



BID 50-129949
PURCHASE OF EXPLOSION PROOF, SUBMERSIBLE PUMPS FOR
THE DEPARTMENT OF SEWERAGE

March 6, 2020 @ 11:00 A.M.

ATTENTION VENDORS!!!

Please review all pages and respond accordingly, complying with all provisions in the technical specifications and Jefferson Parish Instructions for Bidders and General Terms and Conditions. All bids must be received in the Purchasing Department by the bid due date and time.

Jefferson Parish Purchasing Department
200 Derbigny Street, Suite 4400
Gretna, LA 70053
Please Email Any Questions To:
Mark Buttery
MBUTTERY@JEFFPARISH.NET
504-364-2810

DATE: 2/17/2020

INVITATION TO BID
THIS IS NOT AN ORDER

Page: 1

BID NO.: 50-00129949

JEFFERSON PARISH
PURCHASING DEPARTMENT
P.O. BOX 9
GRETNA, LA. 70054-0009
504-364-2678

VENDOR:

BUYER: MBUTTERY@jeffparish.net

Bids will be received until 11:00 AM, 3/06/2020 via online at www.jeffparishbids.net or by hand delivery, USPS mail or other courier service to Purchasing Department, 200 Derbigny Street (General Government Building), Suite 4400, Gretna, LA 70053. For convenience, bidders may also submit bids in the East Bank Purchasing Department, Suite 404, Jefferson Parish Joseph S. Yenni Building, 1221 Elmwood Park Blvd., Jefferson LA 70123. However, if submitting bids on the day of bid opening, bidders must submit at the West Bank location only.

All bids submitted are subject to these instructions and general conditions and any special conditions and specifications contained herein, all of which are made part of this bid proposal reference. By submitting a bid, vendor agrees to comply with all provisions of Louisiana Law, as well be in compliance with the Jefferson Parish Code of Ordinances, Louisiana Code of Ethics, applicable Jefferson Parish ethical standards and Jefferson Parish Resolution No. 113646 and/or Resolution No. 113647. A copy of these resolutions may be obtained from the Office of the Parish Clerk, Suite 6700, Jefferson Parish General Government Building, 200 Derbigny Street, Gretna, LA 70053. You may also obtain a copy by visiting the Purchasing Department webpage at purchasing.jeffparish.net and clicking on On-line forms.

All vendors submitting bids should register as a Jefferson Parish vendor if not already yet registered. Registration forms may be downloaded from <http://purchasing.jeffparish.net> and by clicking on Vendor Information. Current W-9 forms with respective Tax Identification numbers and vendor applications may be submitted at any time; however, if your company is not registered and/or a current W-9 form is not on file, vendor registration is mandatory. Vendors may experience a delay in payment if your company is not a registered vendor with Jefferson Parish.

As per LSA-RS 47:301 et seq., all governmental bodies are excluded from payment of sales taxes to any Louisiana taxing body. Quotations shall be based on F.O.B. Delivered, anywhere within the Parish as designated by the Purchasing Department. JEFFERSON PARISH WILL ACCEPT ONE BID ONLY FROM EACH VENDOR. Items bid must meet specifications. JEFFERSON PARISH will accept one price for each item unless otherwise indicated. Two or more prices for one item will result in bid rejection. Bidders are required to complete, sign and return the bid form and/or complete and return the associated line item pricing forms as indicated. The price quoted for work shall be stated in figures. In the event there is a difference in unit prices and totals, the unit prices shall prevail.

JEFFERSON PARISH reserves the right to award contracts or place orders on a lump sum or individual item basis, or such combination, as shall in its judgment be in the best interest of JEFFERSON PARISH. Every contract or order shall be awarded to the LOWEST RESPONSIVE and RESPONSIBLE BIDDER, taking into consideration the CONFORMITY WITH THE SPECIFICATIONS and the DELIVERY AND/OR COMPLETION DATE

PROTESTS: Only those vendors that submit bids in response to this solicitation may protest any element of the procurement, in writing to the Director of the Purchasing Department. Written protest must be received within 48 hours of the release of the bid tabulation by the Purchasing Department. After consultation, the Parish Attorney's Office will then respond to protests in writing. (For more information, please see Chapter 2, Article VII, Division 2, Sec. 2-914.1 of the Jefferson Parish Code of Ordinances.)

