TESLA TECHNOLOGIES

BRIDGE TO THE FUTURE

WATER TRANSPORT FLOATING PIPELINE

Irrigation of Australia with innovative water supply system

2017

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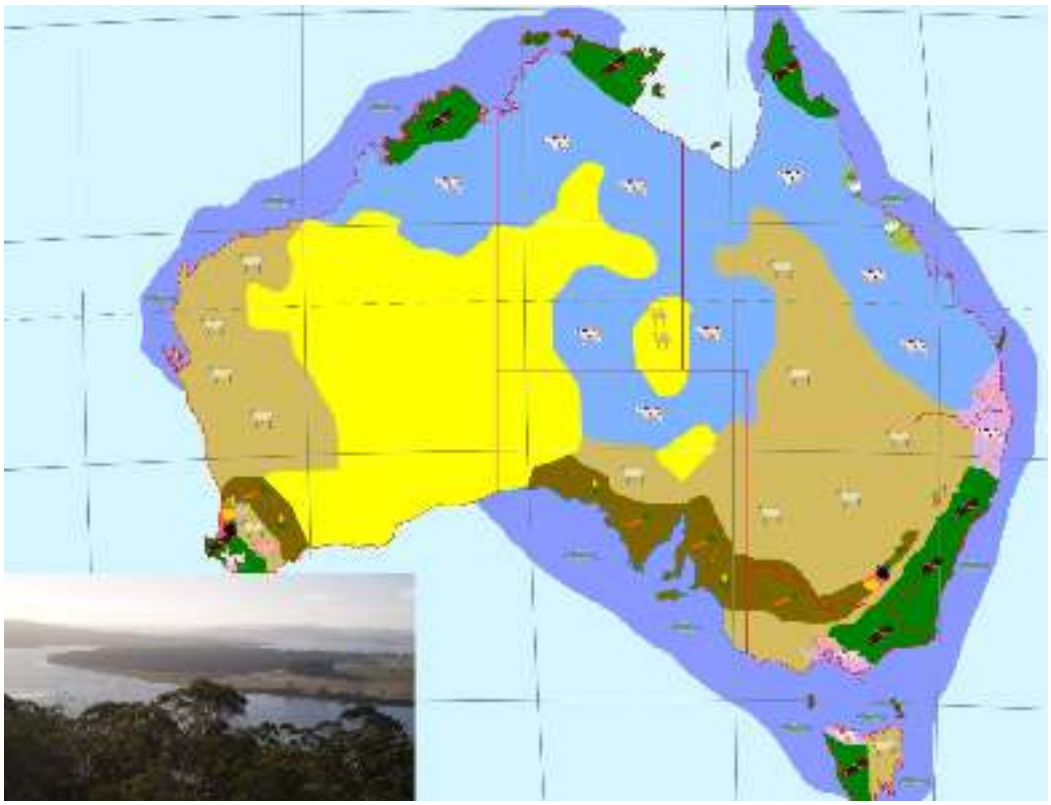
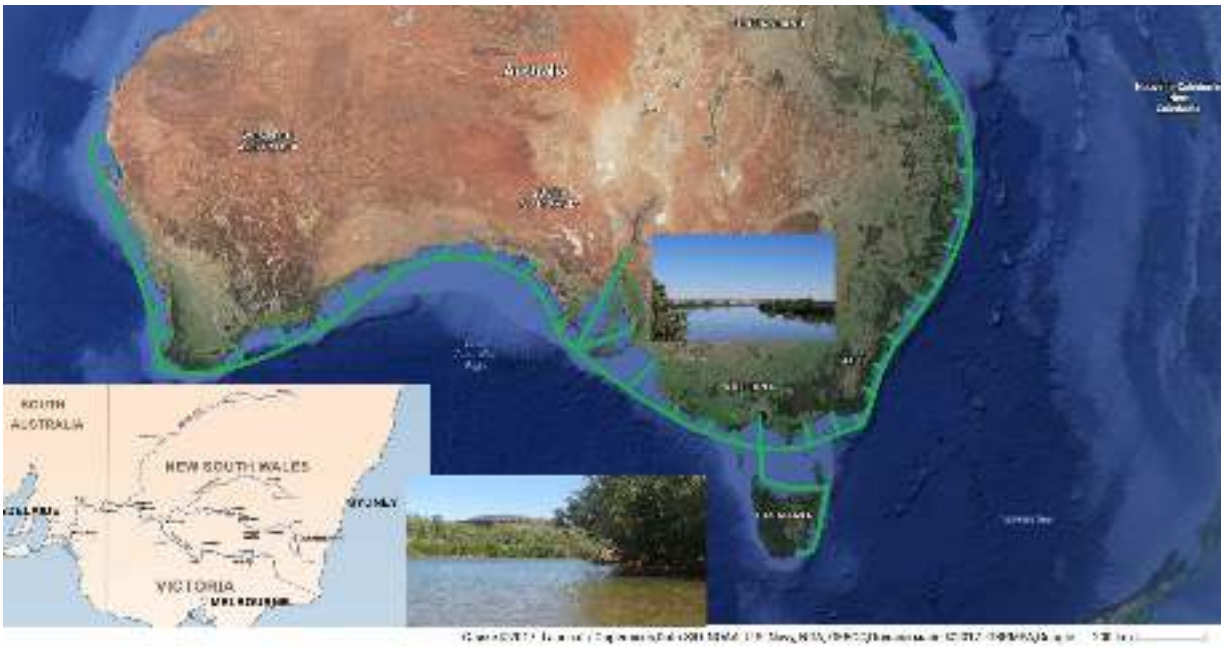


