Buoyancy energy

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Title of the Paper
Buoyancy energy

Form of Presantation

- ◉ Poster
- ○ Presentation

Short Description (maximum 2500 characters)

In normal circumstances the piezometric height of a water column is equal to its geometric height.
But in water with much particles in suspension, the piezometric height is a little bit above the geometric height.
Suppose a reservatory full of liquid with many particles in suspension, if all of them agglutinate and form great floating mass, in the same case the piezometric height would be above the geometric height.
Now suppose a reservatory, full of water and a great floating half-sphere inside it.

If the floating half-sphere has a pipe inside it, there will be geometric unlevelling between the water inside it and the water outside it.

Now, suppose a small orifice in the pipe, below the water level, which allows the escape of water.

The system, in the first moment, in equilibrium, loses pressure.
Now, take an infinitesimal limit of time (dt), when the first fluid mass flows (m), provoking gap in the pipeline;
The gravity action causes the fall of the particles located above the structure failure (orifice) to fill in the gap.
Such an accommodation causes small unlevelling (dh) on the height of the pipeline liquid column, which causes small piezometric unlevelling (dp) between the liquid located inside the pipeline and outside it.
Due to the difference of pressure, the water particles go upside the pipe: taking into consideration that the ascending flow is superior to the discharging flow, as the orifice is small.
In simultaneous movement, the mass coming out of the orifice loses energy and falls into the larger reservoir, by gravity action which, in an infinitesimal time interval, equilibrates the system, but it is followed by new mass of subsequent water.

To get this system leveled and stop the water movement, it is necessary to eliminate the orifice or canalize the water coming from it to the outside of the reservoir.
Over time, the liquid evaporation rate will stop the movement, when the floating semi sphere lays on the reservoir structure, its weight will be directly transmitted to it.
This theoretical model presents water mass movement due to the difference of pressure between floating mass and liquid mass to produce hydro mechanic energy.
For more information access: www.energiadoempuxo.com.br (Patent Cooperation Treaty)

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