



Specialized installation services

Vertech Offshore AS is a very specialized offshore service company. We are based in Lillesand at the south coast of Norway, but our operations are world wide. Our speciality is installation work that involves the use of helicopter and specialized tools, and in particular offshore replacement of flare tips.

The history of our flare tip replacement product goes back to 1991. This was the first time in the North Sea that a flare tip was changed by using helicopter. Since then, the method has improved considerably. Today, we claim that our method is the safest and most cost effective way of changing your flare tip.

The method we utilize had its origin in Statnett, the national powerline company in Norway. In 2003 the product was taken over by Eltel Networks and finally in 2004 the service was organised in a separate limited company, Vertech Offshore AS.

 Vertech
Offshore

Method for replacement

When replacing flare tips, we use the "Long Line" flying technique (often referred to as "Vertical Reference"). The great advantage with this method is that it allows the helicopter pilot to fly while looking down, using a bubble window in the helicopter. He always has a vertical view directly to the platform and the load he is carrying. The technique involves the use of a 20-25 meter long lifting strop ensuring the helicopter is operating well above any danger area, and the helicopter downwash is minimized.

Another important factor when doing these operations is the use of customized guide systems. These guides have locking devices and are installed on the riser flange prior to removal of the existing flare tip. All bolts are removed, locks are released and the flare tip is lifted off. When installing the new flare tip, the guides are steering the load directly onto the flange and automatically lock the flare tip flange when it is in position.

Typical duration of a flare tip replacement operation will be from 6-10 hours, depending on the type and number of flare tips. This means the time from the installers enter the flare boom until all replacement work is completed.

Preparation

The actual replacement work represents an important, but still a small part of a total flare tip replacement project. Prior to all operations, a detailed operations manual for the work is prepared. Every aspect of the work is here described in detail. This includes such as engineering work regarding tools and rigging of flare tips. It also gives a step by step description of all activities to take place, organisation of the project, schedules, risk assessments and tool lists.

Personnel

The main key to our success offshore has been the experience of our personnel and the continuous improvement of equipment and techniques. Our offshore organisation is small, but includes a group of highly qualified personnel. The experience within this group, concerning flare tip operations, is invaluable.

Personnel within the Vertech Offshore organization cover disciplines as project management, engineering, quality assurance and mechanical installation work. The organization also includes an experienced long line helicopter pilot. His responsibility is to quality assure all aerial work that Vertech Offshore is involved in. He will also normally act as our Operations Supervisor when doing the work.



Safety

To assure the high safety standards that we require for such operations, we are utilizing the following “tools”:

- **Vertech Offshore’s Quality Assurance System**, giving our customers the possibility to access all information essential to assure the safety and quality of operations.
- **Helicopter Operator’s Approval System**, for assuring that the engaged helicopter company meets the high standards that we require.
- **Helicopter Pilot’s Approval System**, for pre-qualification of the “flying” pilot for any special lifting operation. We will only accept pre-approved pilots for all our operations.
- **Operations Manual**, a procedure that describes timeframes, schedules, operational aspects, technical information, risk assessments, drawings etc. in detail.
- **Operation Risk Assessment System**, focusing on the work performed by the VO crew and also focusing on the helicopter operations separately.

Through more than 150 flare tips being replaced from 1991 until 2004, we have never had accidents or personnel injuries



Contacts

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