Australia, as well as the rest of the planet, is at the stage of ecological changes caused by elevated temperatures of the planet, which do not stagnate, but tend to deteriorate. The growing population of the current 25 million is mainly concentrated in cities, located along the south and southeast coast of Australia, where moderate and moderate continental climate.

Australia is a continent, with the largest climate impact of sea currents, which condition periodic cyclones in the territory of northern Australia with pronounced changes in amount and precipitation time, so that ¾ territories of Australia feature a desert or semi desert climate.

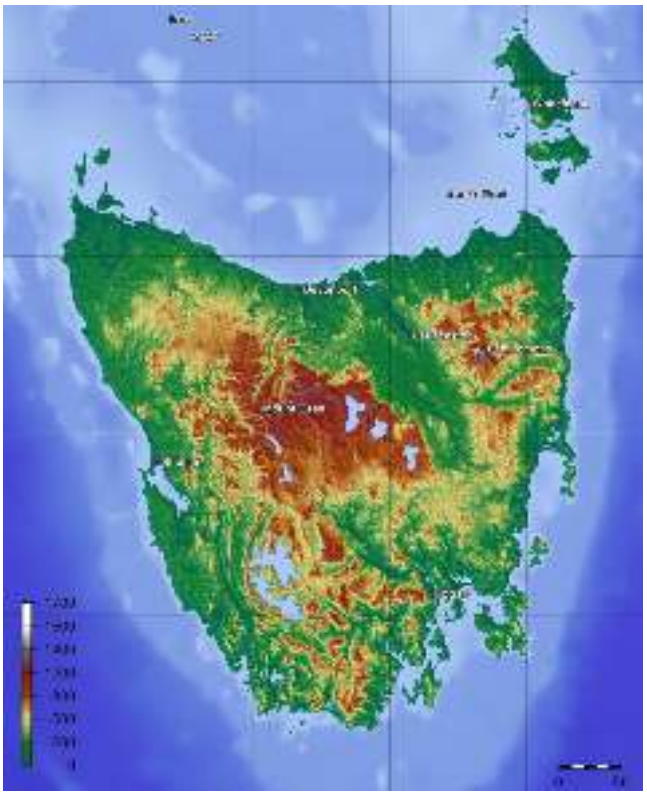
Remains about 1.000.000 km² of suitable land for cattle breeding, agriculture, urban and commercial development, where the biorhythm of land changes due to temperature increase.



