Dear Referee #2,

Thank you very much, indeed, for your constructive comments. My responses to your comments are listed below:

1) Thank you and I agree with I will revise the manuscript and will add a list of abbreviations.
2) I fully agree that the two methods are complementary methods in design and assessment of structures with their own limitations and merits well documented in the literature and also summarised here. The main motivation for a FM based design approach, here, is the shift of paradigm towards damage-tolerant design philosophy which is best done by considering inspection and maintenance activities. To this end and to optimise design and maintenance information about fatigue and crack size is essential. This information cannot be predicated accurately by only using the S-N method.
3) I will correct this. Thank you!
4) It's "**commonly"** adopted for application in structures containing containments because of the possible sever consequences (leak or rapture), but can be used for monopiles as well. There is a debate if the structure is capable of sustaining a through thickness crack after full penetration of crack height or the through height failure governs the overall failure. In case study section this was tried to be studied.
5) Equation 9 is Lr and line 240 refers to Lr_{Max} . For equation 10, Thank you well spotted! I will change line 240 to σ_U.
6) Will address this in the proof.
7) J is J-integral as also mentioned in line 250 right after equation 16. But, perhaps, it not clear. I will make it clearer.
8) Thank you. I will address these.
9) This length are proposed commonly adopted length the value is recommended to be considerably lower that predicted failure length. And you pointed out can be seen as a safety factor. (line 287-292)
10) Agree. I will remove PODs
11) I believe the figure is correct. If you take the firs figure as the probability- by considering small intervals, the third figure is probability of detected sizes as well. The equation is essentially: P(A I B)= P(A).P(B), where, P(A I B) is probability of finding crack sizes, P(A) is probability of crack sizes being present, and P(B) probability of detecting the sizes.
12) Table 1 is values of POD gives by BS7910 and figure 11 POD proposed by DNV. BS7910 gives largest flaws that can be reliably detected (Typically, 90% probability of detection with 95% confidence). But DNV provides an equation, instead. The largest missed flaw needs to be judged by the assessor- Typically, 80%-95% POD is chosen considering the consequence of possible failure.
13) Yes, those refer to material properties are. I will add the reference to those that are not given.
14) Thank you. I will add the units.
15) This is the common term used BS7910. But you are right, strictly speaking "crack growth is Air environment" is a more accurate term. I will address this.
16) I think that's exactly what they do. Black= a, Green 2C, Red= Tolerable, for Black and Green solid is with inspection and dotted without inspection.

Thank you again,

Best regards

Peyman Amirafshari