

Distinguish, differentiate, compare and explain what is the Difference between Gravity and Spring Control. Comparison and Differences.

Difference between Gravity and Spring Control

1. In gravity control, adjustable small weight is used which produces the controlling torque. In spring control, two hair springs are used which exert controlling torque.
2. Controlling torque can be varied in gravity control whereas controlling torque is fixed in spring.
3. In gravity, the performance is not temperature dependent while in the spring the performance is temperature dependent.
4. The scale is nonuniform in gravity. The scale is uniform in spring control.
5. The controlling torque is proportional to $\sin(\text{angle})$ in the first whereas in the second, the controlling torque is proportional to the angle.
6. The readings can not be taken accurately in the gravity. The readings can be taken very accurately in the spring.
7. The system must be used in vertical position only in gravity control. The system need not be necessarily in vertical position in spring control.
8. Proper leveling is required as gravity control. The leveling is not required.