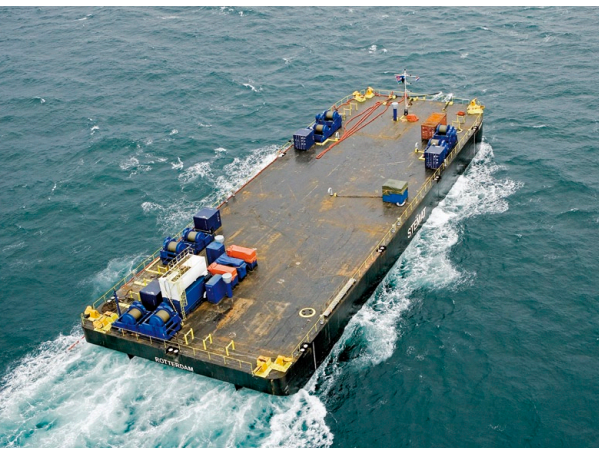


Stemat 82 powers the Dhirubhai KGD6 field

By Tim van Ginneken,
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One of the many challenges on the Reliance Dhirubhai project was the installation of the Type 0 and 1 umbilicals. These umbilicals connect the entire offshore field back to the shore and were installed by a custom-made installation barge, with a helping hand from *Lorelay*.



Beginning of the journey from Rotterdam to Scotland

In a period of one year, the flat top barge "Stemat 82" had to be modified into the umbilical installation barge. Allseas' first umbilical installation project with this custom-built lay equipment was the dual-lay of two Type 0 umbilicals from the landfall point to the control and riser platform with a length of 26 km each.

In the Godavari River, the umbilicals had to be laid in the trench between the 12-inch effluent line and a 24-inch gas trunk line. Once out of the river, *Lorelay* functioned as the external DP system, which allowed the anchor barge to reach the platform in 100 m water depth.

After the dual-laid Type 0, the *Lorelay*-Stemat 82 combination also had to install the two Type 1 umbilicals from the platform to a subsea umbilical distribution hub in almost 500 m water depth, having a length of 13 km.

However, before installation could commence, the lay equipment had to be manufactured and installed in Scotland, the umbilicals had to be picked up in Norway and procedures had to be prepared in the Delft office.



Construction of the umbilical installation barge finished in Scotland



The landfall pull-in location



The firing line of the Stemat 82

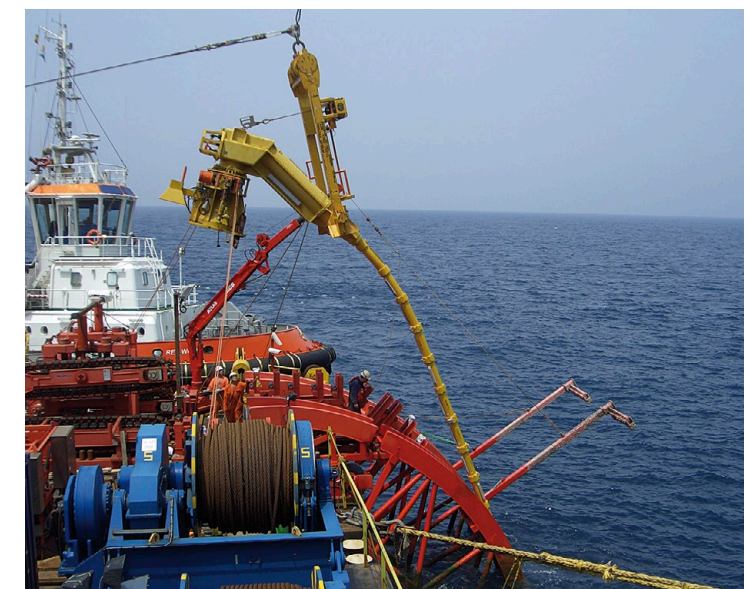
After all preparations were finalised and the Stemat 82 was towed from Norway to India, the umbilical installation could commence. The following photographs give an impression of the installation process.



Two carousels, each spooled with 39 km umbilical



The "chute" (umbilical stinger)



Taming the monster (installation of the Type 1 cobra head)

Seven months after the landfall pull-ins at the beach in Yanam, the Stemat 82 installed the last Type 1 umbilical at the subsea umbilical distribution hub. This was the end of a big adventure. We are very proud of the entire crew, both of Stemat and *Lorelay*, who made this operation possible.

The successful installation of the Type 0 and Type 1 umbilicals proves "the hallmark of Allseas' performance": be creative, inventive, innovative, and above all, daring... and anything can be done!