

DEVICE FOR A SHARK JAW

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The present invention relates to a device for a shark jaw onboard a vessel, where the shark jaw is arranged for securing an anchor line, a cable, a chain or the like, and also associated applications.

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In connection with anchoring or moving of an offshore platform, it will often be useful to know the load effects on the mooring line. Correspondingly, with other operations onboard a vessel, it will be useful to know the strains on the anchor line, chain or cables which run through a shark jaw.

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The object of the present invention is to provide a solution that allows measuring of load effects with the help of load reading. By arranging a number of load cells or similar, to the shark jaw, a safe and exact method can be provided for reading loads in, for example, the anchor line when this is secured in the shark jaw.

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The above mentioned object is achieved with a device which is defined in the independent claim 1, by a device for a shark jaw onboard a vessel, in which the shark jaw is arranged for securing an anchor line, a cable, a chain or the like, wherein the shark jaw comprises measuring equipment in the form of one or more load readers arranged to one or more sides of the shark jaw to read the strains which arise during load effects in the mentioned anchor line, cable, chain or the like.

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Preferred embodiments are given in the dependent claims 2-4. Said load reader can be arranged at an angle in relation to the main body of the shark jaw, such as 45 degrees. Additionally the load readers can be arranged in

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pairs, and the load readers can be made up of a number of load cells, strain gauges or the like. The invention also applies to the use of measuring equipment in a shark jaw.

- 5 The invention shall now be described in more detail with the help of the enclosed drawings, in which;

Figure 1 shows an example of an arrangement of a shark jaw and tow pin onboard a vessel.

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Figure 2 shows in more detail a shark jaw equipped with measuring equipment according to the invention.

- 15 Figures 3a-3c show in more detail an example of placing of the load cell at a shark jaw.

- Figure 1 shows a shark jaw 10 and a tow pin 12, arranged so that it can be raised or lowered in the deck of a vessel, to secure and lead, respectively, an anchor line, a cable, a chain or the like. The construction of the shark jaw can be made in a traditional way and is presumed to be known to one skilled in the art.
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- The shark jaw 10 comprises an, in the main, vertically arranged main body 14 where a number of load readers 16 are arranged. The load readers are preferably arranged in a cavity or pocket 18 in said body 14, and the pocket 18 (and thereby, the load readers 16) can be protected by a cover 20 which is bolted over the pocket 14 such that they are kept dry and which protects them against anchoring components.
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- As shown in figures 3a-3c, the load readers can, for example, be arranged at an angle in the shark jaw. An angle of 45 degrees is preferred, but other angles can also be used. The advantage with such an arrangement is that the load reader will thereby not be dependent of how high the shark jaw is over the deck during the load
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effect. To increase reliability, a further number of load readers, for example two, can be arranged at each side of the shark jaw.

5 Figure 2 shows that from the pocket 18 with the load readers 16, a cable pipe 22 can extend on the inside of the shark jaw down to the underside of the shark jaw. Cables from each load reader can run in said cable pipe to a coupling box 24 fastened to the underside. From this
10 cable box 24 only two wires 26, 28 need to run further to an electric cabinet 30. From said cabinet, signals can be sent that can display the load on the shark jaw and thus the anchoring lines, cables, etc., to for example a display unit on the bridge of the vessel.

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Claims

1. Shark jaw (10) onboard a vessel, where the shark jaw is arranged to secure and lead an anchor line, a cable or a chain, comprising a vertically arranged main body (14) adapted to be raised and lowered in the deck of the vessel, wherein the shark jaw comprises measuring equipment in the form of one or more load readers (16) arranged in a pocket (18) on an outside of the shark jaw, arranged to read the strains which arise during load effects in said anchor line, cable or chain and to send signals to a display unit for displaying the load on the shark jaw.
2. Shark jaw (10) as claimed in claim 1, wherein said one or more load readers (16) are arranged at a 45 degree angle in relation to the main body (14) of the shark jaw.
3. Shark jaw (10) as claimed in claim 2, wherein two load readers (16) are arranged in a pair.
4. Shark jaw (10) as claimed in claim 2 or 3, wherein said load readers (16) are made up of a number of load cells or strain gauges.
5. Shark jaw (10) as claimed in any preceding claim, wherein the signals for displaying the load on the shark jaw, and thus the anchoring line, cable or chain, are sent from said one or more load readers (16) to a display unit on the bridge of the vessel.
6. Shark jaw (10) as claimed in any preceding claim, wherein a cable pipe (22) extends on the inside of the shark jaw, from the pocket (18) with the load readers (16) and down to an underside of the shark jaw (10).
7. Shark jaw (10) as claimed in claim 6, wherein cables from each load reader (16) run in said cable pipe (22) to a coupling box (24) fastened to the underside, wherefrom two wires (26, 28) run to an electric cabinet (30), which

sends signals that display the load on the shark jaw, and thus the anchoring line, cable or chain on a display unit on the bridge of the vessel.