ABEL SH
From the reciprocating positive displacement pump specialist

Solids Handling Pumps for difficult media at high pressure
ABEL SH SOLIDS HANDLING PUMPS span a wide performance range and are suited for a large number of pumping media and applications. These high pressure pumps really prove their worth when extremely abrasive, paste-like and compact media (e.g. dewatered sewage sludge) or mine tailings with high solids content have to be conveyed safely at high pressure.

At ABEL, this high-capacity pump has extra wall thickness and large suction valves, which, when combined with the very good filling efficiency, produce a service life that is longer than the norm.

Along with the actual pump unit (consisting of sludge, hydraulic main and valve cylinders) an ABEL SH solids handling pump comprises a total of four components: the actual pump, the hydraulic drive unit, a screw feeder for sticky media to fill the product cylinder, and a control cabinet with PLC.

The programmable logic controller is the “brain” of the system and allows for integration with complex processes and control room systems.

ABEL SH - Performance range:
up to 200 m³/h (880 GPM); up to 16.0 MPa (2,300 psi)

Original ABEL spare parts ensure availability of your installation
Applications of the ABEL SH

- For the transfer of dewatered sludge or filter cakes from
  - Industry and municipalities
  - Centrifuges, chamber filter presses, vacuum presses, and belt presses
- Feeding incinerators with dewatered and pre-dried sludge, hazardous waste, chemical residues, and solvents
- In mining, for backfilling and transporting paste-like mine slurry

Available with ATEX certification.

The SH pump: For highly abrasive, paste like and sticky media - at high pressure

The Design Advantages

- Duplex piston pump with hydraulically-actuated cone valves – short-circuit free, even at high pressures
- Cone valves with elongated valve rods – safe protection against cross-contamination of the hydraulic circuit with the pumped media
- Electrical pump control as standard with modern PLC for local or external parameters, e.g. incinerator temperature control
- Capable of running dry
- Enclosed pipeline transfer
- Fully automatic, efficient disposal and feed operations
Complete Automation with PLC for Central Control Systems

The “brain” of the unit (control cabinet with PLC) controls the integration into complex processes and central control rooms. Various external control parameters like incinerator temperature or silo filling levels can be used as input signals for the PLC.

The capacities of pump and feed device are automatically adjusted to ensure a maximum operational efficiency. ABEL has supplied numerous custom made systems to fulfill the critical needs of customers.

The pump for extreme tasks in mining

Low-pulsation transfer of viscous slurries

While pulsations are no object when pumping sticky sludges high pulsations can be expected when transferring viscous slurries without appropriate measurements.

For backfilling in mines tailings are mixed with binders (e.g. cement) and are then pumped underground using heavy duty pumps.

To avoid the pulsations when pumping such media the two pump cylinders work with different speeds. Furthermore a special, independent valve cylinder control ensures smooth change-over at the end of each piston stroke.
For solids concentration up to 35 %

Typical application of an ABEL SH pump: Transfer of dewatered sewage sludge, here on a waste water treatment plant in Belgium

ABEL SH for Temperatures up to 200 °C (400 °F)

High temperature design of an ABEL SH as reactor feed pump for highly heated biomass

Individually actuated, separately cooled cone valves
Additional air cooler for the hydraulic buffer fluid
Tangential blowers to cool valve cylinders
Diaphragm Pumps
Solids Handling Pumps
High Pressure Pumps
Marine Pumps

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