certain heave limit given the current measured sea state. This would be helpful in the risk assessment. For example, if the current significant vessel heave is 1 ft, it is highly unlikely the vessel will exceed 2.00 ft. However, if the vessel is heaving 1.5 ft, it is likely that the vessel will experience a heave greater than 2.00 ft. These are vague statements, but the active heave compensation software can use numbers to describe the likelihood instead.

[0005] According to another embodiment, software may predict if the system will be within or exceed the operational limits of the active compensating draw-works with predicted system inputs. This approach would have value when planning operations. By leveraging metocean predictions, well plan information (expected hook loads), vessel characteristics (RAOs) it can be determined (with some uncertainty) if the crew will be operating the draw-works outside of its specific limits. For critical operations, the performance curves single or multiple motor failures can also be integrated to evaluate the impact.

[0006] According to a first aspect, there is provided a method for identifying compliance of a marine motion-compensated draw-works system's performance with pre-defined performance specifications, comprising: receiving, by a processor, performance data associated with a marine motion-compensated draw-works system; receiving, by the processor, pre-defined performance specifications for the draw-works system; determining, by the processor, whether or not the performance of the draw-works system complies with the pre-defined performance specifications; and outputting, by the processor, a notification when the performance of the draw-works system is determined to not be in compliance with the pre-defined performance specifications.

[0006a] According to a second aspect of the present invention, there is provided a computer program product, comprising: a non-transitory computer readable medium comprising code to perform steps comprising: receiving, by a processor, performance data associated with a marine motion-compensated draw-works system; receiving, by the processor, pre-defined

performance specifications for the draw-works system; determining, by the processor, whether or not the performance of the draw-works system complies with the pre-defined performance specifications; and outputting, by the processor, a notification when the performance of the draw-works system is determined to not be in compliance with the pre-defined performance specifications.

[0006b] According to a third aspect of the present invention, there is provided an apparatus, comprising: a memory; and a processor coupled to the memory and configured to perform steps comprising: receiving, by a processor, performance data associated with a marine motion-compensated draw-works system; receiving, by the processor, pre-defined performance specifications for the draw-works system; determining, by the processor, whether or not the performance of the draw-works system complies with the pre-defined performance specifications; and outputting, by the processor, a notification when the performance of the draw-works system is determined to not be in compliance with the pre-defined performance specifications.

[0007] The foregoing has outlined rather broadly certain features and technical advantages of embodiments of the present invention in order that the detailed description that follows may be better understood. Additional features and advantages will be described hereinafter that form the subject of the claims of the invention. It should be appreciated by those having ordinary skill in the art that the conception and specific embodiment disclosed may be readily utilized as a basis for modifying or designing other structures for carrying out the same or