Further, the method may include the following step: e) the crane on the crane carrying vessel releases and brings the independent platform structure back from the installation structure onto the vessel.

According to the present invention also an independent platform structure for temporary attachment to the installation structure and use on the installation structure defined above is provided, which platform structure includes attachment means in form of hooks or other fixation means to be attached or hooked onto the installation structure at suitable installation structure, such as braces or beams adapted to thrust against the installation structure.

Further, the platform structure may include a ladder or gangway to enable forming a walkway from the platform onto the installation structure.

Preferably, the platform structure and interface on the installation structure is to be standardized such that one and the same platform structure can be used on several installation structures.

Summary

According to a first aspect, there is provided an offshore material handling system comprising an installation structure fixed to the seabed and projecting above the sea level, which installation structure includes a material handling distribution system on board said installation structure, characterized in that said material handling system further comprising an offshore crane carrying vessel having a crane onboard said vessel and an independent platform structure configured to be lifted by the crane, in one piece from said vessel and onto said installation structure for temporary attachment to said installation structure so that the offshore handling system is able to perform a lifting operation of loads from the crane carrying vessel to the installation structure via the independent platform structure.

According to a second aspect, there is provided a method for handling offshore material between an offshore crane carrying vessel having a crane and an installation structure fixed to the seabed and projecting above the sea level, said installation structure comprises a material handling distribution system on board said installation structure, characterized in that said method comprises the following steps: the offshore crane on said crane carrying vessel brings an independent platform structure from said vessel onto said installation structure for temporary use as a load station on said installation structure, said crane on said offshore crane carrying vessel brings a load from said vessel onto said independent platform structure, said material handling distribution system brings said load to predetermined level and location on said installation structure.

According to an example, there is provided use of an offshore vessel (SOV) having an offshore certified crane, said use includes transferring loads by means of said offshore certified crane between said offshore vessel and a seabed fixed installation structure via a platform located on said installation structure.

Example of embodiment

While the various aspects of the present invention has been described in general terms above, a more detailed and non-limiting example of an embodiment will be described in the following with reference to the drawings, in which:

Fig. 1 is a perspective view of the installation structure, the vessel with offshore crane and the independent platform structure, and standard load carrier;

Claims

1.

Offshore material handling system comprising an installation structure (1) fixed to the seabed and projecting above the sea level, which installation structure (1) includes a material handling distribution system on board said installation structure (1), **characterized in that** said material handling system further comprising an offshore crane carrying vessel (4) having a crane (5) onboard said vessel (4) and an independent platform structure (3, 3A) configured to be lifted by the crane (5), in one piece from said vessel (4) and onto said installation structure (1) for temporary attachment to said installation structure (1) so that the offshore handling system is able to perform a lifting operation of loads from the crane carrying vessel (4) to the installation structure (1) via the independent platform structure (3, 3A).

2.

Offshore material handling system according to claim 1, **characterized in that** said material handling distribution system onboard the installation structure (1) includes lifting appliances (2, 13) able to elevate or lower a load (11) from or to said independent platform structure (3, 3A).

3.

Offshore material handling system according to claim 1 or 2, **characterized in that** said lifting appliances (2, 13) onboard the installation structure (1) is either a gantry crane (2), slewing crane (13), alternative crane structure, winches, or other lifting appliances able to elevate or lower a load (11) from or to different levels internally on the installation structure (1).

4.

Offshore material handling system according to claim 1, 2 or 3, **characterized in that** said offshore crane carrying vessel (4) is a supply vessel, a service vessel or any suitable vessel.

5.

Offshore material handling system according to any of the claims 1 - 4, **characterized in that** said installation structure (1) is either an unmanned wellhead platform (UWP), or any offshore installation fixed to the seabed.

6.

Offshore material handling system according to any of the claims 1 - 5, **characterized in that** said independent platform structure is a corner platform structure (3A).

7.

Offshore material handling system according to any of the claims 1 - 6, **characterized in that** said independent platform structure (3, 3A) is attached to the installation structure (1) some distance above the sea level.

8.

A method for handling offshore material between an offshore crane carrying vessel (4) having a crane (5) and an installation structure (1) fixed to the seabed and projecting above the sea level, said installation structure (1) comprises a material handling distribution system on board said installation structure (1), **characterized in that** said method comprises the following steps:

a) the offshore crane (5) on said crane carrying vessel (4) brings an independent platform structure (3, 3a) from said vessel (4) onto said installation structure (1) for temporary use as a load station on said installation structure (1),
b) said crane (5) on said offshore crane carrying vessel (4) brings a load from said vessel (4) onto said independent platform structure (3, 3A),
c) said material handling distribution system (2, 13) brings said load to predetermined level and location on said installation structure (1).

9.

The method according to claim 8, **characterized in that** said method includes the following step:

d) said crane (5) on said offshore crane carrying vessel (4) brings a second load from said vessel (4) onto said independent platform structure (2, 13) and continues according to step c) above.

10.

The method according to claim 8 or 9, **characterized in that** said method includes the following step:

e) said crane (5) on said offshore crane carrying vessel (4) releases and brings said independent platform structure (3, 3a) back from said installation structure (1) and onto said vessel (4).

11.

Independent platform structure (3, 3A) for temporary attachment to said installation structure and use on said installation structure according to any of the claims 1-7, **characterized in that** said independent platform structure (3, 3A) includes attachment means in form of hooks (3C) or other fixation means to be hooked onto a horizontal truss bar (6) arranged on aid installation structure (1).

12.

Independent platform structure according to claim 11, **characterized in that** said independent platform structure (3, 3A) includes a ladder (10) or gangway to enable forming a walkway from said platform structure (3, 3A) onto said installation structure (1).

13.

Independent platform structure according to claim 11 or 12, **characterized in that** said independent platform structure is a corner platform structure (3A).

14.

Use of an offshore vessel (SOV) (4) having an offshore certified crane (5), said use includes transferring loads by means of said offshore certified crane (5) between said offshore vessel (5) and a seabed fixed installation structure (1) via an independent platform structure (3, 3A) according to any of the claims 11-12 adapted to be temporarily arranged on said installation structure (1).