



Particular & Technical Specifications

12" [300 mm] Diesel Booster Station

Model BO-4250D

Preliminary Specifications

General

| | | |
|----------------|--------|---------|
| Overall length | 18'-6" | [5.6 m] |
| Overall width | 8'-3" | [2.5 m] |


Dredge Pump

The dredge pump proposed is a skid mounted pump. The pump slurry piping will have a 12" [300 mm] suction diameter and a 12" [300 mm] discharge. The impeller diameter will be 32" (813 mm) and supplied with three (3) vanes.

Dredge Pump Drive

The dredge pump drive features marine style reduction gear and an elastomer coupling.

Dredge Pump Prime Mover

 model C13 ACERT Tier 4 Final diesel engine rated 440 bhp [328 kW] and complete with residential grade silencer. The engine package features Caterpillar premium gages, alarms, and shutdown systems. Engine is radiator cooled.

Service Water Pump

The service water pump's primary use is for the dredge pump packing gland. The service water pump will also be used as the source for the raw water wash down system and the dredge pump transmission cooling system. The service water pump is of the centrifugal design with a single open end suction protected by a strainer. The service water pump will be supplied with a 2 ½" [65 mm] suction x 2" [50 mm] discharge.

Safety

Equipment guards are provided for the safety of the crew and for compliance to DSC strict building codes. The booster station will be equipped with a fire extinguisher.

Electrical System

- ❑ 24 VDC for starting, convenience lighting, and controls
- ❑ Two 1000 cold cranking amp batteries
- ❑ 60 amp alternator

Additional Features

- ❑ Operating pressure gauges
- ❑ Wash-down system
- ❑ Skid pulling eyes

Booster Automation

The booster control package consists of a PLC, touch screen operator interface, transmitters and enclosure with mounting brackets. The sensors that will be supplied are discharge pressure, inlet pressure, and service water pressure. The booster panel will have start/stop switches for the main pump and service water pump. The panel also has a booster mode switch and a touch screen. The touch screen will display data, alarms and it allows the operator to change control and alarm set points. The booster has an auto and manual mode. The auto mode is controlled off the inlet pressure and discharge pressure and the manual mode allows you to control the booster manually.

Coatings

Non-immersion:

1. Blast all steel SSPC-SP6. Blast to achieve 1- to 2- mils profile as determined with a surface profile comparator
2. First coat; 2-4 mils (dry film thickness) Oxide red epoxy
3. Second coat; 4-6 mils (dry film thickness) Pearl Grey epoxy
4. Finish coat; 2 mils (dry film thickness) polyurethane

Engine room and equipment skids:

1. Blast all steel SSPC-SP6. Blast to achieve 1- to 2- mils profile as determined with a surface profile comparator
2. First coat; 1-3 mils (dry film thickness) Oxide red epoxy
3. Second coat; 4-6 mils (dry film thickness) Pearl Gray epoxy
4. Finish coat: 4-6 mils (dry film thickness) Pearl Gray epoxy

Building Standards

- Manual of Steel Construction by the American Institute of Steel Construction
- Joint Industrial Council Hydraulic Standards
- Structural Welding Code – Steel by the American Welding Society and the American National Standards Institute
- Mining Safety and Health Act
- Occupational Safety and Health Act
- Surface Preparation Specifications Steel Structures Painting Council
- National Electrical Code Handbook

Note: Specifications may change due to continual product improvement

