

Allen, William

From: Plate, Nicholas S CIV USN NNPP (USA) <nicholas.plate@navy.mil>
Sent: Monday, April 5, 2021 1:34 PM
To: Allen, William
Cc: Kampen, Jedidiah H CIV (USA)
Subject: [External_Sender] RE: Nav D2g

Thermal Diffusivity Completed Response:

There is a typographical error for the stated unit for thermal diffusivity. The stated unit is ft²/s. The unit should state ft²/hr in accordance with the ASME BPVC reference from where values are sourced. The typographical error is applicable to Table A2.2-2 (sheets 10, 11, & 12) and Table A3-1. However, there is no technical impact since the thermal diffusivity values were applied with the correct unit (ft²/hr). The only SARP calculation which applies thermal diffusivity values is on Table A3-1 to calculate the corresponding specific heat for the materials (see Note 3). We will correct the typographical error on a routine basis.

We can provide a meeting summary (similar to Model 1 core barrel SARP meeting summary) in the next day or two to capture/document the discussion above if you need it for your SER – just let me know and I'll get that ball rolling.

Thanks,
Nick

Nuclear Engineer
Naval Reactors – Reactor Servicing Division
202-781-6034 (work)
202-664-7388 (cell)

From: Plate, Nicholas S CIV USN NNPP (USA)
Sent: Monday, April 5, 2021 9:31 AM
To: 'William.Allen@nrc.gov' <William.Allen@nrc.gov>
Subject: RE: Nav D2g

Chris - Thanks for pointing this out to us. The subject values are referenced from the ASME BPVC, as noted in Table A2.2-2, with units of ft²/hr. It appears we have editorial label errors for these values stating ft²/s, but we also need to confirm that we didn't incorrectly apply these values/units in any of the analyses. We'll have a complete response to you by later today or tomorrow, and then we can discuss how to document the correction.

On a separate topic, I have the M-140 CoC renewal request and associated SARP revisions ready for drop off. Please let me know a date/time that works best for you.

Thanks,
Nick

Nuclear Engineer
Naval Reactors – Reactor Servicing Division
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202-664-7388 (cell)

From: Allen, William <William.Allen@nrc.gov>
Sent: Saturday, April 3, 2021 10:34 PM
To: Plate, Nicholas S CIV USN NNPP (USA) <nicholas.plate@navy.mil>
Subject: [Non-DoD Source] FW: Nav D2g

Nick,

After reviewing the e-mail string below, please reach out to the folks in Pittsburgh and determine if there is a typographical error in SAR Table A3-1.

Thanks, Chris

From: Ahn, Tae <Tae.Ahn@nrc.gov>
Sent: Tuesday, March 30, 2021 12:30 PM
To: Borowsky, Joseph <Joseph.Borowsky@nrc.gov>; Allen, William <William.Allen@nrc.gov>
Subject: RE: Nav D2g

I agree with you, Joe, with hour. Thanks.

From: Borowsky, Joseph <Joseph.Borowsky@nrc.gov>
Sent: Tuesday, March 30, 2021 12:08 PM
To: Ahn, Tae <Tae.Ahn@nrc.gov>; Allen, William <William.Allen@nrc.gov>
Subject: RE: Nav D2g

I put the SAR back in the safe before you sent your email. Let's just say that a metal's thermal diffusivity is on the order of 0.5 ft²/hr (according to my reference books). However, the SAR table would list it as 0.5 ft²/sec. I think it is a "typo" with the units. The applicant can confirm if that is the case or not.

From: Ahn, Tae <Tae.Ahn@nrc.gov>
Sent: Tuesday, March 30, 2021 12:01 PM
To: Borowsky, Joseph <Joseph.Borowsky@nrc.gov>; Allen, William <William.Allen@nrc.gov>
Subject: RE: Nav D2g

Joe, if the thermal diffusivity is classified, I will go to NRC to confirm. If it is not classified, could you tell me that value to me? I guess you already confirmed it, pretty easily. Please let me know. Thanks. Tae

From: Borowsky, Joseph <Joseph.Borowsky@nrc.gov>
Sent: Tuesday, March 30, 2021 11:53 AM
To: Allen, William <William.Allen@nrc.gov>
Cc: Ahn, Tae <Tae.Ahn@nrc.gov>
Subject: Nav D2g

Hi Chris,

I'm essentially finished with my SER for the D2g, which was previously certified. It appears there is an incorrect unit in Table A3-1 for thermal diffusivity of the metals. A spot check of the "value" (i.e., the number in the table) appears to be reasonable if the unit was changed to a per hour basis. In the material property section my SER currently will just say that the package was previously reviewed. However, in your phone calls with the applicant it may be best to ask them if

there is a typo in SAR Table A3-1 for the thermal diffusivity unit. It appears that property was not explicitly used in the thermal analyses.

Thanks.