Claims

1. Jacking system for a leg of a jack-up platform, comprising
- at least three independent yokes, each yoke is connected to a jack-up structure by at least one vertically arranged double acting actuator and is equipped with a leg engaging mechanism such as a horizontally arranged movable locking pin, which is configured to engage or to disengage with a hole of the jack-up leg, in order to transfer a load from the jack-up platform to the leg, including a controller configured to operate the yokes in a way that the leg is moved by all the at least three yokes in an alternating mode, such that at any moment in time during operation all but one of the at least three yokes take the load via the associated engaging mechanism, while the remaining yoke of the at least three yokes makes a return stroke with its engagement mechanism in a disengaged position.

2. Jacking system according to claim 1, wherein the alternating mode involves that a yoke of the at least three yokes that has made a return stroke, while the other yokes are load bearing is controlled such that a next return stroke of that yoke occurs only after each of the other yokes also have made a return stroke.

3. Jacking system according to any of the preceding claims, wherein all engagement mechanisms are engaged when the jacking system is not in operating mode.

4. Jacking system according to any of the preceding claims, wherein the actuators are operated in a way that each leg can be moved at a constant speed.

5. Jacking system according to any of the preceding claims, wherein the actuators are chosen from the group of air cylinders, electric actuators or hydraulic cylinders.

6. Jacking system according to any of the preceding claims, where the return stroke of the at least one actuator of the remaining yoke is activated by the outflow of the actuators of the yokes that are load bearing.

7. Jacking system according to any of the preceding claims, wherein the holes in the leg are arranged in a helical or spiral form around the leg.

8. Method for moving a leg of a jack up platform comprising the steps of:

- providing a jacking system according to any of claims 1-7;
- associating the jacking system with a leg of a jack up platform;
- disengaging an engagement mechanism of a remaining yoke from a hole of the leg while maintaining the engagement of the yokes that are load bearing;
- actuating the actuators of the engaged yokes, while returning the first disengaged yoke in its original position;
- re-engaging the first yoke and disengaging a second yoke
- repeating the above steps for each consecutive yoke, one at a time, thus moving the leg in an upright direction.

Claims

1. Jacking system for a leg of a jack-up platform, comprising
- at least three independent yokes, each yoke is connected to a jack-up structure by at least one vertically arranged double acting actuator and is equipped with a leg engaging mechanism such as a horizontally arranged movable locking pin, which is configured to engage or to disengage with a hole of the jack-up leg, in order to transfer a load from the jack-up platform to the leg, including a controller configured to operate the yokes in a way that the leg is moved by all the at least three yokes in an alternating mode, such that at any moment in time during operation all but one of the at least three yokes take the load via the associated engaging mechanism, wherein the controller operates said all but one of the at least three yokes to perform jacking of the leg, while the remaining yoke of the at least three yokes makes a return stroke with its engagement mechanism in a disengaged position.

2. Jacking system according to claim 1, wherein the alternating mode involves that a yoke of the at least three yokes that has made a return stroke, while the other yokes are load bearing is controlled such that a next return stroke of that yoke occurs only after each of the other yokes also have made a return stroke.

3. Jacking system according to any of the preceding claims, wherein all engagement mechanisms are engaged when the jacking system is not in operating mode.

4. Jacking system according to any of the preceding claims, wherein the actuators are operated in a way that each leg can be moved at a constant speed.

5. Jacking system according to any of the preceding claims, wherein the actuators are chosen from the group of air cylinders, electric actuators or hydraulic cylinders.

6. Jacking system according to any of the preceding claims, where the return stroke of the at least one actuator of the remaining yoke is activated by the outflow of the actuators of the yokes that are load bearing.

7. Jacking system according to any of the preceding claims, wherein the holes in the leg are arranged in a helical or spiral form around the leg.

8. Method for moving a leg of a jack up platform comprising the steps of:
- providing a jacking system according to any of claims 1-7;
- associating the jacking system with a leg of a jack up platform;
- repeatedly engaging the leg by means of the engagement mechanism of all but one of the at least three yokes while disengaging an engagement mechanism of a remaining yoke from the leg,
- repeatedly jacking the leg with the engaged all but one of the at least three yokes while the remaining yoke of the at least three yokes makes a return stroke with its engagement mechanism in a disengaged position.