



## Case Study of BioCask: Sewage Treatment Plant at Ramada Caravela Beach Resort

Thermax Technology

Location : Goa

### About Ramada Resort

Located on the serene white sands of Varca beach, the 199-room resort is sprawled over 24 acres of lush lawns

The Ramada Caravela Beach Resort is quite simply Goa's finest beach resort. As one of the first five-star properties in Goa, the resort enjoys unparalleled proximity to the beach, grand ceilings that are an architectural treat and vantage points that offer breath-taking views of the sea, sand and the dense greenery around the property, giving you an almost secluded and virginal experience while keeping you in touch with all the modern facilities.



### Client's requirement

Existing ASP Based STP was not functioning properly to produce the desired output.

- Revamp of existing plant without demolishing existing structures
- 300 m<sup>3</sup>/day New plant is to be fitted in Basement without using extra space
- Outlet BOD should be < 5
- Treated Sewage should be suitable for Reuse in Horticulture etc.

# BioCask: “Achieve BOD 5 without ultrafiltration”

Thermax has supplied **BioCask** which is the most efficient state-of-art technology for domestic wastewater treatment.

The innovative design of the BioCask has overcome all the limitations of conventional wastewater treatment systems. The BioCask uses a first-of-its-kind unidirectional fluidization pattern that makes efficient use of oxygen that is required for biological degradation of organic impurities.

The novel design of the aeration system in the BioCask also reduces the operating cost of the treatment.

Parameters	Unit	Inlet	Outlet
<b>pH</b>	-	6.5 - 8.5	7 - 8
<b>BOD</b>	ppm	500	< 5
<b>COD</b>	ppm	1000	< 30
<b>TSS</b>	ppm	400	< 5



## BioCask - Features

- Suitable for basement installation - fits in clear height of 3.0 meters
- Improved quality of treated water - suitable for recycling
- Single stage biological treatment
- Reduced operating cost due to high oxygen transfer efficiency
- Higher biomass concentration due to unique fluidization pattern Better outlet parameters due to higher biomass concentration
- Modular arrangements of bioreactor for higher flows
- Minimum civil work
- Meets prevailing stringent norms



*Treated Sewage*

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