FANS AND BLOWERS

SPEC FOR: [X] INQUIRY, SH 1 OF 8 NO. 6014-02D1-J210-02 (DATE)
[ ] QUOTATION, SH OF NO.
[X] PURCHASE, SH OF NO. 6014-02D1-J210-02
QUANTITY ONE UNIT(S)

E I M S

SPECIFICATION NUMBER

AFE	INV	CL	ITEM
S-2001.2200000	05	-	5001

USED WITH 30-5126

[ ] THIS SPECIFICATION INCLUDES ITEM NOS. 41-5008, 41-5009

[ ] SPECIFICATION NUMBERS ON ATTACHED LIST

SERVICE TRANSPORTATION BLOWER

PLANT AND UNIT PHILLIPS SUMIKA POLYPROPYLENE COMPANY

INSTRUCTIONS TO BIDDER

1. Complete items 45 thru 86 on this Inquiry. Return this Inquiry plus 3 copies. Include 3 sets of information and catalog drawings that adequately describe the bid items, and specifically include the following:
   a. Performance data covering capacity, head, and horsepower and efficiency at 3 conditions: at quoted fan speed, and at plus and minus 10 percent of quoted speed.
   b. Wear parts list with supply locations and delivery time.
2. Equipment will be subjected to a critical noise evaluation based on unprotected personnel exposure of 8 hours per day. Other equipment (will) (will not) contribute to the problem. The attached noise data form 3792 is to be completed and submitted by bidder with the quotation. Return this form plus 3 copies.
3. Show Spec No. on all engineering documents and correspondence.
4. Check the box opposite QUOTATION and enter your quotation number. This completed Inquiry is your quotation to the Purchaser. The completed Inquiry will be issued as a purchase spec with the purchase order to the successful bidder.
5. In addition to bidding the material and equipment specified, bidder may propose equally suitable, but less costly materials and equipment as an alternate. If so, then note this under Item 86.

INSTRUCTIONS TO VENDOR

6. Stencil Spec No. and P.O. No. on packing case or, if packing case is not used, on plastic or metal temporary tag wired conspicuously to equipment.
7. An austenitic stainless steel nameplate of manufacturer's standard shall be attached permanently to the equipment and stamped to include the Spec No.

Fans and blowers shall be tested and rated in accordance with the applicable AMCA Standard Test Code and Certified Ratings Program, and shall carry the AMCA Certified Rating Seal.

9. If changes occur: Advise Purchasing, in triplicate, of any changes in price or delivery resulting from such changes.

△ 10. Capacity 11,945 SCFM
11. Gas Handled NITROGEN + H.C. GAS (TRACE)
Composition (is) (is not) attached. (SEE NOTE PAGE 3 OF 6)
△ 12. Suction Pressure 19.7 (~~PSIA~~) (In. Water) at 156 F.
13. Ambient Temperature 20 - 105 F. 14. Relative Humidity — %.
△ 15. Static Outlet Pressure 114.2 (~~PSIA~~) (In. Water) at F.
△ 16. Differential Pressure 94.5 (~~PSI~~) (In. Water).
17. Elevation Above Sea Level 34 Ft.
18. Type Service POWDER TRANSPORTATION
△ Estimated Number of Starts Per Year ______, Estimated Shaft HP 268 SEE NOTE BELOW

CONSTRUCTION

△ 19. Type: (Centrifugal) (~~Vaneaxial~~) (~~Tubeaxial~~) (~~Propeller~~)
20. Inlet and Outlet Connections to be (Flanged) YES OTHER
△ 21. Entire Rotating Element to be Statically, and Dynamically Balanced at 600 RPM
22. Rotation Viewed from Drive Side (Clockwise) (~~Counterclockwise~~).
23. Arrangement Per Standards of Fan Manufacturers:
Drive Arrangement No. ______ (SW) (DW) (SI) (DI)
Direction of Discharge: [ ] (Top) (~~Bottom~~) Horizontal, [ ] (Up) (~~Down~~) Blast, [ ] (Top) (~~Bottom~~) ~~Angular (Up) (Down)~~; Motor Position, Belt or Chain Drive, (W), (X), (Y), (Z)
24. Case Joints to be Gasketed (Yes) (~~No~~).

△4 NOTE 1) MAXIMUM 300 BHP @ 20°F AMBIENT AIR TEMPERATURE AT START UP CONDITIONS.
2) PREDICTED BLOWER DISCHARGE TEMPERATURE = 206°F.

45. Vendor PROCESS EQUIPMENT CO. △
46. Mfr LAMSON CORPORATION △
47. Model and/or Fig. No. 2000 SERIES △
48. Type 2-STAGE CENTRIFUGAL △
49. Capacity 11,945 CFM at △ STANDARD Conditions
50. Differential Pressure 94.5 △ (In. Water) (~~PSI~~)
51. BHP Required 268 △. 52. Fan RPM 3550 △
53. Rotation from Drive End (Clockwise) (~~Counterclockwise~~).
54. Curves and Other Data Attached SEE SHEET 7

PROPELLER
55. Dia. 30.5 In., No. Stages 2, No. Blades Per Stage N/A
56. Type SHROUDED
57. Matl: Blades CARBON STEEL, Hub
58. WR^2 of Rotor LATER △, Min Acceleration Time of Rotor LATER △

SHAFT
59. Dia ______, Matl CARBON STEEL △

CASING
60. Matl DUCTILE IRON △, Max WP
61. Connections: Size and Type 20" IN, 18" OUT △

SHAFT SEAL
62. Type SEE NOTE PAGE 3 OF 6
63. Mfr
64. Matls
65. Details Attached Dwg. No.

