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APPLY

a MORELD
company

Shaker Screen Washer SSW-1

APPLY's automatic screen washer has improved solids control and increased life-time of its vibrating screens which are used by shale shakers for mud cleaning in the oil drilling industry. It is also designed to wash HVAC filter screens which are used in the shaker ventilation hoods above the shakers, and in HVAC scrubbers. This washing machine is a proven product used by a variety of customers over the last 10 years and is under continuous improvement based on offshore application experience. The screen washer has adapters to fit screens from all major shale shaker suppliers, e.g., NOV Brandt, Derrick, Axiom, MI Swaco, Fluid Systems, and others.

The unit is delivered as a compact stand-alone cabinet, for installation in a shale shaker room defined as hazardous zone 1, complete with internal control system. The washer may also be delivered with lance for use as a HP Washer in its vicinity.

The SSW-1 is delivered with low footprint and the hot water reservoir on its top. Variations of the machine may be requested, to fit customer specific requirements. The SSW-2 is modular and designed to be installed via standard doors.



The SSW-1 consists of the following main items:

1. Enclosed washing section with door
2. Two internal reciprocating arms, each with several water spraying nozzles for high pressure cleaning of the screen from both sides.
3. High pressure electrical piston pump
4. Water reservoir with electric heater.
5. Pneumatic valve cabinet, for powering the water valves and reciprocating washing arms.
6. Control panel with internal PLC for automatic control of user selectable washing sequences.
7. Operator panel.



A wobble plate pump with 5 robust diaphragms powers the washing nozzles with high pressure hot or cold water, including optional base oil, from external source or internal tank. The pump is driven by an electric motor and secured by a pressure control valve.

A water reservoir with electric water heater is located on top of the screen washer. The screen washer has a better performance and faster washing cycle when hot water is used. The capacity of the hot water tank is enough for 2 minutes continued use.



The screen washer is supplied with a quick connector for use with a handheld lance for manual washing operations, for example to clean the shale shakers internally when the screens are removed.

Dual function water/ air spraying nozzles are installed on two arms, on opposite sides of the screen, and each arm driven up and down by a pneumatic belt drive. Cold and hot water cycles alternate with a drying cycle at the end.



A simple and intuitive operator panel is used to start and stop the washing cycle, when the door is properly closed, and a door switch is activated. One green lamp is used to indicate operation is running, one red lamp is used for alarm, and one yellow lamp is blinking when the water heater is on, and steady when the reservoir is hot. A program selector and function switch is used to select washing cycles. Not shown are key switches for resetting alarm and disabling of the heater.

TECHNICAL SPECIFICATION

- Footprint: W=1325 mm x D=1165 mm
- Height: 2500 mm
- Weight dry: 1170kg, with fluids 1410kg
- Unit built by stainless steel AISI 316 L, and supported by 4 legs
- Ambient temperature 0- 45 degrC
- Degree of protection IP65
- Atex certified for use in hazardous zone 1, Ex 2 G IIB T3
- Electric supply 3-phase 400-690V/ 50-60Hz, max 63A
- Water supply ANSI 1" #150, 30 litre/min, inlet pressure 2-8bar
- Water drain ANSI 4" #150, 30 litre/min
- Air supply ANSI 1" #150, 230 litre/min, 6-10 bar
- Internal water reservoir 235 litre
- Water heater 26kW
- Water pump 30 litre/min, max 160bar, electric motor 17kW, 1174 RPM
- Declaration of Conformity according to CE Machinery Directive , 2006/42/EC and Norsok S-005 Working environment
- Noise 72dB(A) (1m) pressure level
- Electrical installations according to NEK 400 for low voltage plants, NEK 410 for maritime electrical installations, and NEK 420 for hazardous areas
- Delivered with PLC based controlled system, and typically 3 washing and drying programs, from 75 to 120 sec cycle time
- Powered equipment by electrical motors:
 - High pressure wobble pump
- Instrumentation: Water level switch, water thermostats High and High- High, air pressure switch, oil level switches for water pump, door switch, temperature gauges, pressure gauges, drain water reservoir float switch