CLAIMS

1. System (1) for use with a crane (4) comprising

a crane tool (15) attached or attachable to a hoisting cable (5) of the crane (4) and

one or more adaptors (16) attached or attachable to one or more tools (11–14, 25) for carrying out operations and/or to one or more components (2, 10), the crane tool (15) comprising a circle cylindrical main body (20) and a connector (17) and at least one of the adaptors (16) comprising a connector–counterpart (18), wherein the connector (17) comprises a plurality of latches (21) evenly distributed over the circumference of the main body (20) and the connector–counterpart (18) comprises a notch or a rim (35) for the latches (21) to hook in or behind, and wherein the latches (21) are pivotal about axes extending horizontally and tangentially through their lower ends, enabling the latches (21) to deflect inwards when the crane tool (15) is inserted in one of the adaptors (16), wherein hydraulic actuators are located inside the main body (20) to actively retract the latches (21) by rotation about their axes to release the crane tool (15) from the one of the adaptors (16).

2. System (1) according to claim 1, wherein the connector (17) or the at least one connector–counterpart (18) is a male connector and the other is a female connector.

3. System (1) according to claim 1 or 2, wherein the at least one connector–counterpart (18) faces upwards and/or is adjustable towards a position where it faces upwards.

4. System (1) according to any one of the preceding claims, wherein the connector (17) and/or the at least one connector–counterpart (18) is rotationally symmetrical.

5. System (1) according to any one of the preceding claims, wherein one or more of the adaptors (16) comprises a transition element (26; 40; 50) to couple the connector-counterpart (18) to the tool (11–14, 25) or component (2, 10).

6. System (1) according to any one of the preceding claims, the connector (17) and/or connector-counterpart (18) comprises guiding elements (22).

7. System (1) according to any one of the preceding claims, wherein the crane tool (15) comprises measuring equipment, preferably a global position system, an imaging device and/or an inclination sensor.

8. System (1) according to any one of the preceding claims, comprising a pile driver (25) and an adaptor (16) attached to the pile driver (25), wherein the adaptor comprises a sliding element (28) indicative of displacement of the pile driver (25) relative to the crane tool (15).

9. System according to claim 8, wherein the sliding element (28) is provided with at least one marking (36) that is gradually exposed with increasing penetration of the pile and resulting lowering of the pile driver (25).

10. System (1) according to any one of the preceding claims, comprising a pile driver (25) and an adaptor (16) attached to the pile driver (25), wherein the adaptor (16) comprises a sliding element (29) allowing dampened displacement of the pile driver (25) relative to the crane tool (15).

11. System (1) according to any one of claims 8 to 10, wherein the adaptor (16) comprises a cylindrical element (27) fixed relative to the pile driver (25) and a further cylindrical element (28, 29) slidingly fitted in or over the cylindrical element (27) and preferably fixed or configured to be fixed relative to the crane tool (15).

12. Method of installing an installation, such as a wind turbine, using a crane (4) having a hoisting cable (5),

a crane tool (15) attached to the hoisting cable (5) and having a circle cylindrical main body (20) and a connector (17), and one or more tools (11–14, 25) and/or components (2, 10) having a connector–counterpart (18), wherein the connector (17) comprises a plurality of latches (21) and the connector–counterpart (18) comprises a notch or a rim (35) for the latches (21) to hook in or behind, and wherein the latches (21) are pivotal about axes extending horizontally and tangentially through their lower ends, enabling the latches (21) to deflect inwards when the crane tool (15) is inserted into or onto a connector–counterpart (18), wherein hydraulic actuators are located inside the main body (20) to actively retract the latches (21) by rotation about their axes to release the crane tool (15) from the connector–counterpart (18), the method comprising the steps of

lowering the crane tool (15) with its connector (17) into or onto a connector–counterpart (18) of one of the tools (11–14, 25) or components (2, 10) and establishing a connection between the two,

lifting the tool (11–14, 25) or component (2, 10) with the hoisting cable (5).

13. Method according to claim 12, wherein the connection is established above ground level or deck level, preferably at least 5 meters above ground or deck level.

14. Method according to claim 12 of 13, comprising the steps of

connecting a tool (11–14, 25) to a component (2, 10),

hoisting the tool (11–14, 25) and component (2, 10),

positioning the component (2, 10) in or on the installation,

removing the tool (11–14, 25) from the component (2, 10),

moving the tool (11–14, 25) to a similar or identical component (2, 10) on the ground or on the deck of a vessel (3),

connecting the tool (11–14, 25) to or placing the tool (11–14, 25) on that component (2, 10), and,

disconnecting the crane tool (15) from the connector–counterpart (18) on the tool (11–14, 25).