Claims

1. Water heater, comprises:

Tubular water inlet pipe extends to a water storage container, it preferably sets at the end of said water storage container, or adjoin said end, or be parallel to/roughly parallel to the surface of said end. Said inlet pipe is preferably configurated to extend roughly along the height direction of said water storage container, and set or install at least one rotatable device with fan blades; said rotatable device with fan blades should possess plural joinable internal blades and external blades, the surface of at least one said internal blade and/or external blade is configurated to intersect obliquely at a preset angle with water flow of said inlet pipe; to convert and utilize the force of water flow from said inlet pipe to rotate around the axis and make the water near periphery of said inlet pipe to flow along the first preset direction; said first preset direction is preferably roughly parallel to said height direction.

And water pressure reuse and diversion device, comprises movable and lockable connecting or installing elastic component, and configurate to utilize the change of water temperature, water flow and water pressure to convert between energy storage status and diversion status; wherein in energy storage status, said water pressure reuse and diversion device will drive or compress and lock the elastic component to the position by water pressure or flow in order to store kinetic energy which converted by water pressure or flow; in diversion status, said water pressure reuse and diversion device will release elastic component, through resilience of said elastic component or stored kinetic energy to drive the water flow to second preset direction, in order to quickly mix the water in different temperatures in said water storage container, thus help to reach thermal equilibrium; said second preset direction is preferably parallel to the length or width or thickness direction of water storage container; and/or said second preset direction is preferably perpendicular to said first preset direction, so that expedite the mixing of water in different temperatures by water flow in different directions, thus help to reach thermal equilibrium.

2. The water heater of Claim 1, wherein: said water pressure reuse and diversion

device comprises rotatable guiding component/steering component and/or said rotatable device with fan blades, which correspond to convert said second preset direction in preset working status, so that expedite the mixing of water in different temperatures by generating water flow in different directions, thus help to reach thermal equilibrium.

3. The water heater of Claim 1, wherein: said first preset direction is roughly inverse to water inflow direction of said water inlet pipe, so that expedite the mixing of water in different temperatures by generating water flow in different directions, thus help to reach thermal equilibrium; and/or working direction of said elastic component and/or said second preset direction is preferably perpendicular to water inflow direction of inlet pipe, so that expedite the mixing of water in different temperatures by generating water flow in different directions, thus help to reach thermal equilibrium.
4. The water heater of Claim 1, wherein: said water pressure reuse and diversion device comprises built-in thermal sensor, which corresponds to preset temperature in conversion between energy storage status and diversion status of said water pressure reuse and diversion device.
5. The water heater of Claim 1, wherein: said water storage container is configurated as possessing double sealed wall or housing, comprising internal wall or internal housing for holding water, and external wall or external housing for covering said internal wall or internal housing, and thermal insulation and insulating layer or intermediary between two parties; it is preferably air or gas interlayer or vacuum in order to increase effect of insulation and reduce heat loss of water.
6. The water heater of Claim 1, wherein: said water storage container comprises the exhaust valve which is joinable with said water pressure reuse and diversion device, it will open and close accordingly in energy storage status and diversion status of said water pressure reuse and diversion device, said exhaust valve preferably extends parallel or roughly parallel to said inlet pipe.
7. The water heater of Claim 1, wherein: said water storage container comprises water outlet pipe, said outlet pipe preferably extends parallel or roughly parallel to said inlet pipe.
8. The water heater of Claim 1, wherein: said water storage container comprises at least one high power electric heating tube, said electric heating tube is configurated to firmly connect with said water pressure reuse and diversion device

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or install in the same end of said water storage container; said electric heating tube preferably extends parallel or roughly parallel to said water pressure reuse and diversion device, and occupies roughly same working space.

9. The water heater of Claim 1, wherein: said water pressure reuse and diversion device adopts cylindrical shape and preferably possesses same size and configuration with electric heating tube of water heater; and configurate to possess open end and closed end; and set or install elastic component and matched fixing component in said closed end, said elastic component comprises joinable spring, cover and connected main body which is separably coupled with said fixing component, and configurate to convert between the first position and the second position; wherein

   When in the first position, said elastic component or main body meshes with said fixing component and adjoin with said closed end, in order to store own resilience of said elastic component, or resilience or kinetic energy of elastic component converted and stored by water pressure or water flow, and configurate to separate with said fixing component accordingly at preset temperature or working status, so that use stored resilience or kinetic energy to move to said second position which adjoins with said open end, drive and lead the water to flow towards the second preset direction during moving it, thus help to mix water and reach thermal equilibrium; and

   When in the second position, said elastic component is configurated to drive through water pressure or water flow, so that move to and mesh with said fixing component until fasten in or convert to said first position, to convert and store the kinetic energy driven by water pressure or water flow, and can convert from said first position to said second position by said kinetic energy accordingly at preset water temperature or working status; keep driving and leading the water during conversion, so that quickly mix the water in different temperatures in said water storage container, thus help to reach thermal equilibrium.

10. The water heater of Claim 9, wherein: cover and main body of said elastic component preferably have T-type section, and said main body has plural separated concave along the edge, in order to separably meshed with corresponding movable hook or convex of said fixing component.