JEFFERSON PARISH reserves the right to cancel all or any part of an order if not shipped promptly. No charges will be allowed for parking or cartage unless specified in the quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel at any time and for any reason by issuing a THIRTY (30) day written notice to the contractor.

JEFFERSON PARISH requires all products to be new (current) and all work must be performed according to standard practices for the project. Unless otherwise specified, no aftermarket parts will be accepted. Unless otherwise specified, all workmanship and materials must have at least one (1) year guaranty, in writing, from the date of delivery and/or acceptance of the project. Any deviations or alteration from the specifications must be indicated on the bid form for each item and upon request, product data for same must be submitted by the time specified by the Purchasing Department.

If this bid requires a pre-bid conference (see Additional Requirements section), bidders are advised that such conference will be held to allow bidders the opportunity to identify any discrepancies in the bid specifications and seek further clarification regarding instructions. The Purchasing Department will issue a written response to bidders' questions in the form of an Addendum.

All formal Addenda require written acknowledgment on the bid form by the bidder. Failure to acknowledge an Addendum on the bid form shall cause the bid to be rejected; JEFFERSON PARISH reserves the right to award bid to next lowest responsive and responsible bidder in this event.

USE OF BRAND NAMES AND STOCK NUMBERS: Where brand names and stock numbers are specified, it is for the purpose of establishing certain minimum standards of quality. Bids may be submitted for products of equal quality, provided brand names and stock numbers are specified. Complete product data may be required prior to award.

Quantities listed are for bidding purposes only. Actual requirements may be more or less than quantities listed.

Bidders are not to exclude from participation in, deny the benefits of, or subject to discrimination under any program or activity, any person in the United States on the grounds of race, color, national origin, or sex; nor discriminate on the basis of age under the Age Discrimination Act of 1975, or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973, or on the basis of religion, except that any exemption from such prohibition against discrimination on the basis of religion as provided in the Civil Rights Act of 1964, or Title VI and VII of the Act of April 11, 1968, shall also apply. This assurance includes compliance with the administrative requirements of the Revenue Sharing final handicapped discrimination provisions contained in Section 51.55 (c), (d), (e), and (k)(5) of the Regulations. New construction or renovation projects must comply with Section 504 of the 1973 Rehabilitation Act, as amended, in accordance with the American National Standard Institute's specifications (ANSI A117.1-1961).

Jefferson Parish and its partners as the recipients of federal funds are fully committed to awarding a contract(s) to firm(s) that will provide high quality services and that are dedicated to diversity and to containing costs. Thus, Jefferson Parish strongly encourages the involvement of minority and/or woman-owned business enterprises (DBE's, including MBE's, WBE's and SBE's) to stimulate participation in procurement and assistance programs.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

IN ACCORDANCE WITH STATE REGULATIONS JEFFERSON PARISH OFFERS ELECTRONIC PROCUREMENT TO ALL VENDORS

This electronic procurement system allows vendors the convenience of reviewing and submitting bids online. This is a secure site and authorized personnel have limited read access only. Bidders are encouraged to submit electronically using this free service; while the website accepts various file types, one single PDF file containing all appropriate and required bid documents is preferred. Bidders submitting uploaded images of bid responses are solely responsible for clarity. If uploaded images/documents are not legible, then bidder's submission will be rejected. Please note all requirements contained in this bid package for electronic bid submission.

Please visit our E-Procurement Page at www.jeffparishbids.net to register and view Jefferson Parish solicitations. For more information, please visit the Purchasing Department page at <http://purchasing.jeffparish.net>.

ADDITIONAL REQUIREMENTS FOR THIS BID

PLEASE MATCH THE NUMBERS PRINTED IN THIS BOX WITH THE CORRESPONDING INSTRUCTIONS BELOW.

