supports. The circumferential part of the riser deck structure 19 is a fabricated steel cylindrical shell structure that connects to the turret cylinder 20, and accommodates respectively the horizontal running race of the axial bogie wheels 5, 28 (see figure 3) and, if needed, the vertical running race of the radial wheels 6. The weight of the turret 4 and the vertical loads from the anchor legs, risers 8, and umbilicals are transferred through the axial bogie wheels 5, 28 to the turntable 12, while the horizontal mooring loads are transmitted through the radial wheels 6.

Manifold Structure

The turret manifold is installed on top of the riser deck 19 and is formed of several grated decks. Access from one deck to the other is provided through vertical ladders and stairways located on the gantry 13 and accessible via the provided rotating part access platforms that are flush with the manifold decks.

The winch deck 17 supports the main installation winch 16 used for the anchoring legs and risers 8 hook-up.

The swivel stack 9 is seated on a shaft, namely a swivel support 14 which is located at the centre deck or Subsea Equipment Room (SER) deck 15. The bottom of the shaft is open to allow passage for the piping routed from the manifold decks to the swivels and to provide access to the underside of the swivel stack 9.

The components comprised by the rotating turret part 29 (connected to the vessel) will be explained in more detail hereafter:

Turntable 12

The turntable 12 structure is attached to the rigid arm 3 or extension construction 3 and comprises a welded steel box structure cantilevered off the rigid arm 3. It includes a central opening into which fits the turret fixed part.

On top of the turntable 12, a thick annular plate provides support to the axial bogies 5, 28 while two other thick annular plates provide housing to the radial wheels 6 below, such as a few meters below, for instance 5-20 m, preferably 8-15 m, such as 10 m. It is through the turntable 12 that all of the loads are transferred from the turret fixed part 30 to the vessel 2 via the rigid arm 3. In some examples, the height of the turntable 12 is at most 60% of the turret 4 height.

4. External turret assembly (1) according to any of the preceding claims, **characterized in that** the turret (4) comprises a riser deck (19) for receiving a plurality of risers (8), the riser deck being placed along the turret axis (X) above the first bearing means (5).

5. External turret assembly (1) according to any of the preceding claims, **characterized in that** a height of the turntable (12) is at most 60% of a height of the turret.

6. External turret assembly (1) according to any of the preceding claims, **characterized in that** the chaintable (11) is provided with a sub-chaintable platform (21) with a diameter that is larger than the bearing assembly diameter.

7. External turret assembly (1) according claim 7, **characterized in that** the sub-chaintable platform (21) is provided with means to fix the position of chainhawsers during transport.

8. External turret assembly (1) according to any of the preceding claims, wherein the first bearing means (5) comprises bogie wheels (28) and a permanent bogie evacuation rail structure (22) is provided for evacuating the bogie wheels.

9. External turret assembly (1) according to claim 8, wherein the bogie wheels are evacuated in radial direction.

10. External turret assembly (1) according to any one of the preceding claims, wherein the bogie wheels are comprised by a radial wheel access platform, wherein a maintenance hatch (24) or access hatch (25) is provided for accessing the bogie wheels in the radial wheel access platform.

11. An offshore vessel (2) provided with an external turret assembly (1) according any of the preceding claims.