CLAIMS

1. A spar-type floating structure comprising a tall, thin floating body and a ballast portion provided to the floating body so that the weight of the ballast portion allows the floating body to float in upright position, wherein

the floating body includes a horizontally-extending first extended portion arranged at the bottom, a horizontally-extending second extended portion arranged in the middle, and a column portion connecting the first and second extended portions and extending up to the waterline, wherein

the first extended portion forms the ballast portion, and

the second extended portion constitutes a buoyancy portion giving buoyancy to the floating body.

2. The spar-type floating structure according to claim 1, wherein the floating body further includes a horizontally-extending third extended portion arranged at the top of the column portion.

3. The spar-type floating structure according to claim 2, wherein the third extended portion has a waterplane area corresponding to 10 to 300% of the average area of the floating body obtained by dividing the displaced volume by the draft of the floating body.

4. The spar-type floating structure according to claim 2, wherein a columnar member with a reduced horizontal size is joined to the top of the third extended portion.

5. The spar-type floating structure according to claim 2, wherein a mooring cable for mooring the floating body are connected to the third extended portion.

6. The spar-type floating structure according to claim 1, wherein the second extended portion has an inner volume corresponding to one fourth to three fourths of the displaced volume of the floating body.

7. The spar-type floating structure according to claim 6, wherein a fairlead are provided to the side of the second extended portion to guide the floating-body mooring cable.

8. The spar-type floating structure according to claim 1, wherein the first and second extended portions have sizes determined to meet the requirement $GM = Iw / (\Delta \times \tan\theta)$ (, where GM is the metacentric height, Iw the wind overturning moment, Δ the displacement, θ the allowable maximum angle of tilt).

9. The spar-type floating structure according to claim 1, wherein a resisting body is provided to surround the circumference of the first extended portion to adjust the dynamic response of the floating body

10. The spar-type floating structure according to claim 9, wherein the resisting body includes an annular guard to prevent the floating-body mooring cables from becoming caught in.