

## SEAWAY KESTREL

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A dynamically positioned reeled pipelay and diving support ship, the *Seaway Kestrel* is equipped to lay pipe of up to 16" diameter which can be reeled on to the ship at a shore based spooling facility or lifted on to the ship as a full reel.

The *Seaway Kestrel* has an excellent track record of deep water flowline lay both to the West of the Shetland Isles on the Foinaven and Schiehallion projects and in West Africa on the Zafiro field.

*Seaway Kestrel* proved its versatility reeling out EPCI contracts for BP West of Shetland projects in a water depth of 500m and 450m respectively on Foinaven and Schiehallion in 1995 and 1997, with an expedition on Shell's Teal Guillemot field in 1996 to install duplex stainless steel lines of 6" and 8".

This outstanding experience served to introduce the reeling method offshore West Africa in 1997, with a winter contract for the *Seaway Kestrel* to tie-back two satellite fields on Mobil's Zafiro offshore Equatorial Guinea. A total of 30km of 8" and 6" lines were

required in a 500m water depth, to cover distances of 6.5km and 8.5km. Due to the distance, rigid lines were found to do a more economic job than flexible lines.

However, there did not exist a reeling base in West Africa at that time, and two pre-fabricated reels of pipes had to be sailed all the way from Ardersier-Scotland to West Africa. The change of reel was done by lifting in Port Gentil, using the crane on the *Seaway Polaris*.

Following the operation on the Zafiro field, it was decided to establish a reeling base in West Africa and Stolt Offshore's Sonamet yard in Lobito-Angola was chosen as the most appropriate location, in order to respond to upcoming deepwater tie-back requirements offshore Angola.

During the winter 2000, *Seaway Kestrel* went back to West Africa to complete all subsea tie-ins on Elf's Congo Tchibeli-Nkossa field and to install subsea cables, a Riser made of Pipe-in-Pipe, as well as a Flexible Jumper.

# SPECIFICATIONS



Type:	DP Reel lay & Diving Vessel
Class:	American Bureau of Shipping IA AMS DNV ERN 99.99.99
Flag:	Bermuda
Port of Registration:	Hamilton
Dimensions:	LOA 98,523 Draught 5,869 m Breadth 25 m
Clear Deck Area:	1200 M2
DP System & Propulsion:	Simrad ADP 703 with ADP 701 back up complying with DNV class Auto Bow Thruster: 3 x 1500 HP tunnel. Ulstein 375 TV Type Stern Thruster: 1 x 600 HP tunnel 2 x 2000 HP Azimuth thruster type Ulstein TCM92
Main Propulsion:	2 x 1500 HP wichman with CP propellers Bollard Pull: 90 T sustained
Mooring:	2 x single drum Bratwaag winches with 1,640 m of 44 m diam. wire + 10,000 lb Damforth anchors
Diving System:	Lloyds Class + IOOAT 18 man, 300 msw saturation 3 chambers, 1 x 3 manbell, hyperbaric life boat
Displacement:	10,112 MT
Gross tonnage:	4,604 MT
Net tonnage:	1,381 MT
Helideck:	Bell 214
Accommodation:	80 total

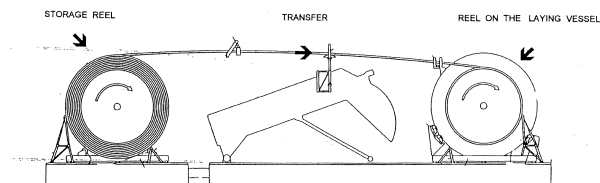
## REEL LAY CAPACITY

Main Reel Dimension:	OD: 18.3 m ID: 9.8 m Width: 9.45 m Quantity: 2 off
Pipe Storage on Main Reel:	1,250 T
Pipe Storage on Secondary Reel:	180 T
Tensioning Capacity:	120 T
Variable lay tower angle:	between 30° and vertical position
Lay capacity: Rigid Steel Pipe:	up to 16" Umbilicals: 6.4 MBR
Flexible Pipe:	12" NB/6.4 m MBR
Reel Capacity:	from 120.5 km 3" x 4.8 mm to 5.4 km 16" x 23.8 mm

## REEL TO REEL

### Innovating with the Reel to Reel method

The Reel to Reel transfer method considerably reduces the vessel's operational downtime. Pipe is prefabricated and loaded on a reel that remains onshore. When the vessel arrives to the base for its new supply, the pipe is reeled out from the onshore reel onto the vessel's reel. No welding is required. Immobilisation of the vehicle is reduced and the vessel gains in efficiency. Tests on the reel to reel transfer have been performed at the spooling base of Arderseir. These show that the transfer of pipe from one reel to another does not imply major modifications of the strains and stresses of the pipe. At the end of the operation, strains and stresses are similar to those registered during the first reeling operation. Furthermore weld defects which were measured before the test operation proved to remain stable, when measured after the reel to reel transfer. The next stage will be to perform a reel transfer operation from a floating unit onto the Norlift. Provided a successful test, it should then be possible to bring the already reeled spool to a location closer to the field location. This should reduce the vessel's transit time when loading new pipe supplies.



**Stolt Offshore**  
Combines Stolt Comex Seaway and ETPM



Stolt Offshore Limited  
Bucksburn House, Howes Road,  
Aberdeen AB16 7QU Scotland.  
Tel: +44 1224 718200 Fax: +44 1224 715129  
www.stoltoffshore.com