BEARINGS
66. Type ANTI FRICTION (BALL) △
67. Lubrication OIL △
68. Mfr and Catalog No. SKF △
69. Cooling Water Reqd. NO △ GPM with — F Temp Rise.

DRIVER
70. Recommended HP 350, RPM 3550 △ (Furnish detail information on driver spec form if driver is to be furnished with pump).
71. Shipping Instructions (When furnished by Purchaser).
Attn
Street No.
City and State.

BASE PLATE
72. Matl FABRICATED STEEL

ACCESSORIES
73. ~~Louvers~~ ______, Screens
74. Other

SERVICE ENGINEER
75. Days Service Included w/Order ______; Extra Time, Charge Per Day $
76. Travel and Living Expense to be Paid by
77. Vendor's Documents:
   a. Vendor shall mark applicable purchase order number, equipment specification number, and document code on documents.
   b. Do not duplicate documents for identical equipment on the same purchase order.
   c. If normal method of furnishing documents combines two or more of the required document descriptions, vendor shall furnish the maximum quantity required for any one description in the combination.
   d. A transparency may be furnished in lieu of the quantity of certified documents required. Transparency on approval documents not acceptable.

PREPARED JBP DATE APR93 PROCESS APPD ______ DATE ______ INQUIRY APPD RG DATE APR93 PURCH APPD ______ DATE ______ (13)

CHECKED ______ DATE ______ REV 1 APPD [signature] DATE SEP-94 REV 2 APPD ______ DATE ______ REV 3 APPD ______ DATE ______

FANS AND BLOWERS

SPEC FOR: ☐ INQUIRY, SH 2 OF 8 NO. 6014-02D1-J210-02 (DATE)
☐ QUOTATION, SH OF NO.
☒ PURCHASE, SH OF P O NO 6014-02D1-J210-02

SPEC NO. 05-5001

MATERIALS
25. Casing DUCTILE IRON
Shaft CARBON STEEL
26. Impeller or Propeller C.S.
28. Hub
29. Baseplate STEEL, By
30. Other

SHAFT SEAL
31. Type
32. Mfr

DRIVER
33. Type: (Motor) (~~Engine~~) (~~Steam Turbine~~) (~~Gas Turbine~~).
34. Spec No. IV.E & QCP-30-1 Attached.
35. Furnished by Vendor (Yes) (~~No~~), Mounted by Vendor (Yes) (~~No~~).
36. Dimensional Print Attached (~~Yes~~) (No)

ACCESSORIES (Matl)
37. ☐ Screens
38. ☐ Louvers
39. ☐ Heat Slinger
40. ☒ Baseplate Leveling Screws NO
41. Other

OPENINGS
42. All flanged or screwed openings shall be covered or plugged for shipment and outside storage.

43. For Engineering Details Contact: D. SMITH (713) 753-2476

44. Other information

SEE PAGE 3 OF 6

NOTE: TRANSPORTATION BLOWER PRESSURES, TEMPERATURES, AND FLOWS PER DATA SHEET GPM-E-1102 REV. B DATED AUG-94.

77. Vendor's Documents: (Continued)

e. MAIL DOCUMENTS TO:

SEE VDR

TR 24 25 | TC 31 32 | 50 | 62

VENDOR TO COMPLETE AS PART OF BID: Show number of calendar days * vendor requires for delivery of documents after commitment.

DOC-CODE 26 27	CR 33	DOCUMENT DESCRIPTION	APPROVAL QTY 34 35	APPROVAL DAYS * 36 38	CERTIFIED QTY 39 40	CERTIFIED DAYS * 41 43
01		DIMENSIONAL DRAWINGS				
02		INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS				
03		PARTS LIST: Description, Parts Numbers, Materials of Construction and Quantities				
04		CROSS SECTIONAL DRAWINGS: With reference numbers to parts list. These may be pictorial				
06		RECOMMENDED SPARE PARTS: Include Prices, Points of Supply, and Delivery				
07		PERFORMANCE DATA: Capacity Curves, Head, Horsepower and Efficiency				
10		BILL OF MATERIALS				
12		FOUNDATION DESIGN DATA: Anchor Bolt Layout, Bolt Detail, and Loading Required for Foundation Design				
37		RECOMMENDED LUBRICATION: Type, Lubrication Points and Frequency				

The documents described above are part of the purchase and must be furnished before rendering final invoice.

Remarks:

DELIVERY (After Commitment)
78. Equipment will be on job site: With Driver Weeks, Without Driver Weeks.

NET WEIGHT (Each)
79. With Driver Lbs, Without Driver Lbs.

80. Point of Origin

PRICE FOB ORIGIN
81. Complete as Specified, Less Driver, Each ..... $
82. Extra for Driver, Each ..... $
83. Transportation Charge to Destination, Each ..... $
84. Total Price ..... $

85. Invoice Terms

86. Exceptions should be noted below or attached: