

Raw water pumps for Nigeria

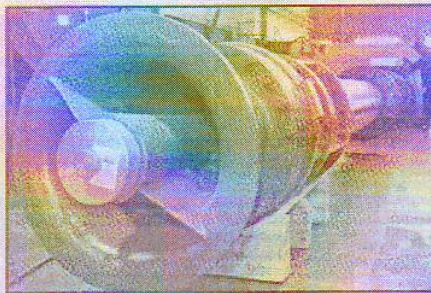
APE Pumps has shipped two vertical turbine pumps for installation in a high-volume raw water transfer application in Nigeria.

Designed as single-stage pumps each with an under-floor discharge volume of 4000m³/h at a head of 25m, the pumps will be installed in an existing pumphouse and connected directly to a pipeline feeding adjacent water treatment works.

The value of the order excluding electric motors is in excess of R1-million.

Besides raw water supply applications such as that of the Nigerian export order, vertical turbine designs are used in steel works and chemical process plants, in effluent disposal and cooling water circulation applications, for irrigation, mine de-watering, pipeline booster and transfer service, and in condensate extraction.

These pumps have several advantages over other designs. Civil works



to accommodate them are simpler and cheaper, and the pumps can be suspended in wet sumps, boreholes, rivers, steel tanks or dams, in dry pits with a suction pipe connected to the bellmouth, or as "pot" pumps with various positions of the inlet and outlet branches.

There is no necessity for a pumphouse if weather-proof motors are used, and no danger of flooding electric motors which are mounted above the discharge.

Mechanically, the pumps have a generally non-overloading kW characteristic and a steep head-quantity curve. The absence of a suction valve reduces pressure loss, while bearings and glands last longer because there are no radial loads on them.

By adding stages to the pump, a very wide range of duties can be covered with standard parts, reducing the spares stockholding needed for maintenance.

In raw water applications such as the Nigerian installation, the grit in dirty water tends to fall vertically out of wear areas, causing less damage.

Materials of manufacture for APE vertical turbine pumps are selected from a number of standard variations to suit the application.

Casings for the Nigerian units were made from a high quality close-grained cast iron. Shafts were made of stainless steel, while bronze was used for the impellers.

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