Horizontal Split Case Centrifugal Pumps

General

Furnish a unit built in accordance with the Hydraulic Institute and ANSI Standards. Qty _____ Series 5060 Split Case Pump(s) and special accessories. Pump performance and installation details as follows.

Fluid_____ Temperature ºF _____
Specific _____ Gravity Viscosity _____
U.S. GPM _____ Total Head _____
Motor Voltage _____ Motor Phase _____
Motor Hertz _____ Motor Speed _____
Motor Efficiency _____ Pump Efficiency_____
Other _____

Submittal Data

Provide General Product Bulletin, Performance Curve, and Dimension Print. Maintenance Manual required at time of shipment. Recommended Spare Parts List to be included.

Testing

The following (Witnessed)(Non-Witnessed) test to be performed:

Pump Performance ☐ Routine Motor Test ☐
Hydrostatic - Complete Pump ☐

Exceptions

Any exceptions taken to this specification shall be clearly stated and justification provided.

Pump

Furnish and install, as shown on the plans _____ Deming Fig. _____ Size _____ Horizontally Split Case Double Suction Single Stage Centrifugal Pump(s) each shall be capable of pumping _____ GPM when operating against a total pumping head of _____ feet of (suction lift)(suction pressure) at the temperature, specific gravity and viscosity indicated. The pump shall operate at _____RPM and shall have _____ percent minimum guaranteed efficiency at the design point. Shut off head shall be (clockwise)(counter-clockwise) rotation when viewed from behind the driver end.

Construction Details

The pump casing shall be of extra heavy cast iron, with minimum tensile strength of 30,000 lbs. and shall be split parallel to the shaft. Bearing housing supports, suction and discharge flanges shall be cast, bored and machined integrally with the lower half casing. Upper and lower half casing shall be dowelled and bolted together, removable upper and lower half casing and bearing caps must permit inspection or removal of the entire rotating assembly without disturbing the piping. Flanges shall be (125 lb)(250 lb) ANSI standard.

The impeller shall be of one-piece cast (bronze)(cast iron) of the enclosed, double suction type, accurately machined and balanced to minimize thrust, shall be keyed and axially adjusted on the shaft by means of threaded shaft sleeves. Shaft shall be protected by renewable (bronze) (416 st. stl.)(316 st. stl) shaft sleeves that are threaded and tighten with shaft rotation and are free to expand at the stuffing box end.

Renewable (cast iron)(bronze) casing wearing rings shall be accurately machined and securely mounted in the pump casing. Renewable impeller wearing rings shall be of (bronze)(cast iron) and mounted on the impeller at the suction inlets and held in place with set screws. When tcasing and impeller wearing rings are furnished, they shall be of dissimilar alloy.

Rotating assembly shall be supported by heavy-duty, grease lubricated, cartridge mounted ball bearings. The outboard bearing shall be a double row bearing, locked in position by bearing lock nuts. The inboard bearing shall be single row bearing, free to move axially in the bearing housing. Dual lip seals shall seal the bearing housings against dirt and moisture. Removable bearing caps and bearing covers shall permit inspection or service of the bearings without disturbing the pump casing or piping. Bearing housings shall be designed for grease lubrication. Grease relief shall prevent over-lubrication. When oil lubricated bearings are furnished, constant level oilers shall be mounted on the bearing covers. Stuffing boxes, to seal the pump shaft, shall be located on the shaft center line and include a minimum of five packing rings and a lantern ring in each packing box. Internally drilled liquid passages in upper half casing shall provide lubrication to the packing area through the lantern ring opening. Heavy cast split glands shall be furnished on each stuffing box designed for easy removal for packing inspection and maintenance. Heavy fabricated steel base (with)(without) drip lip to mount the pump and driver shall be furnished. Flexible shaft coupling shall be furnished to connect the driver to the pump. Coupling shall be enclosed in (standard)(OSHA) coupling guard.

Motor

The motor shall be not less than _____ HP _____ RPM, NEMA Design B squirrel cage induction type, (Drip Proof)(TEFC)(Explosion Proof) EISA motor with (1.15)(1.0) service factor and suitable for operation on (200)(208)(230/460)(460)(575) volt, 3 phase, 60 hertz power supply. Motor size shall be sufficient to prevent overloading at operating conditions or at the lowest listed head conditions whichever point requires greater horsepower. Following installation, grouting and connection of all piping, pump and motor must be checked for alignment in accord with standards of the Hydraulic Institute.