

Package No: 0482-MI20-94PO-9912

Package Name: **PROGRESSIVE CAVITY PUMPS**

Scope of Work Listed below are the Progressive Cavity Pumps to be utilized on various application as mentioned:

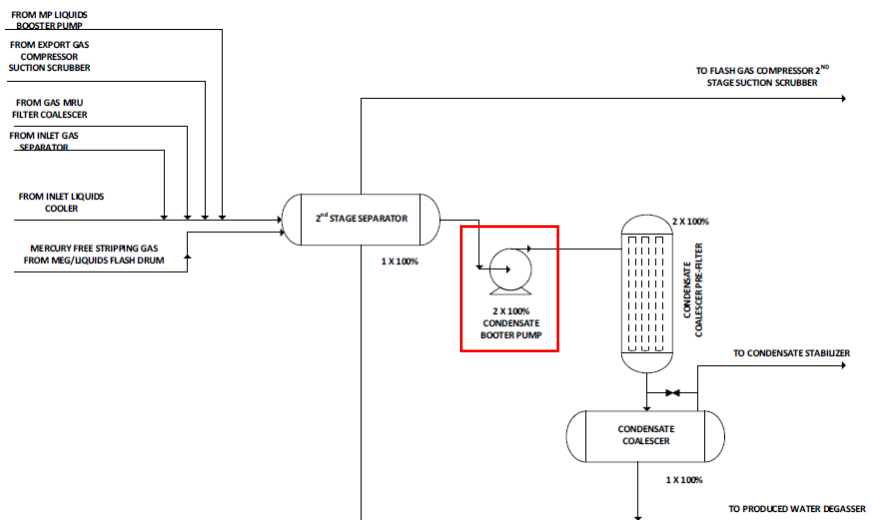
TAG NUMBER	SERVICE	SYSTEM LOCATION
PBA-1311AB	Condensate Booster Pump (88 m3/hr @ 38 meters)	Condensate Separation System
PBA-1356AB	MP Liquids Booster Pump (47.3 m3/hr @ 241 meters)	Liquid Receiver System
PBE-3015AB	HP Flare KO Drum Pump (30 m3/hr @ 25 meters)	Flare and Vent System
PBE-3025AB	LP Flare KO Drum Pump (30 m3/hr @ 25 meters)	Flare and Vent System
PBE-3415AB	Close Drain Drum Pump (30 m3/hr @ 14 meters)	Close Drain System

Refer to below for Process Description of each system

Condensate Separation System

The purpose of the Condensate Separation System is to separate the produced water from the condensate and in order to meet the condensate specification: BS&W (Basic Sediment and Water) maximum content 0.3%. The Condensate Separation System consists of the following components:

- 1 x 100% 2nd Stage Separator
- **2 x 100% Condensate Booster Pump (PBA-1311AB) – 88m3/hr per pump**
- 2 x 100% Condensate Coalescer Pre-Filer
- 1 x 100% Condensate Coalescer



Liquids from the Inlet Liquids Cooler (at ~ 32 barg and 50°C) is combined with various liquid streams (from MP Liquids Booster Pump – recycled from lower pressure systems, Gas MRU Filter Coalescer, Inlet Gas Separator, Export Gas Compressor Suction Scrubber, Fuel Gas Scrubber). The combined liquid stream is sent to the 2nd Stage Separator where gas is flashed off and bulk produced water is separated from the condensate. The condensate is boosted in pressure via the Condensate Booster Pump to the Condensate Coalescer Pre-Filter and then to the Condensate Coalescer where water is

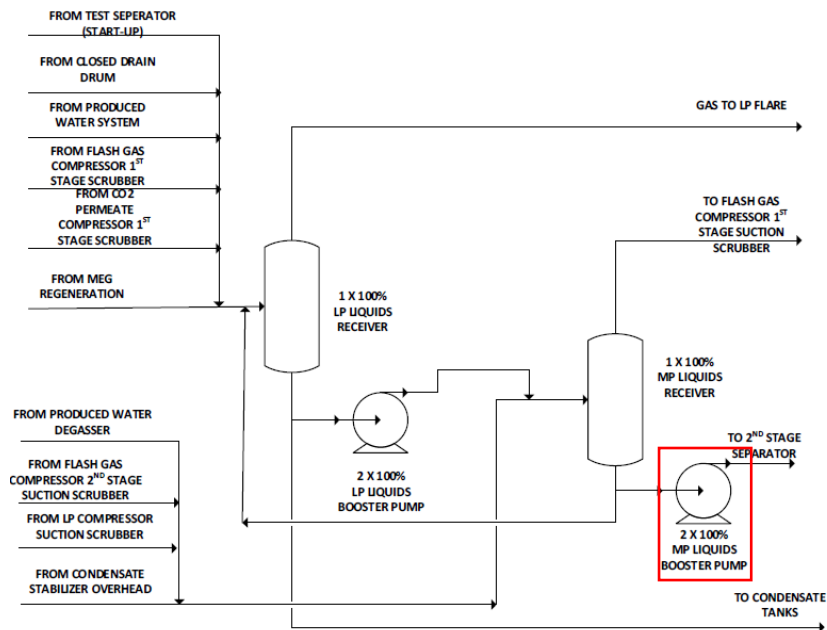
further removed to meet the condensate design specification. The treated condensate stream is sent to the top section of the Condensate Stabilizer to be stabilized. The produced water separated from the 2nd Stage Separator and the Condensate Coalescer are combined and sent to the Produced Water Degasser for treatment.

