PRE-STRESSED CONCRETE



Pioneer of the PC Technology

PC TANKS

The PC tank is an abbreviation of a "pre-stressed concrete tank", and means a water storage tank made of the concrete that had been compressed beforehand to resist the pressure or tensile stress caused during service.

The PC tank is made of the high-strength concrete that is several times stronger than conventional concrete. In addition, PC tank is made of the PC steel wires and PC steel bars that are ten times stronger than reinforcing bar. The PC tank has been developed by modern technology to meet the needs of the times. In our country, the first PC tank was designed and constructed by our company at Ijira village on the outskirts of Gifu in July 1957.

Since then, our company has designed and constructed a wide variety of tanks for water supply, drainage, & industrial water, under prefectural and town management.

Our rich experience and accumulated technology are having a high reputation in Japan.

Thereby, in the market for PC tank in Japan, we have the No. 1 market share. We have a proven track record of 4000 PC tanks or more.

The predominance of a PC tank has been recognized widely gradually in Japan. And while the conventional underground square type reservoirs made of reinforced concrete decreased in number, PC tanks increased in number.





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Characteristics

I. COMPLETE WATER TIGHTNESS (leak-free structure)

The PC tank is reinforced by high-strength steel wires and bars (PC tendons) placed in the vertical direction, and in the horizontal direction.

That is, a compression stress is introduced beforehand to prevent the induction of tensil stress (arise with water pressure)which is a weak point of concrete. Therefore, the pre-stressed concrete is free from crack and water leakage.

II. LOW CONSTRUCTION COST

Since the cylindrical tank which is rational form can reduce the material to be used, it is economical. Because the cylindrical PC tank can make a water level more high, it can store mass water in narrow land.

It is effective in the expensive urban areas of land.

III. RUST-FREE AND CORROSION-FREE

Because the concrete has water resistance in itself, the steel materials which are Reinforcing bars and PC tendons, etc. are completely protected from corrosion caused by the infiltration or leakage of water. In addition, the PC tank is protected from corrosion caused by the chlorine used for sterilization or by sulfides to be generated in sewage.

IV. EXCELLENT COLD-RESISTANCE AND HEAT-RESISTANCE

Generally, the heat permeability of rich-mix concrete is lower compared with steel. On the other hand, cold- resistance and heat- resistance is higher.

Furthermore, it is adaptable to local changes in temperature by the excellent elasticity.

V. HIGH EARTHQUAKE RESISTANCE

As mentioned above, pre-stressed concrete is excellent in elasticity.

VI. HIGH RESISTANCE AGAINST GROUND SUBSIDENCE

The above-mentioned means that P.C tanks are highly resistant to the subsidence of ground.



