness of the housing. The information provided in the application appears to have been primarily for the TIAS 211 source housing (5321-025 drawing series, including radiation profiles).

So that I may properly identify the source housings and other significant aspects of design in the certificate, please: state which source housings will be available for this gauge, and of those, identify which has the least shielding and thus the highest external radiation levels; verify that we have received the radiation profile for that housing; and state any other significant differences between the housing. Specifically, any differences in the ANSI testing (you provided TIAS 211 test results), structural strength or operation.

Item 4.2

As discussed, please provide the actual radiation measurements, for the source housing with the least shielding, in the tables of dose rates.

Item 5.1

It is noted that you did not use our primary reference on QA programs. This reference, Regulatory Guide 6.9, can be found on our website at the following link:  
<http://www.nrc.gov/NRC/RG/06/06-009.html>

Page 2, section 7 says an organizational chart is attached. I didn't receive it.

Page 6, "Instructions, Procedures and Drawings" item 3, says, "...organization outlined in 2b reviews...", however, no clarification of what 2b is, is provided.

Item 6.1

Based on this response the maximum operating temperature for the device will be listed as 85C, not 100C, with a reviewer note that if 80C is exceeded, the air cylinder is to be checked.

Item 7.2

Please provide the required flowrate for the air system. Please explain why the customer may supply air at 10 bar when you state on page 7 of the application that the shutter actuator is limited to 8 bar.

Bill

William R. Ward, P.E.  
NRC/NMSS/IMNS/MSIB  
(301) 415-7038  
m/s T8-F5

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