A Condensate Booster Pump is provided to avoid two-phase flow in the vertical line to the top section of the Stabilization column.

Liquid Receiver System

The purpose of the Liquids Receiver System is to recover the hydrocarbon liquids from the low pressure systems and recycle back to the process. The two-stage Liquids Receiver System also functions as a back-up condensate stabilization system via staged flashing to near atmospheric pressure before the partial stabilized condensate is sent to the hull condensate tanks. The system also facilitates start-up via the Test Separator. The Liquids Receiver System consists of the following components:

- 1 x 100% MP Liquids Receiver
- **2 x 100% MP Liquids Booster Pump (PBA-1356AB)– 47.3m³/hr per pump**
- 1 x 100% LP Liquids Receiver
- 2 x 100% LP Liquids Booster Pump



Flare and Vent System

The Flare / Vent System provide safe egress of hydrocarbon fluids that are relieved from process equipment and/or from PSVs, BDVs, and PCVs/ PVs during start-up and/or process upset conditions.

The flare system consists of a HP Flare System and a LP Flare System. A separate vent system is provided for the hull storage tanks.

- The HP Flare System collects PSVs, BDVs, and PCVs/ PVs discharges from 20 barg and above systems.
- The LP Flare System collects PSVs, BDVs, and PCVs/ PVs discharges from systems below 20 barg. The LP Flare System is also an acid gas flare system which is designed to handle relief fluids with high CO₂ content.

The Flare and Vent System consists of the following components:

- 1 x 100% HP Flare KO Drum
- **2 x 100% HP Flare KO Drum Pumps (PBE-3015AB) – 30m³/hr per pump**

- 1 x 100% LP Flare KO Drum
- **2 x 100% LP Flare KO Drum Pumps (PBE-3025AB) – 30m3/hr per pump**
- 1 x 100% Flare Tower
- 1 x 100% HP Flare Tip
- 1 x 100% LP Flare Tip
- 1 x 100% Flare Ignition Panel
- 1 x 100% Manual Flame Front Generator
- Propane Rack

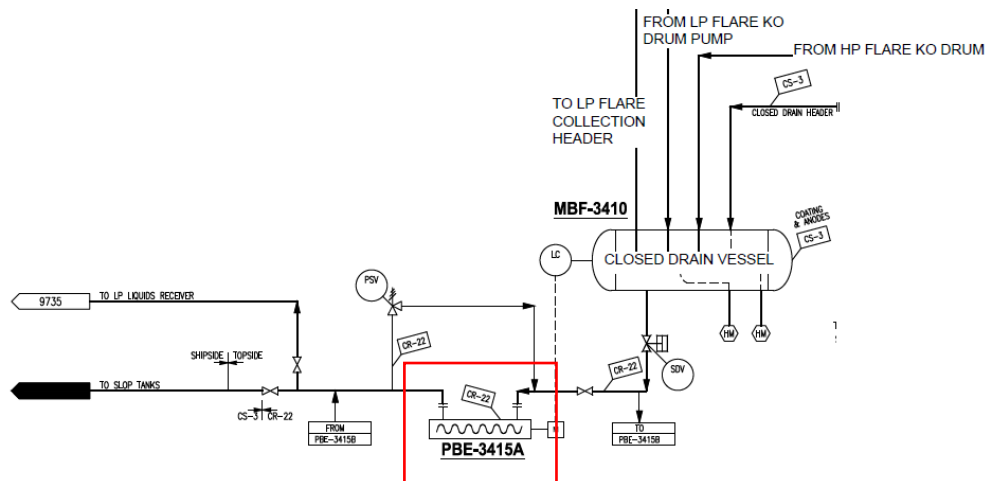
Close Drain System

A permanently connected closed drain system is provided to collect hydrocarbons from the process pressure vessels and equipment on topside modules. Closed drain piping shall be without pockets routed to the Closed Drain Vessel. The closed drain system is associated with the intermittent collection of hydrocarbon liquids from process vessels depressurized for maintenance, during blowdown or upset condition.

The Closed Drain System consists of the following components:

- 1 x 100% Closed Drain Vessel
- **2 x 100% Closed Drain Vessel Pumps (PBE-3415AB) – 30m3/hr per pump**

The Closed Drain Vessel is sized for the largest liquid inventory to be drained. The liquids collected in the Closed Drain Vessel will be transferred to the Slop Tanks in the hull via the Closed Drain Vessel Pump. Flashed gases are sent to the LP Flare.



- Contract Award Q3 2020; Delivery Q2 2021 all units

Project Registration

ConocoPhillips is committed to ensuring Australian Industry full, fair and reasonable opportunity to participate in the Barossa Offshore Project. Expressions of Interest are invited from contractors and suppliers with the relevant capability and capacity to undertake the scope of work.

This is a request for specific expressions of interest. Contractors and suppliers will be considered for prequalification and tender if suitably qualified against this package.

Note that an important part of the project registration process is to register an Expression of Interest at the correct Scope level.

Scope level definition:

Full scope: Able to produce / supply the entire package.

Partial scope: Able to produce / supply one or more of the sub-packages.

All registrations are to be completed via ICN Gateway BarossaOffshore.icn.org.au. Please contact the ICNNT if registration assistance is required. Contact details: (08) 8922 9422 or admin@icnnt.org.au.

Project

Website: ConocoPhillips Australia