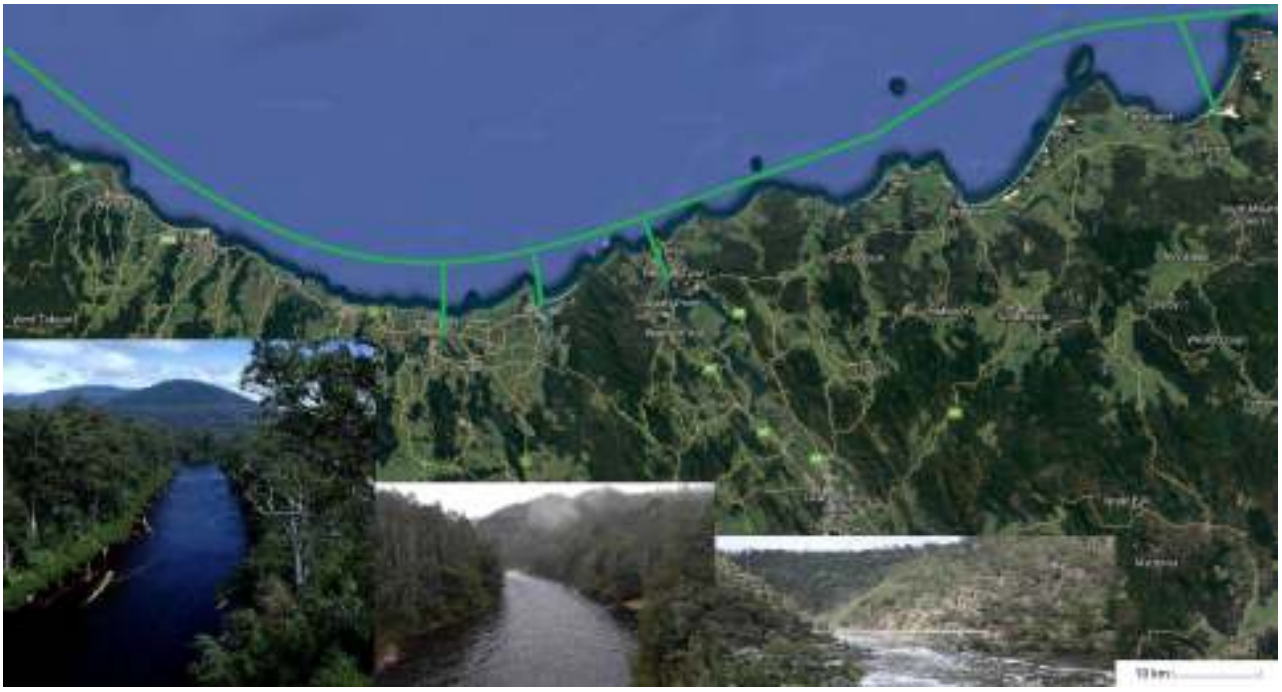
There is a great need for the population of water, mainly concentrated in cities along the coast of southern and southeastern Australia, which can be supplied with water from an innovative pipeline, located below the sea surface. The pipeline would fill water from the local rivers of the continental part of Australia, in addition to the island of Tasmania, which would then distribute water for the needs of irrigation, the necessary water for settlements, or provide opportunities to produce a regional change of the microclimate, where they would be refreshed with water in the territory where a concentrated population.

The island of Tasmania with an area of 68.400 km², with its position and relief terrain, has a climate suitable for the needs of an innovative pipeline, with a rainfall of over 1.000 mm per year. Mostly precipitation is every week, all year round, so the island of Tasmania can be a reliable and stable supplier of potable and technical waters of the south and southeast coast of Australia.

