

21st November 2018

To Whom it May Concern

Heal Group of Companies has been in the Water, Waste Water, Solid Waste and general environmental consulting since 1984 and over the years has been involved in the design and manufacture of many systems in all the fields listed above.

In the 1990's Heal Manufacturing Co. Pty., Ltd manufactured among other things Rotating Biological Contactor (RBC) as secondary treatment for sewage treatment systems. We stopped doing this, both with escalating Australian Labour costs and the lessening popularity of RBC systems that were considered mechanical trickling filters that did not match Extended Aeration or the then growing Membrane Biological Reactor (MBR) systems that promised a great deal with effluent standards.

With a much greater concentration on energy efficiency and green house gas production and that Heal Group did a lot of work in the Pacific Region where power relates to litres of diesel we again turned to simpler and more energy efficient forms of treatment and this also was followed through to reinvestigating RBC Systems.

Historically these had a middle range effluent standard, Biological Oxygen Demand of around 25.0 mg/l and Suspended Solids of 40.0 mg/l and most base effluents required were BOD 20.0 mg/l and SS 30.0 mg/l.

In late 2014 Heal Group made first contact with Hürriyet Aydoğan and PlanetTEK and since then built up a good rapport, both a personal and professional level. We have used their equipment and have added this into our design philosophy to develop a cost effective and energy efficient system of treatment. This involves some modification to standard RBS systems but by example one our most recent system for Boarder Force for the Australian Government we are achieving effluents sometimes of BOD 10.0 mg/l and Suspended Solids of 15.0 mg/l but generally BOD 15.0 mg/l and Suspended Solids of 20.0 mg/l that more than meets effluent standards.

This is adapting by sufficient disc area and recirculation to allow removal of Carbon (BOD) and Nitrification, conversion of ammonia to nitrates and the conversion of Nitrate into nitrogen and water by prudent design and recirculation at equal to or better that half average dry weather flow. We also maintain strict de-sludging not based on volume but BOD transfer from primary to secondary treatment.

The resultant treatment has matched or bettered our expectations and we were pleasantly surprised at the results and the low energy input that this was achieved. The Boarder Force facility releases into a stream governed by CEPA Reg. 2002 Guidelines on discharge limits for the protection of Marine/Aquatic Life. Here steam health rather than absolute effluent standards is monitored and require compliance. The PlanetTEK/Heal System meets these requirements and exceeds.

We are given to understand that PlanetTEK are looking to use their RBC Technology in Azerbaijan and this is an area in which Heal Group has work in the past, both in Baku and Primorsk and the equipment offered with correct engineering to suit the individual proposed sites would work well in this environment.

RBC technology has advance from being a simple mechanical biological filter and well-engineered with stable conditions with and good operation will be an economical and energy efficient means of sewage treatment.

It is also well suited for both regional and remote systems and Heal Group is happy to be associate with Hürriyet and PlanetTEK and hopes that this association will continue for many years.



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All facets of water, waste water & solid waste equipment