

COLOANE WASTEWATER TREATMENT PLANT (supervisory services for the design and build second phase project)



Client / Employer Government of the Macao Special Administrative Region
Infrastructure Development Office

Service Supervisory Services for the Design and Build Project by CONSULASIA, LDA.

Investment Approx. MOP 250 Million

Contract Price MOP 4,285,000

Time Schedule May 2006 to June 2008

Description of the Project

During the past few years, the Coloane wastewater treatment plant has been enlarged and updated on the basis of SBR (Sequencing Batch Reactor) technology. The biological cleaning stage follows a reuse phase for a partial flow of the cleaned wastewater. As a consequence, up to 10,000 m³/d of treated wastewater is available for export and use within the plant as service water. The resultant sewage sludge is thickened mechanically and then dewatered in centrifuges.

The whole plant handles 130,000 m³/d of wastewater using modern mechanical/biological treatment technologies and the new Phase II extension went online in September 2008.



In addition, the plant used the low-cost unobtrusive compact advanced sustainable (LUCAS) technology which combined the advantages of the conventional technology and the sequential batch reactor (SBR) technology. In every reactor unit there is a succession of three processes, namely accumulation, regeneration and sedimentation, which are separated by closing the common gate valves. All the equipment follows an operational sequence controlled by a PLC.

CONSULASIA was awarded the project management and supervision of its construction, beginning from ground excavation up to the completion of Testing & Commissioning of all the plant's equipment. With a vision of improving future operational procedures of the plant in order to meet the needs and expectations of Macao and harnessing the protection its environment.