Natural advantage has not been considered as a solution so far, because there was not an adequate conceptual and commercial solution to realize it.



On Tasmania's island there are tanks with drinking water, which have already been built, partly used for the needs of local hydroelectric power plants. Reservoirs with the necessary water would serve for the controlled water supply of continental Australia, in order to remain the primary function of electricity production water would be mainly used with the exploited gravity potential.



Water from the reservoir would be used at the mouth of the river, on the north and east coast of Tasmania, where several smaller rivers are concentrated, which are suitable for this purpose. So that the water supply and filling of the pipeline would be in more places, at the mouth of the river. The water would be concentrated behind a multi dam which would accumulate incoming water in the river for the needs of an innovative pipeline and prevent the mixing of sea and river water.

For example, a dam of required length is built, so that the water of the river it's up with a difference of 5 m above the sea level. Accumulated water is previously filtered by natural passage through the set dam, then the pure water is filled with an innovative pipeline in several places. The water is then transported to the coast of Australia at a rate of several meters per second without pump usage, by the principle of the law of fused vessels, following the sea level at zero angle.

The water conduction can be at a higher altitude, if necessary linked to existing accumulations, so we get a higher water outlet pressure of several bars, where water without energy can be used with sprinklers to irrigate the necessary areas of continental Australia.

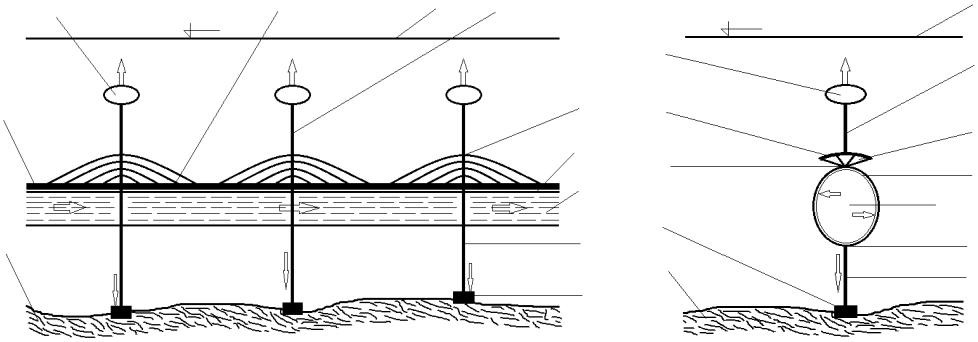
In addition, a parallel pipeline of a smaller profile is replenished with fresh drinking water from a suitable accumulation, then transported to the coast of Australia for the needs of the population.

Floating pipeline (parts from a patent)

The field of the technique to which the invention relates

The invention relates to the field of the technique of constructing an innovative floating pipeline at a position below the surface of the water. In such a way that the pipeline so constructed is technically advanced to bridge the deep water of the ocean or the sea, and for the distribution of water from the mouth of the river to the consumer. In addition to the above-mentioned primary objective, such construction and maintenance technology has been improved to provide the ability to make the pipeline as possible and built.

In the figure, a longitudinal section of the pipeline is shown at the location of the setting in the ocean or sea, with the shown position of the bearing anchorages with the anchor points in accordance with the invention.



The pipeline is made of a cylindrical canvas, which is connected to the construction of the pipeline. Then, through the position fixing cable it binds to buoys placed below the surface the water, sea. Looking at the surface of the water pipelines are visually not noticeable. The distance between the buoy and the anchorage is less than the distance between the water level and the bottom of the sea. The flow of water unfolds in an approximately horizontal position. Regardless of the distance, water is transmitted thousands of kilometers in this way. The energy required for the transfer of water is based on the principle of the joining vessel, so that the input part of the water position in the pipeline and its outlet are in balance. The water flow within the pipeline and the speed of its flow is equal to the potential energy of the water inlet into the pipeline, that is, the formed water pillar above the water level or the potential of the pump, if other possibilities are excluded.