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1. All bidders must attend the MANDATORY pre-bid conference and will be required to sign in and out as evidence of attendance. In accordance with LSA R.S. 38:2212(I), all prospective bidders shall be present at the beginning of the MANDATORY pre-bid conference and shall remain in attendance for the duration of the conference. Any prospective bidder who fails to attend the conference or remain for the duration shall be prohibited from submitting a bid for the project.
2. Attendance to this pre-bid conference is optional. However, failure to attend the pre-bid conference shall not relieve the bidder of responsibility for information discussed at the conference. Furthermore, failure to attend the pre-bid conference and inspection does not relieve the successful bidder from the necessity of furnishing materials or performing any work that may be required to complete the work in accordance with the specification with no additional cost to the owner.
3. Contractor must hold current applicable JEFFERSON PARISH licenses with the Department of Inspection and Code Enforcement. Contractor shall obtain any and all permits required by the JEFFERSON PARISH Department of Inspection and Code Enforcement. The contractor shall be responsible for the payment of these permits. All permits must be obtained prior to the start of the project. Contractor must also hold any and all applicable Federal and State licenses. Contractor shall be responsible for the payment of these permits and shall obtain them prior to the start of the project.
4. A LA State Contractor's License will be required in accordance with LSA R.S. 37-2150 et. seq. and such license number will be shown on the outside of the bid envelope. Failure to comply will cause the bid to be rejected. Additionally if submitting the bid electronically, then the license number must be entered in the appropriate field in the Electronic Procurement system. Failure to comply will cause the bid to be rejected.
5. It is the bidder's responsibility to visit the job site and evaluate the job before submitting a bid.
6. Job site must be clean and free of all litter and debris daily and upon completion of the contract. Passageways must be kept clean and free of material, equipment, and debris at all times. Flammable material must be removed from the job site daily because storage will not be permitted on the premises. Precautions must be exercised at all times to safeguard the welfare of JEFFERSON PARISH and the general public.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

7. PUBLIC WORKS BIDS: All awards for public works in excess of \$5,000.00 will be reduced to a formal contract which shall be recorded at the contractor's expense with the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. A price list of recordation costs may be obtained from the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. All awards in excess of \$25,000.00 will require both a performance and a payment bond. Unless otherwise stated in the bid specifications, the performance bond requirements shall be 100% of the contract price. Unless otherwise state in the bid specifications, the payment bond requirements shall be 100% of the contract price. Both bonds shall be supplied at the signing of the contract.
8. NON-PUBLIC WORKS BIDS: A performance bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The performance bond shall be supplied at the signing of the contract.
9. NON-PUBLIC WORKS BIDS: A payment bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The payment bond shall be supplied at the signing of the contract.
10. All bidders must comply with the requirements stated in the attached "Standard Insurance Requirements" sheet attached to this bid solicitation. Failure to comply with this instruction will result in bid rejection.
11. A bid bond will be required with bid submission in the amount of 5% of the total bid, unless otherwise stated in the bid specifications. Acceptable forms shall be limited to cashier's check, certified check, or surety bid bond. All sureties must be in original format (no copies). If submitting a bid online, vendors must submit an electronic bid bond through the respective online clearinghouse bond management system(s) as indicated in the electronic bid solicitation on Central Auction House. No scanned paper copies of any bid bond will be accepted as part of the electronic bid submission.
12. This is a requirements contract to be provided on an as needed basis. JEFFERSON PARISH makes no representations on warranties with regard to minimum guaranteed quantities unless otherwise stated in the bid specifications.
13. Freight charges should be included in total cost when quoting. If not quoted FOB DELIVERED, freight must be quoted as a separate item. Bid may be rejected if not quoted FOB DELIVERED or if freight charges are not indicated on bid form.
14. PUBLIC WORKS BIDS - Completed, Signed and Properly Notarized Affidavits Required; This applies to all solicitations for construction, alteration or demolition of public buildings or projects, in conformity with the provisions contained in LSA-RS 38:2212.9, LSA-RS 38:2212.10, LSA-RS 38:2224, and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Conviction Affidavit, Non-Collusion Affidavit, Campaign Contribution Affidavit, Debt Disclosures Affidavit and E-Verify Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.
15. NON PUBLIC WORK BIDS - Completed, Signed and Properly Notarized Affidavits Required in conformity with the provisions contained in LSA – RS 38:2224 and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Collusion Affidavit, Debt Disclosures Affidavit and Campaign Contribution Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled NON PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.
16. The ensuing contract for this bid solicitation may be eligible for FEMA reimbursement and/or Federal funding/reimbursement. As such, the referenced appendix will be applicable accordingly and shall be considered a part of the bid documents. All applicable certifications must be duly completed, signed and submitted with bid submission. Failure to submit applicable certifications with bid submission will result in bid rejection.

