

CLAIMS:

1. A tubular handling system comprising:
a bridge disposed in a horizontal orientation above a horizontal storage area;
a tubular lift system configured to transport a tubular in a horizontal orientation between the horizontal storage area and an intermediate storage location; and
a pipe handler moveably coupled to the bridge, the pipe handler configured to transport the tubular between the intermediate storage location and a rig floor.
2. The system of claim 1, wherein the bridge comprises first and second bridge rails with a space between.
3. The system of claim 2, wherein pipe handler is configured to transport the tubular through the space while the tubular is being transported along the bridge.
4. The system of claim 1, wherein the intermediate storage location comprises a longitudinal groove, and wherein the tubular lift system is configured to deliver the tubular to or receive the tubular from the longitudinal groove.
5. The system of claim 4, wherein the intermediate storage location comprises a longitudinal groove, and wherein the pipe handler is further configured to engage the tubular in the longitudinal groove and lift the tubular from the longitudinal groove, or deliver the tubular to the longitudinal groove and disengage from the tubular.
6. The system of claim 1, wherein the tubular lift system comprises a front lift system and a rear lift system, wherein the front lift system is configured to transport a first plurality of tubulars in a horizontal orientation between a first portion of the horizontal storage area and the intermediate storage location, and wherein the rear lift system is configured to transport a second plurality of tubulars in a horizontal orientation between a second portion of the horizontal storage area and the intermediate storage location.
7. The system of claim 6, wherein the front lift system delivers one of the first plurality of tubulars into a longitudinal groove of the intermediate storage location from a first side of the intermediate storage location, and wherein the rear lift system delivers one of the second plurality of tubulars into the longitudinal groove from a second side of the intermediate storage location.
8. The system of claim 1, wherein the pipe handler is further configured to spin the tubular to connect the tubular to a tubular string at a well center or disconnect the tubular from the tubular string at the well center.
9. The system of claim 8, wherein the pipe handler is further configured to:

lift the tubular from the intermediate storage location, rotate the tubular from the horizontal orientation to a vertical orientation, and deliver the tubular to a well center on the rig floor in the vertical orientation; or

rotate the tubular from the vertical orientation at a well center to the horizontal orientation and deliver the tubular to the intermediate storage location in the horizontal orientation.

10. A method for handling tubulars, the method comprising:

lifting a tubular from a horizontal storage area to an intermediate storage location while maintaining the tubular in a horizontal orientation;

engaging the tubular at the intermediate storage location with a pipe handler;

transporting the tubular, via the pipe handler, along a bridge to a rig floor;

rotating the tubular, via the pipe handler, from the horizontal orientation to a vertical orientation; and

presenting, via the pipe handler, the tubular in the vertical orientation to a well center.

11. The method of claim 10, wherein the rotating of the tubular further comprises moving the tubular through a space between first and second bridge rails of the bridge.

12. The method of claim 11, further comprising translating of the pipe handler along the bridge while manipulating the tubular through the space.

13. The method of claim 10, wherein the lifting the tubular further comprises engaging the tubular with first and second actuators of a vertically oriented tubular lift system and vertically raising the tubular toward the intermediate storage location.

14. The method of claim 13, further comprising releasing the tubular, via the first and second actuators, from the vertically oriented tubular lift system into a longitudinal groove in the intermediate storage location.

15. A method for handling tubulars, the method comprising:
- retrieving, via a pipe handler, a tubular in a vertical orientation from a rig floor;
 - transporting the tubular, via the pipe handler, from the rig floor along a bridge;
 - rotating the tubular, via the pipe handler, from the vertical orientation to a horizontal orientation;
 - depositing the tubular, via the pipe handler, into an intermediate storage location; and
 - lowering the tubular, via a vertically oriented tubular lift system, from the intermediate storage location to a horizontal storage area while maintaining the tubular in the horizontal orientation.