

Hydro Power using Waste Water at Esholt WwTW

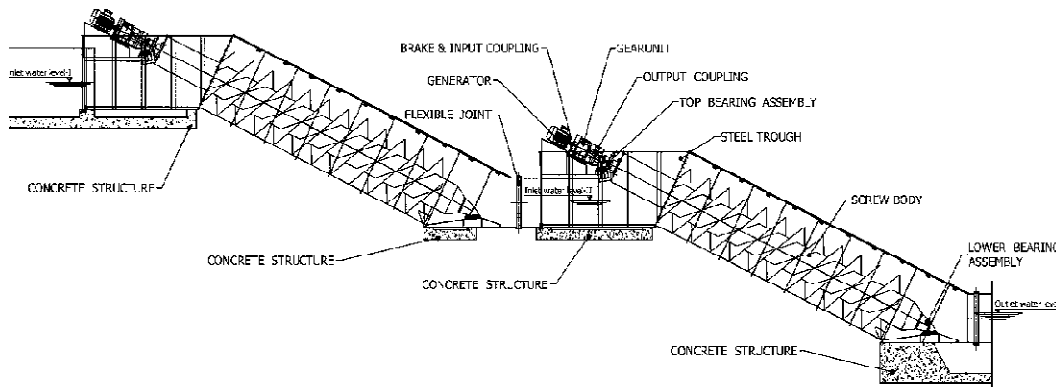
The Spaans Babcock Screw Generators are switched on at Yorkshire Water June 2009. Following a short and successful commissioning period the generators are now running 24/7 to provide up to 180kw of renewable energy into the grid system reducing site running costs.



Technical Data

Flow up to 2678 l/s.
 Head 8.2m.
 Installed Power 2 x 110 kw.
 Diameter = 2.6m.
 Screw Length = 14m each.
 Total Weight = 64 Tons.
 Medium = Screened Waste Water.
 Output Max = 175kw.

Two Archimedean screws are installed in series, each with a capacity of 90kw. The flow is fed from the inlet works upstream of the generators via an intake / bypass chamber with fast acting hydraulic weir gates and an overflow bypass facility.



The flow passes through each turbine in turn and exits on its way for further treatment. Each generator is controlled using an ABB regenerative drive unit to control speed and output to the grid. The Spaans Babcock Archimedean Screw Equipment which is already familiar to Yorkshire Water for over 40 years of providing Screw Pumps, helps Yorkshire Water towards its goals of reducing its Carbon Footprint through commitment to renewable energy sources.

This robust and low maintenance solution offers longevity for generation for all types of water flow on low head applications with reasonable flow.

Similar Spaans Babcock equipment is being used on other schemes such as “River Weirs” for harnessing power for local areas or grid connection. From 1kw to several hundred kw Spaans Babcock can supply anything from a single high quality screw generator to a full Turn Key solution for hydro power generation.

The fish friendly design of the screw helps with Environment Agency approval for use on river weirs. The relatively low cost, low maintenance, good efficiencies and no need for fine screens makes the equipment suitable for many low head applications where costs can be kept to a minimum.

Please see online at www.spaansbabcock.com for further literature and information on this and our other products.