

PCS-522B Offshore (Zone-II) double pump cementing skid

1. Overview

With the rising safety requirements of international and domestic regulations for working at potential hazardous area, especially in the last recent years, many international oil companies require service companies or manufacturers to provide the oil equipments working under Zone-II environment. During the actual oil drilling operation, particularly on offshore drilling platform, the equipment is unavoidable to be in this hazardous environment because of the restriction of site and installation.

To meet the requirements of international and domestic market, PCS-522B Offshore Explosion-proof Cementing Skid is the newly developed cementing equipment which can work under Zone-II environment.

TPD600 or TPH400 plunger pump can be selected according to different operating conditions and operation habit.

2. General specification (TPH400 pump)

- Max. pressure: 95.2MPa (14,000Psi, W/4" fluid end)
- Max. flow: 3.04m³/min (W/tow 4'2" fluid end)
- Density range: 1.3-2.5g/cm³
- Auto control precision: +/-0.02 g/cm³
- Mixing capacity: 0.3-2.3m³/min
- Working ambient temperature: -20°C-50°C
- Overall dimension (mm): 8000(L) x 2600(W) x 3100(H)
- Net weight: 27,000kg

3. Engine explosion-proof

1. Choose mechanical fuel supply diesel engine 3406C; according to the characteristics of offshore platform, adopt air control method to operate engine, such as: air start, air control throttle operation, shutdown, etc.
2. Water cooled exhaust manifolds and turbocharger, water cooled flexible pipe; Designed to ensure the surface temperature below T3 (200°C)
3. Crankcase breather with integral flame trap, avoid hazardous air entering into engine.
4. Stainless steel spark arrestor and flame trapper. Stop hot carbon particles exiting the system and prevent flames reaching atmosphere.
5. Anti-static fan and belt, avoid causing static electricity during operation.
6. Pyroban 3GP engine monitor system, to give the automatic shut down of both intake air and fuel in the event of: over speed, over temperature and flammable gas in the atmosphere.
7. Other accessories: Flameproof EExd category 2G alternator, Ex d e II T4 increased safety deep discharge battery pack.

4. Electrical explosion protection

1. All non-explosion-proof electrical components are installed in "Positive pressure" explosion-proof console, so it is applicable for operating conditions in ZoneII.
2. The components outside the control console, such as external transducer, electromagnetic valve, etc. meet the requirement of Zone-II explosion-proof.

5. Authorization

The whole unit can be offered with explosion-proof certificate of domestic and international certificate authority.