An example of the dam at the mouth of the river, a low dam with a water pillar of 5 (m) must be formed. The dam is partly made of hollow material, the water is naturally filtered and concentrated in the pool. The swimming pool is connected to the pipelines, which is made of canvas in a developed diameter of 10 (m), placed in the sea in accordance with the innovative solution. With its position at the other end of the pipeline, on the other shore of the sea a water storage tank for water accumulation has been made, water is connected to the receiving pool by the principle of connected vessels, in the amount of water and consumption. Thus, a closed cycle of movement of water from the river through the route through the sea water is foreseen, without mixing it with seawater, without consuming energy for its transmission and with the necessary amount of water which can reach more than 100 (m^3/s) of flow for irrigation purposes. The pipeline should be disassembled into parts for a certain period of use, rinse the deposited sludge, and then reinstall it for use.

In the figure, the cross section of the pipeline with the position of the underwater buoy and the construction of the pipelines, interconnected in accordance with the invention, is shown hooked the cable of the buoy and for the anchorage located at the bottom of the sea. Their position furthermore enables and controls the ballast weights placed in the construction of the pipeline.
The water flow in the pipeline is below the sea level.

The necessary cleaning of an innovative pipeline can be achieved by using a water vacuum cleaner, additional necessary equipment to be inserted inside a part of the pipeline through the designated technical opening, and at a time when the pipeline is used. This gives us unhindered and constant characteristics of water flow over a long period of use of the pipeline.

Innovative technology can contribute to the need for wastewater treatment from coastal cities, through innovative pipes transported contaminated water to distant marine currents, in order to maintain the quality of seawater for the tourist content and general health of people living in the area.

Additional known solutions that contribute to the realization of the project, such as mounting equipment and springs on all necessary cables, should be mentioned due to the amortization of current impacts due to the effects of various forces and the effects of high waves. Certain sensors placed on buoys, with satellite monitoring via the valve, control and protect the operation of the pipeline.

Specific companies will have additional use of this innovation, which contains at least one of the above patent applications, where innovation provides an indicative set of future technical solutions. For example, a pool below the sea level is provided at the exit of the pipeline users, so that the flow of water within the pipeline is accelerated, and then the water is pumped and by discharging the receiving pool.

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Features of an innovative pipeline for Australia:

- with the installation of a pipeline 100 m below the surface of the water, we will get the possibility of transporting water for irrigation at a pressure of 10 bar, where the achieved pressure does not affect the walls of the innovative pipeline because it is neutralized by the position of the pipeline with the pressure of water from the sea,
- so that the walls of the pipeline can be made of canvas, does not require large material investments for making, and can also be a limpid and transparent canvas,
- large diameter of the pipeline has several positive effects, among other things, the water in the central part then has a flow-free flow, the resistance of water friction to the walls of the pipeline is negligible,
- water is not compressible, so water pressure at the inlet of the pipeline when the pipeline in full volume gives a simultaneous amount of water exit regardless of the distance of the pipeline,
- **10 m** pipeline diameter, with a water pillar of **5 m**, with a water outlet to the pool on the shore of the sea, provides a maximum flow of **600 m³/s of water**, which is used as needed, with constant flow,
- **2 m** pipeline diameter, with a water pillar of **100 m**, exiting the water into the pool at an angle of **60 m** above the sea level, gives a maximum flow of **90 m³/s of water**, which is used as needed for regional water supply under the pressure of **4 bar**,
- **1 m** pipeline diameter, with a water pillar of **100 m**, exiting the water into the pool at an angle of **60 m** above the sea level, gives a maximum flow of **20 m³/s of water**, which is used as needed for regional water supply under the pressure of **4 bar**,
- so that the main pipelines work with three interconnected pipelines in a **10 m, 2 m and 1 m** radius, while the secondary pipelines are connected as needed and capacity.