

Kizomba C

(Saxi Batuque)

PROJECT OVERVIEW

Skandi Navica during spooling operations, Luanda Spoolbase, Angola



Engineering, design, procurement, fabrication, installation and pre-commissioning of flowlines for Esso's Kizomba C development, offshore Angola.

Project included the following elements:

- 16 Flowlines (50 km)
- 32 Flowline End Terminations (FLETs)
- 14 Heavy suction piles
- Upgrade to Luanda spoolbase
- Significant local content at spoolbase

LOCATION

The Kizomba C development consists of 3 fields, Mondo, Saxi and Batuque, located in Block 15 offshore Angola. The water depths vary between 650-810 m.



Luanda Spoolbase, Angola



Skandi Navica at Luanda Spoolbase, Angola

CLIENT

Esso Exploration Angola Ltd

PROJECT DURATION

Engineering completed	June 2007
Fabrication of FLETS	September 2006 - September 2007
Flowline fabrication	July 2007 - October 2007
Offshore installation	September 2007 - January 2008

ASSETS

Luanda Spoolbase, Skandi Navica, Seisranger



Skandi Navica preparing for operations

SCOPE OF WORK

Subsea 7 performed the design, fabrication and installation of 16 short flowlines, totalling 50km in length, ranging from 6” to 10” diameter.

Project management and engineering were executed from Subsea 7’s London office.

A sloping and soft seabed location, combined with high operating temperatures and pressures, called for the installation of large suction piles weighing up to 30 t, to restrain 14 of the 16 short flowlines during their initiation and to prevent them from ‘walking’ during service.

The high interface loading from the risers and manifold jumpers required the installation of 32 heavy flowline end terminations (FLETs) weighing between 18 t and 26 t each. To improve efficiency of FLET handling and storage during the installation phase of the project, one of Subsea 7’s deepwater pipelay and construction vessels, the Skandi Navica, was fitted with a new hydraulic FLET alignment system and a new mezzanine deck.

All flowlines were fabricated at Subsea 7’s Luanda spoolbase by local Angolans, who undertook rigorous training as part of the project. FLETs were fabricated by a team including 18 Angolans who also underwent extensive skills development training.

Following the contract award Subsea 7 carried out a major upgrade of its Luanda spoolbase at Sonils, extending the firing line to provide improved workstations for welding, non-destructive examination (NDE) and field joint coating. Permanent mid-line and spooling tie-in stations were introduced to improve efficiency of these operations, along with more general operational environment improvements.

The spoolbase upgrades, combined with the investment in personnel training and the focus on behavioural safety, contributed to the excellent overall safety performance on the project. The safety performance of both the Skandi Navica and the Seisranger, working on the project in a construction support vessel capacity, was described by Esso as ‘exemplary’.