

ACS-IV-300 Auto density control mixing skid

1. Overview

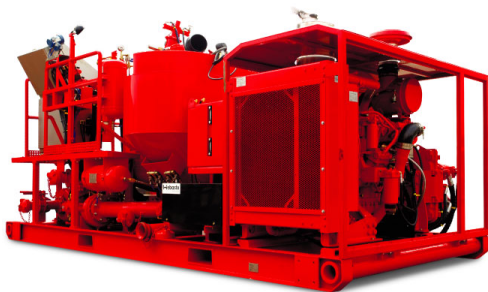
ACS-IV-300 Mixing skid adopts ACM-IV.1 auto density control system which can realize full-auto control of density and liquid level so as to make the density feedback and control more prompt and accurate. Meanwhile, optimize software design according to working habits in oilfield which greatly simplifies the operation.

2. General specification

Engine power: 300HP@2500RPM
Mixing capability: 0.3-2.3 m³/min
Mixing tank volume: 1.2 m³
Averaging tank volume: 3.2m³
Density range: 1.3-2.5 g/cm³
Auto control precision: +/-0.02 g/cm³
Working ambient temperature: -20°C-50 °C
Overall dimension: 4500 (L) x2500(W)x 3000(H)
Net weight: 6,500 kg

Configuration

Engine: caterpillar C7 300HP@2200RPM
Gear box: Funk 59000 series
Slurry Recirculating pump: Serva RA56
Booster/transfer pump: Serva RA56
Mixing Water pump: Serva 4X3
Mixing system: high energy mixing system
Control system: ACM-IV.1 liquid level/density auto control system
Mixing tank volume: 1.2m³
Average tank volume: 3.2m³



3. Features

- 300HP diesel engine, sufficient power for high energy mixing system.
- Advanced high energy mixing technology. By the first mixing in high energy mixer, recirculating between recirculation pump and mixing tank, and blending of agitators, it can ensure the stable quality of slurry.
- Adopts ACM-IV.1 mixing system to realize automatic control of water, bulk, density and mixing tank liquid level.
- 3.2m³ average tank, by which slurry can acquire enough holding time for mixing more evenly and a small batch mixing with Max. capacity of 4.5 m³.
- New off-center dry cement valve avoids bulk cement from choking.
- F300 non-radioactive densitometer is easy to wash, safe and reliable.
- Dedicated booster/transfer pump, priming the triplex pump to increase volume efficiency.
- Simple user interface and simple operation, suitable for working habits in oil field.

ACM-IV Auto density control system

The Automatic Cement Mixer ("ACM IV") with the Density and Tub Level Control is designed to meet the highest specifications for High Energy Recirculating Mixing with the aid of the latest Computer Control Technology. The ACM density and tub level control systems consists of two interactive parts. The first part that controls density consists of four component groups that work interactively together to produce a consistent quality blend of cement and a wide range of slurry densities. They are: 1) high energy mixer, 2) bulk cement metering valve and 3) density control computer and 4) densitometer. The second part controls the tub level function and consists of: 1) level sensor, 2) proportional control valve, 3) water control actuator and 4) position sensor. These devices interact with the control computer to automatically control the mixing rate to maintain a stable tub level. The tub level system works similarly to the density control system in that it calculates a calibration factor for the water metering valve. It calculates what the water rate should be to maintain or correct the tub level and then positions the water metering valve to a position based on its current calibration.

