Claims

1. A reel assembly for an offshore umbilical comprising:

a frame having an axle;

a spool having flanges and a drum wherein said spool is mounted on said axle and adapted to hold said offshore umbilical;

a motor in communication with said spool and adapted to rotate said spool;

a tensioning device adapted to automatically maintain a relatively constant tension and a relatively constant slippage load on said umbilical when deployed from said spool and said tensioning device includes a primary accelerometer attached to said spool and adapted to independently detect rotational direction of said spool and a secondary accelerometer attached to said spool at an angle from said primary accelerometer and adapted to independently detect rotational direction of said spool; and

a processing computer in communication with said primary accelerometer, said secondary accelerometer and said motor wherein said processing computer is adapted to compute said relative constant tension and said relative constant slippage and control said motor by measuring the g force difference between said primary accelerometer and said secondary accelerometer.

2. The reel assembly of claim 1 wherein said tensioning device includes at least one slip clutch attached to said frame, adapted to engage said spool, and in communication with said processing computer.

3. The reel assembly of claim 1 further including a computer module in wireless communication with said processing computer.