It shall be the duty of every parish officer, employee, department, agency, special district, board, and commission: and the duty of every contractor, subcontractor, and licensee of the parish, and the duty of every applicant for certification of eligibility for a parish contract or program, to cooperate with the Inspector General in any investigation, audit, inspection, performance review, or hearing pursuant to Jefferson Parish Code of Ordinances Section 2-155.10(19). By submitting a bid, vendor acknowledges this and will abide by all provisions of the referenced Jefferson Parish Code of Ordinances.

DATE: 2/17/2020

INVITATION TO BID
THIS IS NOT AN ORDER

Page: 4

BID NO.: 50-00129949

JEFFERSON PARISH

PURCHASING DEPARTMENT
P.O. BOX 9
GRETNA, LA. 70054-0009
504-364-2678

VENDOR: _____

BUYER: MBUTTERY

As per LSA-RS 47:301 et seq., all governmental bodies are excluded from payment of sales taxes to any Louisiana taxing body. Quotations shall be based on F.O.B. Agency warehouse or jobsite, anywhere within the Parish as designated by the Purchasing Department.

JEFFERSON PARISH reserves the right to cancel all or any part of an order if not shipped promptly. No charges will be allowed for parking or cartage unless specified in quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel at any time and for any reason by issuing a THIRTY (30) day written notice to the contractor.

JEFFERSON PARISH is expecting all products to be new and all work to be done in workman-like manner, according to standard practices. Any deviations or alteration from the specifications must be indicated on the bid form for each item and upon request, product data for same must be submitted by the time specified by the Purchasing Department.

DELIVERY: FOB JEFFERSON PARISH	
INDICATE DELIVERY DATE ON EQUIPMENT AND SUPPLIES	<u>4-6 WEEKS</u>
INDICATE STARTING TIME (IN DAYS) FOR CONSTRUCTION WORK	_____
INDICATE COMPLETION TIME (IN DAYS) FOR CONSTRUCTION WORK	_____

In the event that addenda are issued with this bid, bidders MUST acknowledge all addenda on the bid form. Bidder must acknowledge receipt of an addendum on the bid form as indicated. Failure to acknowledge any addendum on the bid form will result in bid rejection.

Acknowledge Receipt of Addenda: NUMBER: _____
 NUMBER: _____
 NUMBER: _____
 NUMBER: _____

LOUISIANA CONTRACTOR'S LICENSE NO.: (if applicable) _____

*** ALL BIDDERS MUST COMPLETE SECTION BELOW ***	
FIRM NAME: <u>Fluid Process & Pumps</u>	
SIGNATURE: <u>Bill Bloom</u> <small>(Must be signed here)</small>	TITLE: <u>SALES</u>
PRINT OR TYPE NAME: <u>Bill Bloom</u>	
ADDRESS: <u>P.O. Box 10608</u>	
CITY, STATE: <u>NEW ORLEANS, LA.</u>	ZIP: <u>70181</u>
TELEPHONE: <u>(504) 733-1330</u>	FAX: <u>(504) 736-9348</u>
EMAIL ADDRESS: <u>BB@FLUIDPROCESS.NET</u>	

TOTAL PRICE OF ALL BID ITEMS: \$ 19,940.00

INVITATION TO BID FROM JEFFERSON PARISH - continued

BID NO.: 50-00129949

SEALED BID

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
1	2.00	EA	<p>PURCHASE OF EXPLOSION PROOF, SUBMERSIBLE PUMPS FOR THE DEPARTMENT OF SEWERAGE</p> <p>0010 - HYDROMATIC EXPLOSION-PROOF PREMIUM EFFICIENT SUBMERSIBLE NON CLOG SEWAGE PUMP AND MOTOR, HYDROMATIC S4PXP750 PUMPS WITH 50 FOOT CORDS, 7.5 HP, 240/3/60, 1750 RPM, WITH 4 INCH DISCHARGE TO MATCH THE EXISTING PUMPS DIMENSIONS AND HYDRAULICS FOR THE SEWER LIFT STATION AT VILLAGE GREEN LANE AND VILLAGE GREEN STREET</p> <p>DELIVER TO: WEST BANK SEWERAGE SHOP BUILDING 1450 RIVER PARK ROAD BRIDGE CITY, LA 70094</p>	9,970.00	19,940.00

