# Response to Reviewer 1 Comments

**Point 1:** This is quite a solid study that clearly showed the superior proposed PP-NFTSMC-ESO control method. It would be interesting to see experimental comparison method, in particular whether the unfavorable factors, as described by the authors, are accurately captured in the simulation setup.

**Response 1:** Thank you for the suggestion. The unfavorable factors (i.e., oil stirring viscos loss, output shaft dynamic seal loss, and core loss resulting from extremely high water pressure and near freezing temperature of the deep-sea working environment) do exist both in the deep-sea test and in some relevant references [7-10]. But it is difficult to simulate these unfavorable factors experimentally, especially the effect of temperature, because we currently do not have the equipment which can be able to control the temperature of the joint under high pressure in real time.

We have to say sorry to the reviewer about this suggestion as currently we don't have equipment to carry out these experiments.

**Point 2:** For minor suggestions, Figure 2 image quality can be better. Also the highlighted region in Figure 7 (b) could be enlarged as that is the significant result that conclude to Table 6. It is also difficult to see Figure 7 (c) so enlargement on a particular region will help. Another minor one is P and T on line 303 page 9 should be italic.

**Response 2:** Thank you for these suggestions. We have made revision of the P and T and the Figure 2, Figure 7 (a) and Figure 7 (b) according the suggestions.
We updated the manuscript as follows:
(1) In line 305 page 9, the P and T are revised in italic format.
(2) Figure 2 has been replaced by an image with better quality.
(3) The highlighted region in Figure 7 (b) has been enlarged with a new figure.
(4) The Figure 7 (c) has been also been replaced with a new figure in which a highlighted region is added.