Hi-Speed Industrial Service
7030 Ryburn Dr
Millington, Tn 38053
901-873-5300

AC Inspection as Found

ARKEMA, INC.
2571 Fite Road
Memphis, TN 38127

FolderID: 153188
FormID: 20989903

AC Inspection - Rev. 2

Completed by: JAMES VALENTINE on 07/15/2024

Location:	A Hydro
Serial Number:	P32G0400E

Description:50 Hp XP Motor

Hi-Speed Job Number:	153188
Manufacturer:	Other
Serial Number:	P32G0400E
HP/kW:	50 (HP)
RPM:	3555 (RPM)
Frame:	326TS
Voltage:	230 / 460
Current:	56.6 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	9
J-box Included:	Complete
Coupling/Sheave:	None
Date Received:	07/15/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Teardown Inspection
Rewind:	No
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	No
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **2 - High** **55 - Good**

Overall Condition

1.	Report Date	**07/15/2024**

2. Nameplate Picture P2

3. Photos of all six sides of the machine. P3

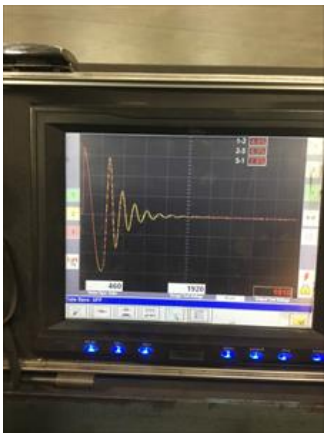
	4.	Describe the Overall Condition of the Equipment as Received ***Good***	
Initial Mechanical/Electrical			
	5.	Does Shaft Turn Freely?	**(Y) Yes**
	6.	Does the shaft require T.I.R in Lathe to identify additional repairs?	**(No) No**
	7.	Does Shaft Have Visible Damage?	**(No) No**
	8.	Assembled Shaft Runout	**0.003 Inches**
	9.	Assembled Shaft End Play	**0.005 inches**
	10.	Air Gap Variation <10%	
	11.	Lead Condition	**(P) Pass**
	12.	Lead Length	**10 Inches**
	13.	Does it have Lugs?, If so what is the Stud Size?	**(No) No**
	14.	Lead Numbers	**1-9**
	15.	Frame Condition	**good**
	16.	Fan Condition	**(F) Fail**
	17.	Broken or Missing Components	**fan broke**
Initial Electrical Inspection			

18. Insulation Resistance/Megger **92000 Megohms** P18

19. Winding Resistance P19

1-2	1-3	2-3
.14440	**.144580**	**1.44820**

20. Perform Surge Test **(P) Pass** P20



	21.	Number of Stator Slots		
●	22.	Stator Condition		
	23.	Stator Thermistors/Ohms	**none**	
	24.	Stator Overloads/Ohms	**none**	
Mechanical Inspection				
●	25.	Drive End Bearing Brand	**ntn**	
●	26.	Drive End Bearing Number-	**6311 c3**	
●	27.	Drive End Bearing Qty.	**1**	
●	28.	Drive End Bearing Type	**(Ball) Ball Bearing**	
●	29.	Drive End Lubrication Type	**(Grease) Grease Lubricated**	
●	30.	Drive End Bearing Insulation or Grounding Device?	**no**	
●	31.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**no**	
●	32.	Drive End Bearing Condition	**good**	
●	33.	Opposite Drive End Bearing Brand	**ntn**	
●	34.	Opposite Drive End Bearing Number-	**6311 c3**	
●	35.	Opposite Drive End Bearing Qty.	**1**	
●	36.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	
●	37.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**	
●	38.	Opposite Drive End Bearing Insulation or Grounding Device?	**none**	P38

39.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**wavy washer**	P39

40.	Opposite Drive End Bearing Condition	**good**
41.	Drive End Seal	**none**
42.	Opposite Drive End Seal	**none**

Rotor Inspection

43.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**
44.	Growler Test	**(Pass) Pass**
45.	Number of Rotor Bars	**28**
46.	Rotor Condition	**good**
47.	List the Parts needed for the Repair Below ***2-6311 c3 bearings*** ***1- fan repair or replace***	
48.	Signature of Technician that Disassembled Motor	**James Valentine**

Mechanical Fits- Rotor

49.	Shaft Runout		
50.	Rotor Runout		
	Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

51.	Coupling Fit Closest to Bearing Housing		
	0 Degrees	90 Degrees	120 Degrees
	1.8735	**1.8745**	**1.8735**
52.	Coupling Fit Closest to the end of the Shaft		
	0 Degrees	60 Degrees	120 Degrees
	1.8725	**1.8725**	**1.8725**

53. Drive End Bearing Shaft Fit P53

0 Degrees	60 Degrees	120 Degrees
2.1655	**2.1655**	**2.1655**

54. Drive End Bearing Shaft Fit Condition **(P) Pass** P54

55. Opposite Drive End Bearing Shaft Fit P55

0 Degrees	60 Degrees	120 Degrees
2.1655	**2.1655**	**2.1655**

56. Opposite Drive End Bearing Shaft Fit Condition **(P) Pass** P56

57. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

None

Mechanical Fits- Bearing Housings

58. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
4.7244	**4.7244**	**4.7244**

59. Drive End - Endbell Bearing Fit Condition **(P) Pass**

60. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
4.7244	**4.7244**	**4.725**

61. Opposite Drive End - Endbell Bearing Fit Condition **(P) Pass**

62. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap
good	**good**

63. End Bell Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

64. List Machine Work Needed Below

None

65. Technician **James Valentine**

Root Cause of Failure

66. Failure locations

Reconditioning/ bearing replacement

67. Root cause of failure

N/a