

Interactive comment on “Risk assessment of sea ice disasters on fixed jacket platforms in the Liaodong Bay” by Ning Xu et al.

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The manuscript suggests a risk assessment for fixed jacket platforms in icy waters. The overall criterion is based on valuable full-scale data from different platforms located in the Bohai Sea. Besides measured structure responses, this work considers real physical process including ice-structure interaction and structure failure modes, which yields to several risk modes and levels. In the risk analysis, the authors give specific details describing different structure failure potentials. This work has a great value for offshore structure design in ice-covered waters. In believe this manuscript is subjected to a minor revision.

Normally, the ice condition is relative weak in the Bohai Bay. In my knowledge, the ice

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type includes level ice, rafted ice and small ridges. My only concern is that for a given ice thickness if the ice type may influence the risk assessment.

Furthermore, some language corrections own to be dealt with. Line 9, page 1, the risk assessment should be a risk assessment. Line 14, page, facility should be facilities. Line 22, page 1, occurred should be occurs. Line 13, page 2, parameters of should be parameters, i.e.,. Line 17, page 2, application should be engineering. Line 23, page 1, respectively should be individually. Line 24, page 2, good condition should be healthy condition. Line 27, page 2, iced should be icy. Line 2, page 3, more serious than should be heavier than. Line 10, page 2, forms should be categories. Line 14, page 2, form should be category. Line 14, page 5, “was established with the risk calculation model to” to “with the risk model was established to”. Line 10, page 6, delete “the interactions between”. Line 16, page 6, “contacts with” should be “contacts”. Line 5, page 7, “it will generate” to “it generates”. Line 10, page 8, “will fail” to “fails”. Line 20, page 8, “loosened” to “weakened”. Line 10, page 10, “will collapse” to “collapses”. Line 8, page 12, “additionally” to “carefully”. Line 18, page 13, “sea ice disasters” to “structures”.

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