

DESCRIPTION

This work shall consist of removing, furnishing and installing pump motors and motor starters and controls for the machinery lubrication system in accordance with the contract documents and as directed by the Engineer.

MATERIALS

- A. Shop Drawings.** The Contractor shall submit the following documents:
- a. Manufacturer's shop drawings, catalog cuts, product specifications and certified dimension sheets
 - b. Drawings showing mounting details, dimensions, clearances and shaft connections of motors.

- B. Pump Motors.** The pump motor shall meet Nema Standard MG1, Motors and Generators, and shall have the following ratings and features:

- Horse power: As shown on drawings
- Voltage: 230 volts A.C., 3 phase, 60 cycle
- RPM: 1725
- Service factor: 1.15
- Temperature rating: 40 degrees Celsius – ambient
- Nema design code: B
- Insulation class: F
- Full load efficiency: 81
- Enclosure: Totally-enclosed, non-ventilated (TENV) with electrostatic epoxy coating, moisture sealant on bolt heads and between frame and endplates
- Mount: Base mount
- Shaft: Stainless steel with over-sized ball bearing on locked drive end for minimum shaft movement.

- C. Motor Starters.** The motor starter shall be non-reversing combination starter units including molded case circuit breaker, electrically held contactor and overload protection with auxiliary contacts as required. The primary power circuit to each motor will be via the molded case circuit breaker. All components and control devices shall be enclosed in a Nema type 4X stainless steel enclosure. The contactor rating shall not be less than the horsepower rating of the controlled motor.

CONSTRUCTION DETAILS

This work shall be in accordance with the applicable requirements of the latest edition of the following codes and standards:

1. National Fire Protection Association, National Electrical Code (NEC)
2. New York State Department of Transportation Standard Specifications
3. National Electrical Contractors Association, NECA 1, Standard Practices for Good Workmanship in Electrical Contracting.

ITEM 599.2103 10 M - MACHINERY LUBRICATION PUMP MOTORS - NB BRIDGE

Basis of Acceptance

All shop drawings submitted shall follow the general guidelines and procedures given in the New York State Steel Construction Manual. No installation or rehabilitation work may take place until the shop drawings and procedures have been approved by the Engineer.

The work shall include, but not be limited to, the following:

- a. Remove existing motors and properly dispose of away from the construction site.
- b. Furnish mounting as shown in plans.
- c. Install pump motors, and motor starters with control interlocked with the bridge control system.
- d. Adjust and align motors as recommended by the manufacturer and as indicated in plans.
- e. Test operational performance of pump motors to the satisfaction of the Engineer.
- f. Coordinate this work with the other work of the project.

METHOD OF MEASUREMENT

This work will be measured for payment on a lump sum basis.

BASIS OF PAYMENT

The lump sum price bid shall include the cost of furnishing all labor, materials, and equipment necessary to satisfactorily complete the work.