capable of pulling or paying out the individual mooring legs or chains 18. The mooring legs 18 run from the chain handler 14 over each of the turn-down sheaves 16. The chain handler 14 is at a fixed position towards the centerline 2 of the FPSO and away from the turn-down sheaves 16 in such a way that each mooring leg is under a different angle β with the chain handler. Due to the different angles, pulling characteristics on each mooring leg 18 are different, which require a relatively wide power range for the chain handler 14.

Embodiments of the invention seek to overcome the disadvantages from the prior art.

Summary of the invention

According to a first aspect, there is provided a vessel comprising a traction system for operating lines, in particular mooring lines and/or riser lines, of a vessel, comprising at least ~~2~~ two work stations, wherein the at least two work stations are distributed along ~~at least~~ two sides of the vessel and engaged by respective operating lines, the traction system comprising a main traction device and a transmission device having a duty line connected to the main traction device, and at least one guide member for selectively routing the duty line to each work station for attachment to a respective operating line, wherein a line storing space is provided for storing parts of the duty line and/or ~~hauled in~~ moorings lines; the main traction device, the transmission device and the line storing space are ~~placed together~~ at ~~or near~~ a side of the ~~floating production unit~~vessel, the vessel being one of a floating production storage offloading unit, a floating offshore unit, a floating production unit, and a floating storage offloading unit, and wherein the guide member and the main traction device are arranged on a skidding unit, and can move over a track placed along a side of the vessel. According to a second aspect, there is provided a chain jack skid adapted for use in a traction system according to the first aspect.

According to a third aspect, there is provided a vessel provided with a traction system according to the first aspect.

According to a fourth aspect, there is provided a method for hauling-in operating lines with a traction system according to the first aspect comprising the steps of:

- connecting the duty line via the workstation to an operating line,
- activating the traction device to haul in the operating line through the workstation,
- guiding and storing the part of the duty line and/or operating line that is hauled-in into the line storing space,
- securing the operating line to the workstation,
- disconnecting the duty line from the operating line,
- guiding and connecting the duty line via the workstation to a next operating line and repeating said steps.

Brief description of drawings

The invention will be explained in more detail below with reference to drawings in which illustrative embodiments of the invention are shown. It will be appreciated by the person skilled in the art that other alternative and equivalent embodiments of the invention can be conceived and reduced to practice without departing from the true spirit of the invention, the scope of the invention being limited only by the appended claims.

Figure 1 shows a layout of a deck portion of a FPSO vessel with a traction system according to the prior art;

Figure 2 shows a layout of a deck portion of a FPSO vessel with a traction system according to an embodiment of the invention;

Figure 3 shows a layout of a deck portion of a FPSO vessel with a traction system according to an embodiment of the invention;

Figure 4 shows a top view of a traction system according to an embodiment comprising a chain jack skid that is moveable above fairleads;

Figure 5 shows a side view cross section of a traction system according to an embodiment comprising a chain jack skid that is moveable above fairleads;

CLAIMS

1) A vessel comprising a traction system for operating lines, in particular mooring lines and/or riser lines, of a vessel, comprising at least ~~2~~ two work stations, wherein the at least two work stations are distributed along two sides of the vessel and engaged by respective operating lines, the traction system comprising a main traction device and a transmission device having a duty line connected to the main traction device, and at least one guide member for selectively routing the duty line to each work station for attachment to a respective operating line, wherein a line storing space is provided for storing parts of the duty line and/or mooring lines; the main traction device, the transmission device and the line storing space are ~~placed together~~ at a side of the vessel, the vessel being one of a floating production storage offloading unit, a floating offshore unit, a floating production unit, and a floating storage offloading unit, and wherein the guide member and the main traction device are arranged on a skidding unit, and can move over a track placed along a side of the vessel.

2) A vessel comprising a traction system according to claim 1, wherein the main traction device is placed between the line storing space and the workstation to which it is connected in operation.

3) A vessel comprising a traction system according to claim 1, wherein the main traction device is moveable over a track that leads over the workstation.