

ANCILLARY EQUIPMENT



PURPOSE

- ◆ In addition of our standard screening equipment, BEAUDREY proposes also the ancillaries essential for the normal operation of BEAUDREY's machines
 - ◇ Washing circuit: pumps, piping and valves
 - ◇ Cathodic protection, be it anodes or impressed current
 - ◇ Control panels
- ◆ These equipment are supplied from international recognized vendors/suppliers

WASHING CIRCUIT FOR ROTATING SCREENS

Band Screen and Drum screens need a specific washing circuit for the water supply to the spray nozzles. Water pressure requirement is around 3.0 barg to ensure an efficient cleaning of the panels.

Thus, BEAUDREY can support you in the supply of the following equipment:

Pumps

- ◆ Centrifugal horizontal booster pump
- ◆ Vertical sump pump
- ◆ Submersible pump

Material: cast iron, SS 316, Duplex, Super Duplex or Copper Nickel

Piping

- ◆ Standards: ASTM, DIN, API
- ◆ Diameter: from DN 50 to DN 300

Material: Stainless Steel, HDPE, PVC or GRP

Valves

- ◆ Type: any types (butterfly, ball, gate, etc) manual or motorized



BEAUDREY ELECTRICAL CONTROL CABINETS FOR AUTOMATIC OPERATION

BEAUDREY supplies and installs the necessary control cabinets for its supply. BEAUDREY can meet any customer-imposed standard for instruments, computers and switchgear.

Control Cabinet:

Control can be achieved using one of the following systems:

- ◆ All relay: this is suited for very simple plants and little available specialist maintenance.
- ◆ Local PLC: this is well suited to most cases. Care must be taken to shelter the PLC from high temperatures. The choice of makes and types of PLC is large and prices soar when sophistication increases. Such sophistication is generally not necessary in the case of screens.
- ◆ DCS control: this avoids using a local PLC in most cases. The cost of the control hardware is reduced but owing to possible misunderstanding between the DCS programmer and our requirements, the duration and cost of commissioning may be high.

2. Low Voltage Switch Gear:

BEAUDREY can either supply control cabinets that included the power control in a separate compartment or the MCC in a separate cabinet.

The size and the cost of the MCC depends very much on the customer's electrical specification (fixed circuit breakers or withdrawable type, etc.). The variable frequency drives for the motors are generally part of the MCC. As for the control part, BEAUDREY can assist in specifying the minimum, necessary equipment.



CATHODIC PROTECTION

Depending on the type of water the corrosion prevention means, BEAUDREY can provide cathodic protection solutions :

- ◆ Aluminum anodes
- ◆ Impressed current



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www.beaudrey.com/contact

TRASH BASKETS



- ◆ The wash-water and debris from the screens run in a deck flume and reach the debris collection zone. Two solutions are possible
- ◆ The water falls into a perforated basket; the debris are retained in the basket and the water flows out to be discharged into the sea or river
- ◆ BEAUDREY can supply standard baskets that are emptied either by being tilted or via a door on one side
- ◆ The basket design should be decided to accommodate the needs of the contractor in charge of disposing of the trash
- ◆ Another solution consists in installing a mechanical separator that removes the debris from the water and downloads them into a nearby basket

DIFFERENTIAL LEVEL MEASURING SYSTEMS



Cleaning screens and filters is controlled in three manners:

- ◆ Operator: The operator manually initiates a cleaning cycle
- ◆ Timer: A timer starts a cleaning cycle periodically. The periodicity is preset and generally adjustable
- ◆ Head-loss: The head-loss of any screen or filter increases as more debris are arrested and more mesh surface is obstructed.

Safe operation requires that when the head-loss reaches a preset value, the cleaning cycle starts and carries on for a minimum period of time or until the head-loss has dropped back to machine values



is started
clean

There are two main cases for BEAUDREY's equipment:

- ◆ Gravity-fed screens (trash rakes, travelling band screens, drum screens, WIPs etc.); The head-loss is measured as the level difference between the water surfaces upstream and downstream. Various systems are available:
 - ◇ Float and pneumatic types which are now obsolete
 - ◇ Ultrasonic or radar types which have the advantage of not being in contact with the water
 - ◇ Piezometric systems for which the sensors are immersed and require regular cleaning. To be used only when the previous systems do not fit
- ◆ For pressure-line filters, self-cleaning strainers, debris filters and tube-cleaning systems the head-loss is measured as the difference in pressure between the upstream side and the downstream side of the machine

In practice, it is always done using a differential pressure membrane pressostat