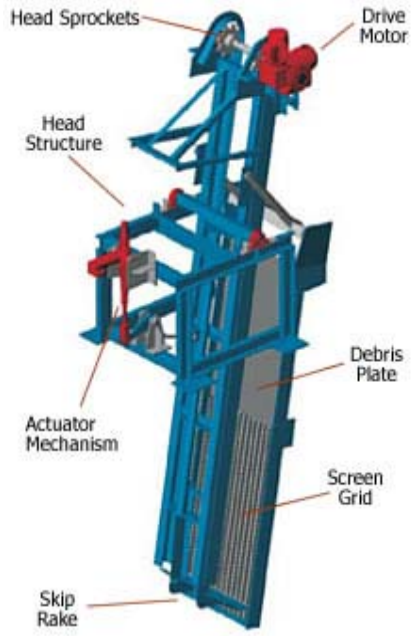
ADAMS

POWER ENGAGED BAR SCREEN

HYDRAULICS

SCREENING EQUIPMENT

- **Automatic skip withdrawal and re-engagement is achieved if an immovable object is encountered on the upward stroke.**
- **Automatic repeat of obstructed engagement stroke if full engagement is prevented by exceptionally heavy debris.**
- **Actuating mechanisms are above flows.**
- **Long reach skip keeps chain out of normal flows.**
- **Bar spacings down to 10mm.**
- **Quiet operation of screen as the skip is engaged with the screen bars under control and not allowed to drop into mesh with grid bars as is the case with gravity types of bar screen.**
- **No wash water required.**



Screen control sequence ensures that the raking carriage will always park above top water level when the screen is not in operation, and the actuator stops in the retracted position.

Debris is cleared from the screen grid by a chain operated rake travelling up the intake face of the grid. The front edge of the skip is fitted with replaceable tine plates which project into the grid. The rake is raised and lowered by two conveyor chains within the skip. A current sensing overload protection device within the control panel can be used to protect the mechanism during both the 'up' and 'down' movements of the skip.

Guides for the rake are attached to the supporting structure, their position relative to the screen grid is controlled by an actuator attached to a structure spanning the chamber upstream of the screen. For installation in deep chambers the guides can be pivoted at a suitable position below floor level but above top water level reducing the loading on the guide control mechanism. On the downward travel of the rake, the control mechanism is operated and the guides are swung clear of any debris on the face of the grid. At the bottom of the rake travel (underwater) the mechanism is operated swinging the guides back towards the screen grid forcing the tines of the rake into the spaces between the grid bars. This ensures positive engagement of the tines with the grid without relying on the weight of the skip.

If the rake contacts a rigid obstruction during its upward travel, the power demand of the drive motor will rise and the surge will be sensed to signal the actuator to withdraw the tines from the grid. When the resistance to movement of the rake is lower than the power available from the motor, the movement of the rake will continue, if this occurs before the tines have cleared the obstruction, part of the debris will be cut away by the ends of the tines. Any unusual obstruction as the tines are pushed into the grid will signal the screen motor to start and hoist the rake clear of the obstruction. The sensing devices are provided with adjustable time delays before cutting out an overload. If this method of protection does not clear the obstruction within the preset delay the screen should cut out and the appropriate overload lamp on the panel illuminates.

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