Claims

1. A method of conducting a subterranean operation, the method comprising:

engaging, via a retention feature, a tubular string that extends through a drill floor of a rig;

capturing images, via an imaging system, of a portion of the tubular string that extends above the drill floor, with the portion including a visible feature of the tubular string;

communicating the images to a processor that is coupled to the imaging system;

detecting, via the processor, a change in a relative position of the visible feature across the images while the tubular string is engaged with the retention feature, wherein the change indicates movement of the tubular string while the tubular string is engaged with the retention feature; and

calculating, via the processor, a wear status of the retention feature based on the change in the relative position of the visible feature across the images; and

applying a gripping force to the tubular string via the retention feature,

wherein the gripping force allows the change in the relative position of the visible feature while the tubular string is engaged with the retention feature and the wear status of the retention feature is greater than a pre-determined threshold of wear for the retention feature, or

wherein the gripping force retains the tubular string in the retention feature when the retention feature is engaged with the tubular string and the wear status of the retention feature is equal to or less than the pre-determined threshold of wear for the retention feature.

2. The method of claim 1, wherein calculating the wear status comprises calculating that the wear status is greater than the pre-determined threshold of wear for the retention feature and that the wear status indicates the retention feature is operating improperly.

3. The method of claim 1, wherein detecting the change further comprises detecting a movement in an axial direction of the tubular string, detecting a movement in a horizontal direction of the tubular string, or combinations thereof.

4. The method of claim 1, wherein the retention feature comprises a plurality of grippers, with each gripper comprising a gripping surface that is configured to engage the tubular string.

5. The method of claim 4, further comprising applying the gripping force to the tubular string via the gripping surfaces, wherein wear status of the retention feature indicates wear of at least one of the plurality of grippers.

6. The method of claim 4, wherein the wear status indicates that at least one of the plurality of grippers applies an insufficient engagement force against the tubular string to substantially prevent movement of the tubular string when the tubular string is engaged with the plurality of grippers.

7. The method of claim 1, wherein calculating the wear status further comprises calculating, via the processor, a wear status for each time a connection to the tubular string is made or broken, thereby calculating, via the processor, multiple calculated wear statuses while tripping the tubular string.

8. The method of claim 7, further comprising calculating a trend of the wear status by comparing the multiple calculated wear statuses to each other.

9. The method of claim 8, further comprising predicting that the retention feature needs to be repaired in a future time period based on the trend.

10. The method of claim 1, wherein calculating the wear status further comprises calculating, via the processor, a wear status for each time the retention feature is engaged with a tubular string.

11. The method of claim 10, further comprising collecting, via the processor, historical information for the retention feature by collecting, via the processor, the wear status for each time the retention feature is engaged with the tubular string over a period of time and storing the historical information in a memory system that is coupled to the processor.

12. The method of claim 11, determining, via the processor, an actual life cycle of the retention feature based on the historical information.

13. A system for conducting a subterranean operation, the system comprising:

a retention feature in a drill floor configured to suspend a tubular string from the drill floor via engagement of the retention feature with the tubular string;

an imaging system configured to capture images of a portion of the tubular string that extends above the drill floor, with the images containing a visible feature of the tubular string; and

a processor coupled to the imaging system and configured to detect a change in a relative position of the visible feature in the images while the tubular string is engaged with the retention feature, wherein the change indicates movement of the tubular string while the tubular string is engaged with the retention feature, and

the processor configured to calculate a wear status of the retention feature based on the change in the relative position of the visible feature across the images based on a comparison between the images of the relative position of the visible feature, wherein a gripping force applied to the tubular string via the retention feature allows the change in the relative position of the visible feature while the tubular string is engaged with the retention feature and the wear status is greater than a pre-determined threshold of wear for the retention feature, or wherein the gripping force retains the tubular string in the retention feature when the retention feature is engaged with the tubular string and the wear status is less than or equal to the pre-determined threshold of wear for the retention feature.

14. The system of claim 13, wherein the change in the relative position of the visible feature comprises a movement of the tubular string in an axial direction, a movement of the tubular string in a horizontal direction, or combinations thereof.

15. The system of claim 13, wherein the visible feature is spaced away from a top of the tubular string, wherein the processor is configured to determine the wear status of the retention feature for each one of multiple connections to a tubular string that is made or broken, wherein the processor is configured to compare the wear status for one of the multiple connections to the wear status for at least another one of the multiple connections and determine a trend of the wear status of the retention feature, and wherein the trend of the wear status indicates that:

the wear status of the retention feature has worsened over time,

one or more grippers of the retention feature have degraded past an acceptable wear level,

components of the retention feature other than the one or more grippers have failed, or

combinations thereof.