higher than desired. The third issue with changing out to a longer bail is time. Many top drives now have many clamps and arms that are attached to the bails. The time it takes to change bails on some offshore rigs cancels out the time savings provided with the tool. One of the objects of the present invention is to be able to provide a compact design that avoids such obstructions in situations with shorter bails. One way this is accomplished is to integrate a power piston with the flow line such that space is saved by running the mud line through a hollow piston. Another space saving feature integrates the rotational mechanism for the fill up and circulation tool about the piston and mud line going through the piston as they move in tandem. Lateral connection of the mud line eliminates a large u-bend previously employed to reduce the needed operating height for the tool between its end positions. The overall height of the articulating arm that swings into alignment with the fill up tool has been reduced to less than 50% of the overall tool length. These and other aspects of the present invention will be more readily appreciated by those skilled in the art from a review of the detailed description of the preferred embodiment and the associated drawings while recognizing that the full scope of the invention is to be determined from the appended claims.

SUMMARY OF THE INVENTION

[0014] The laterally rotating height of a fill up and circulating tool that is mounted on one of the bails supporting an elevator is made shorter with integration of design components. A power cylinder features a hollow piston which integrates the mud line connected to the fill up tool. The hollow piston forms an integral part of the mud. The mud line has an exterior slot with a longitudinal and a spiral component into which a pin extends that is supported by the cylinder. As the mud line descends the fill up tool moves initially axially followed by rotational movement to align with a sting for connection thereto. Raising the mud line reverses the movement pattern. The fill up tool is cantilevered from the mud line for its sole support. Height savings allows tool use with bails of varying lengths without interference.

[0014a] In view of the above, according to a first aspect of the present application, there is provided an apparatus, mounted to a hoisting system in a rig having a longitudinal axis, defined by a pair of bails supporting an elevator, for selective positioning of a fill-up and circulating tool in a first

position for contact with a tubular in the elevator and in a second out of the way position to allow drilling or tripping pipe, comprising: a frame supported on the hoisting system; a mechanism mounted to said frame and supporting the fill-up and circulating tool; said mechanism capable of selectively translating at least a portion of the fill-up and circulating tool to move the fill-up and circulating tool into or out of alignment with a tubular in the elevator or to raise or lower the fill-up and circulating tool for selective contact with the tubular; said mechanism comprising axially aligned axial movement and rotation devices.

[0014b] According to a second aspect of the present application, there is provided an apparatus, mounted to a hoisting system in a rig having a longitudinal axis, defined by a pair of bails supporting an elevator, for selective positioning of a fill-up and circulating tool in a first position for contact with a tubular in the elevator and in a second out of the way position to allow drilling or tripping pipe, comprising: a frame supported on the hoisting system; a mechanism mounted to said frame and supporting the fill-up and circulating tool; said mechanism capable of selectively translating the fill-up and circulating tool to move the fill-up and circulating tool into or out of alignment with a tubular in the elevator or to raise or lower the fill-up and circulating tool for selective contact with the tubular; said frame and said mechanism having an overall height along a longitudinal axis substantially parallel to one of said bails; said mechanism having a lateral component that selectively pivots about said longitudinal axis, said lateral component having a component height less than 50% of said overall height.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] FIG. 1 is a front view of a prior art tool showing both bails with the fill-up and circulating tool in the out of the way position;

[0016] FIG. 2 is the back view of the view of FIG. 1;