**BID 50-129949
SPECIFICATIONS
SUBMERSIBLE NON-CLOG SEWER PUMPS
JEFFERSON PARISH DEPT. OF SEWERAGE
VILLAGE GREEN LANE & VILLAGE GREEN ST
SEWER LIFT STATION P-14-10**

1.01 GENERAL

- A. The bidder shall provide two (2) Hydromatic S4PXP750 submersible explosion-proof, premium efficient, solids handling pumps, or approved equal. Pumps must be able to fit the existing rail system, utilize the existing sealing flange, and fit into the aluminum hatches at Village Green Lane & Village Green Street Sewer Lift Station. The pumps shall be quoted by the factory authorized Hydromatic Pump agent for Jefferson Parish, Louisiana or for the brand bidder. Pumps must match up to and utilize the existing rail system and hatch doors with no modifications to the existing sewer lift station or rail system. The pumps shall be able to match the hydraulic performance limits listed in these specifications. The pump motors shall be NEMA Premium Efficient and bear a stainless steel nametag showing FM approval for Class I, Division I explosion proof environments and NEMA Premium Efficient. All bids submitted for alternate pump manufacturers, other than as specified, must include in their bid all information needed to fully demonstrate complete compliance with requirements of these specifications and dimensional duplicity of the existing pumps. The pumps on this bid shall, at Jefferson Parish's option, have a complete witnessed certified Hydraulic Institute pump test performed in the same facility that the pump(s) were manufactured in. This hydraulic test shall certify at least seven (7) separate operating points along its operating curve, including the duty point and shut-off; and show GPM, TDH, efficiency, and BHP at each tested point. These certified curves shall be approved by Jefferson Parish, or its appointed agent before the pump can be released for shipment. Jefferson Parish reserves the right to reject any bids that are incomplete, or do not demonstrate that they are equal to the requirements of these specifications. It is the bidder's responsibility to provide adequate information necessary for the complete evaluation of their proposed equipment. Jefferson Parish shall be the sole judge as to the equality of any alternate manufacturer's offering.

2.01 OPERATING CONDITIONS

- A. Each pump shall be rated 7.5 H.P., 240 volts, 3 phase, 60 hertz, maximum 1750 R.P.M. The unit shall produce 200 GPM at 56 feet TDH, with a minimum pump efficiency of 57 percent and maximum input KW of 7.

The pump shall be non-overloading throughout the entire range of operation without employing service factor. The pump shall have an auxiliary duty point of 550 GPM @ 21 feet TDH, with a minimum 50 percent pump efficiency. The pump shall have a minimum shut off head of 68 feet. The pump motor shall reserve a minimum service factor of 1.3. The performance curve shall show head, capacity, pump efficiency, solid handling capacity, and reflect motor service factor.

3.01 CONSTRUCTION

- A. The pump shall be a centrifugal, non-clog, solids handling, submersible, wastewater type; model S4XP750 as manufactured by Hydromatic Pumps, or approved equal. The pump must bear a stainless steel manufacturer's nameplate stating Made in the U.S.A, or Assembled in the U.S.A. The pump volute, motor, and seal housing shall be high quality gray cast iron, ASTM A-48, Class 30. The pump discharge shall be fitted with a 4 inch standard ASA 125-lb. flange, faced and drilled. Slotted flange bolt holes will not be accepted. All external mating parts shall be machined and Buna N Rubber O-ring sealed on a beveled edge. Gaskets will not be accepted. All fasteners exposed to the pumped liquids shall be 300 series stainless steel.

3.02 ELECTRICAL POWER CORD

- A. Electrical power cord shall be 50 feet long, and made of STW-A, water resistant 600 V, 60° Celsius, UL and CSA listed, and applied dependent on amp draw for size. The pump shall have an independent sensor cord containing motor overtemp and moisture sensor wires.
- B. The pump shall be double protected with a compression fitting and epoxy potted area at the power cord entry to the pump.
- C. The power cable entry into the cord cap assembly shall first be made with a compression fitting. Each individual lead shall be stripped down to bare wire at staggered intervals, and each strand shall be individually separated. This area of the cord cap shall then be filled with an epoxy compound potting which will prevent water contamination to gain entry even in the event of wicking or capillary attraction through the power cord.
- D. The power cord leads shall then be connected to the motor leads with extra heavy terminal board that allows for easy connection of motor leads to power cord leads.
- E. The cord cap assembly, where bolted to the connection box assembly; and the connection box assembly, where bolted to the motor housing,

shall each be sealed with a Buna N Rubber O-ring on a beveled edge to assure proper sealing.

3.03 MOTOR

- A. The stator, rotor, and bearings shall be mounted in a sealed and oil filled submersible type housing. The stator windings shall have a minimum Class H insulation (180° Celsius or 356° Fahrenheit), NEMA B design (3-phase). Air filled designs will not be accepted. Further protection shall be provided by "on winding" thermal sensors.
- B. The pump and motor shall be specifically designed so that they may be operated partially or completely submerged in the liquid being pumped.
- C. The motor stator shall be slip fit mounted into the watertight casing. Stators must be capable of being repaired or rewound by local motor service facilities. Heat shrink motor fits, will not be accepted. No special tools shall be required for pump and motor disassembly.
- D. Motor shall be equipped with integral heat sensors, one for each phase (three phase motor). The heat sensor(s) shall be a low resistance; bi-metal disc that is temperature sensitive. They shall be mounted directly on the stator windings. The sensors shall be connected in series with motor starter coil so that the pump ceases operation when an over-temperature condition is sensed. These sensors shall be used in conjunction with and supplemented by external motor over- current protection located at the control panel. The pump shall cease operation when the overload is tripped. The overload shall be manually reset.
- E. Motors shall have a service factor of 1.3 or greater.
- F. Cable Entry: The cable entry water seal design shall be such that it precludes specific torque requirements to ensure a watertight and submersible seal. It shall permit no entry of water into any high voltage area, even if the cable is severed below the water level.
- G. Cooling System: Each pump shall be provided with an adequately designed cooling system. Water jackets or closed loop cooling systems will not be accepted.
- H. Motors shall conform to the NEMA Premium Efficiency Electric Motor Program.
Motors must meet or exceed the nominal energy efficiency levels listed in NEMA standards publication MG 1-2006, tables 12-12 and 12-13.

3.04 BEARINGS AND SHAFT

- A. An upper radial bearing and a lower thrust bearing shall be required. These shall be heavy-duty single row ball bearings, which are permanently lubricated by the dielectric oil which fills the motor housing. Sealed grease packed bearings will not be accepted. Bearings that require lubrication according to a prescribed schedule will not be accepted. The upper radial bearing shall have a minimum B-10 life at the specified condition of 50,000 hours, and the lower double row thrust bearing shall have a minimum B-10 life at the specified condition of 50,000 hours. Bearings shall be locally available.
- B. The shaft shall be machined from a solid 416 series stainless steel forging and is a design that is of large diameter with minimum overhang to reduce shaft deflection and prolong bearing life.

3.05 SEALS

- A. The pump shall have two mechanical seals, mounted in tandem, with an oil chamber between the seals. Seals shall be used with the rotating seal faces being carbon and the stationary seal faces to be silicone carbide. The lower seal shall be replaceable without disassembly of the seal chamber and without the use of special tools. Pump-out vanes shall be present on the backside of the impeller to keep contaminants out of the seal area. Units that require the use of foreign manufactured seals will not be accepted. Seals shall be locally available.
- B. The pump shall be equipped with a seal leak detection probe and warning system. This shall be designed to alert maintenance personnel of lower seal failure without having to take the unit out of service for inspection or requiring access for checking seal chamber oil level and consistency.
- C. There shall be an electric probe or seal failure sensor installed in the seal chamber between the two tandem mechanical seals. The seal fail circuit shall use a probe that has no moving parts. If the lower seal fails, contaminants which enter the seal chamber shall be detected by the sensor and send a signal to operate the specified warning device.
- D. Units equipped with opposed mechanical seals will not be accepted.

3.06 IMPELLER

- A. Impeller shall be of the two-vane, enclosed non-clogging design and have pump-out vanes on the front and backside of the impeller, to prevent grit and other materials from collecting in the seal area. Single vane design impellers, which cannot be easily trimmed, and which do not maintain

balance with wear causing shaft deflections and reducing seal and bearing life will not be accepted. Impeller shall not require coating. Because most impeller coatings do not remain beyond the very early life of the impeller, efficiency and other performance data submitted shall be based on performance with an uncoated impeller. Attempts to improve efficiency by coating impeller will not be accepted. The impeller shall be manufactured from ductile iron ASTM A-536 material.

- B. Impellers shall be dynamically balanced. The tolerance values listed below shall be according to the International Standard Organization grade 6.3 for motors in rigid frames. The tolerance is to be split equally between the two balance planes, which are the two impeller shrouds.
- C. The impeller shall be slip fit to a tapered shaft and key driven. A 300 series stainless steel washer and impeller bolt shall be used to fasten the impeller to the shaft. Straight end or threaded shafts for attachment of the impeller will not be accepted.

3.07 CASING

- A. The casing shall be of the end suction volute type, having sufficient strength and thickness to withstand all stress and strain from service at full operating pressure and load. The casing shall be of the centerline horizontal discharge type. The design shall be such that the pumps will be automatically connected to the discharge piping when lowered into position with the guide rails. The casing shall be accurately machined and bored for register fits with the suction and casing covers.
- B. A volute case wearing ring shall be provided to minimize impeller wear. The wear ring shall be 300 series stainless steel or bronze ASTM # B584-932 and held by 300 series stainless steel fasteners. The wear ring shall be easily replaceable in the field. Wear rings of any other material will not be accepted.

3.08 PAINTING

- A. The pump shall be painted after assembly and testing, with a dark green water reducible air dry enamel. The paint shall be applied in one coat covering all exterior surfaces. The pump shall be air dried after testing and before painting.

3.09 SERVICEABILITY

- A. The complete rotating assembly shall be capable of being removed from the volute without disturbing discharge piping or volute. The motor housing, seal housing, with seal plate and impeller still attached to the shaft, shall be capable of being lifted out of the volute case from the top as one assembly.

3.10 SUPPORT

- A. Though the pump may not require feet to support the unit while installed, the pump volute must have feet to support the unit when removed for service. Units which do not have feet upon which the unit can be supported when removed for service will not be accepted.

4.01 TESTING

- A. Commercial testing shall be required and include the following:
 - 1. The pump shall be visually inspected to confirm that it is built in accordance with the specification as to HP, voltage, phase, and hertz.
 - 2. The stator motor leads shall be tested for integrity, using a meg-ohm meter at the highest setting.
 - 3. Pump shall be allowed to run dry to check for proper rotation.
- 4. Discharge piping shall be attached; the pump submerged in water, and amp readings shall be taken in each leg to check for an imbalanced stator winding. If there is a significant difference in readings, the stator windings shall be checked with a bridge to determine if an unbalanced resistance exists. If so, the stator shall be replaced. The pump test facility shall be located in the same plant that the pump was assembled, and shall be capable of providing certified Hydraulic Institute level test reports.
 - 5. The pump shall be removed from the water, meg-ohm meter tested again, dried, and the motor housing filled with dielectric oil.

5.01 WARRANTY PERIOD AND SERVICE

- A. The pump bidder must be listed as a factory authorized service center, for the brand they are bidding and be capable of completely servicing the proposed pumps within one (1) hour of the project site. The pump bidder must own and operate a direct factory service center and stocking facility capable of completely servicing and supplying spare parts for the proposed pumps within one (1) hour of

the project site. The bidder's factory service center/stocking facility shall be available for Jefferson Parish inspection on a twenty four (24) hour prior notice. The bidder's service center must have factory trained mechanics capable and certified to service the equipment being offered. Bidders of alternate pumps must submit information on their factory authorized service center and factory trained mechanics with their bid.

- B. The pump unit or any parts thereof shall be warranted against defects in material or workmanship within one year from date of installation, or 18 months from date of manufacture, whichever comes first, and shall be replaced at no charge with a new or manufactured part, F.O.B. factory or authorized warranty service station. The warranty shall not assume responsibility for removal, reinstallation or freight, nor shall it assume responsibility of incidental damages resulting from the failure of the pump to perform. The warranty shall not apply to damage resulting from accident, alteration, design, misuse, or abuse.