End Suction Pumps

General:
The contractor shall furnish and install as shown on the plans, qty _____Deming (horizontal)(close coupled) Series 3110 size _____ centrifugal pump(s) as herein specified.

The pump(s) shall be rated for continuous service and of (all iron)(bronze fitted) construction for the following operating conditions. Each pump shall be capable of delivering _____ GPM of liquid against _____ feet total head. The following characteristics of the liquid to be pumped are:

Liquid Handled _____
Specific Gravity _____
Temperature _____
Viscosity of Liquid at Pumping Temperature _____
$NPSH_A$ _____

NOTE: Add any additional facts concerning the nature of the liquid or installation which might affect the pump construction, application or operation.

Model 3111 Horizontal Frame Mounted:
The design requires a one piece 416 stainless steel shaft rotating on bearings with a 2 year minimum B-10 bearing life and are maintenance free lubed for life design. This is a sleeveless design.

The frame is one piece with a cast integral large taper seal chamber. The John Crane Type 21 single mechanical seal is standard with carbon vs ceramic faces, stainless steel hardware and buna elastomers; various other face materials and elastomers are available depending on the medium being pumped.

Model 3112 Close Coupled:
The Pump is to coupled directly to a Nema _____ HP _____ Phase _____ Hertz _____ Voltage _____ RPM _____ Enclosure _____ motor. The adapter to the casing is to be one piece cast iron construction capable of mounting a John Crane Type 21 mechanical seal. The standard seal construction is carbon vs ceramic faces, stainless steel hardware with buna elastomers; various other face materials and elastomers are available depending on the medium being pumped.

Construction:
Castings shall be of Cast Iron ASTM-A48, Class 30 Cast Iron with tensil strength of 30,000 PSI. Bronze castings will be of ASTM A584. Pump units must be capable of withstanding hydrostatic test pressures of 1½ times maximum working pressure. All assembly points shall be of machine register fit to assure proper pump alignment.

Casing:
The threaded casing nozzles shall conform to ANSI B16.1 and NPT specifications with a minimum 125 PSI ratings. The casings shall also have a tapped drain connection, available for any casing rotatable discharge positions. Back pull out design for maintenance ease and tangential discharge to maintain high efficiency volute designs.

Impeller:
The impeller shall be of the enclosed deisgn, designed for high efficiency while being both statically and hydraulically balanced for smooth operation. The impeller shall also incorporate grooves on the suction nose O.D. to reduce leakage and to permit close running clearances to prevent seizing and collect any particles.

Motor:
The motor shall be not less than _____ hp _____ RPM, NEMA design B squirrel cage type, (drip proof)(TEFC) (EISA)(premium) efficiency motor with (1.15)(1.0) service factor and suitable for operation on (115)(230) volt, 1 phase, (50)(60) Hertz power supply OR (200)(230)(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 accordance with standards of the Hydraulic Institute.