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

AC Inspection as Found

US Zinc
3380 Fite Rd
Millington, Tennessee 38053

FolderID: 154138
FormID: 22258240

AC Inspection - Rev. 2

Location:	ML SHOP
Serial Number:	18014574

Description:50 HP

Hi-Speed Job Number:	154138
Manufacturer:	Other
Product Number:	PE326T-50-4
Serial Number:	18014574
HP/kW:	50 (HP)
RPM:	1780 (RPM)
Frame:	326T
Voltage:	208-230/460
Current:	58.3 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	12
J-box Included:	None
Coupling/Sheave:	None
Date Received:	11/13/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Teardown Inspection
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **2 - High** **10 - Good**

Overall Condition

1.	Report Date	**11/13/2024**	
2.	Nameplate Picture		P2

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

	4.	Describe the Overall Condition of the Equipment as Received ***Bearings and grease looked clean..... minimal run time since last recondition***	
Initial Mechanical/Electrical			
●	5.	Does Shaft Turn Freely?	**(Y) Yes**
	6.	Does the shaft require T.I.R in Lathe to identify additional repairs?	
	7.	Does Shaft Have Visible Damage?	**(No) No**
	8.	Assembled Shaft Runout	**0.002 Inches**
	9.	Assembled Shaft End Play	**0.001 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		**1-12**	
15.	Frame Condition		**Good**	
16.	Fan Condition		**(P) Pass**	P19

Snap ring

17.	Heater Quantity, Ratings			
	Quantity	Volts/Watts	Pass/Fail	

None

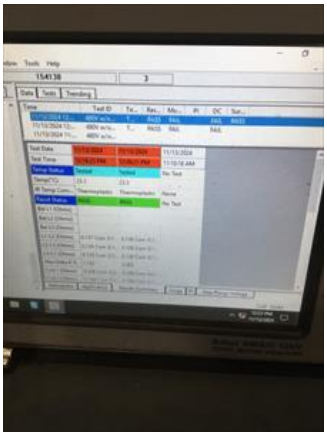
18.	Broken or Missing Components	**none apparent**	

Initial Electrical Inspection

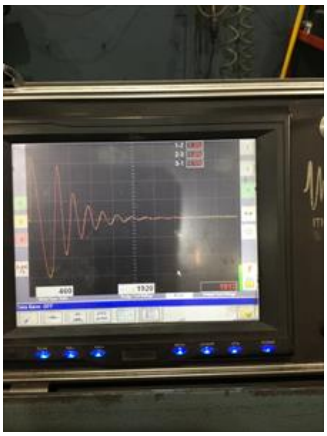
19.	Insulation Resistance/Megger	**230000 Megohms**	P22

20.	Winding Resistance			P23

1-2	1-3	2-3
.143	**.144**	**.143**



21.	Perform Surge Test	**(P) Pass**	P24



22.	Number of Stator Slots	**48**	
23.	Stator Condition	**acceptable**	P26

24.	Stator Thermistors/Ohms	**none**
25.	Stator Overloads/Ohms	**none**

Mechanical Inspection

26.	Drive End Bearing Brand	**SKF**	
27.	Drive End Bearing Number-	**6312 ZZ C3**	P30

28.	Drive End Bearing Qty.	**1**	
29.	Drive End Bearing Type	**(Ball) Ball Bearing**	
30.	Drive End Lubrication Type	**(Grease) Grease Lubricated**	
31.	Drive End Bearing Insulation or Grounding Device?	**none**	
32.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**none**	
33.	Drive End Bearing Condition	**good**	P36

34.	Opposite Drive End Bearing Brand	**SKF**	
35.	Opposite Drive End Bearing Number-	**6312 zz c3**	P38

36.	Opposite Drive End Bearing Qty.	**1**	
37.	Opposite Drive End Bearing Type	**(Ball) Ball Bearing**	
38.	Opposite Drive End Lubrication Type	**(Grease) Grease Lubricated**	
39.	Opposite Drive End Bearing Insulation or Grounding Device?	**none**	
40.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**snap ring**	
41.	Opposite Drive End Bearing Condition	**good**	P44

42.	Drive End Seal	**yes**	
43.	Opposite Drive End Seal	**slinger**	

Rotor Inspection

44.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**	
45.	Growler Test	**(Pass) Pass**	
46.	Number of Rotor Bars	**44**	

47. Rotor Condition **good** P58

48. List the Parts needed for the Repair Below

(2) 6312 bearings

49. Signature of Technician that Disassembled Motor **Brian Goines**

Mechanical Fits- Rotor

50. Shaft Runout

51. Rotor Runout

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing

52. Coupling Fit Closest to Bearing Housing

0 Degrees	90 Degrees	120 Degrees
2.124	**2.124**	**2.124**

53. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees
2.124	**2.124**	**2.124**

54. Drive End Bearing Shaft Fit P65

0 Degrees	60 Degrees	120 Degrees
2.3623	**2.3623**	**2.3621**

60mm = 2.3622 Pressfit tolerance is from 2.3623 to 2.3628

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

56. Opposite Drive End Bearing Shaft Fit P67

0 Degrees	60 Degrees	120 Degrees
2.3625	**2.3624**	**2.3625**

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

58. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal

Mechanical Fits- Bearing Housings

59. Drive End - Endbell Bearing Fit		
0 Degrees	60 Degrees	120 Degrees
5.1205	**5.1204**	**5.1205**

130mm = 5.1181 Tolerance is from 5.1181 to 5.1191

60. Drive End - Endbell Bearing Fit Condition **(F) Fail**

61. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
5.1213	**5.1214**	**5.1214**

130mm = 5.1181 Tolerance is from 5.1181 to 5.1191

The ODE endbell has been repaired in the past. See photos

62. Opposite Drive End - Endbell Bearing Fit Condition **(F) Fail**

63. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap

64.	End Bell Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
65.	List Machine Work Needed Below		
	Both endbells need to be bored and bushed		
66.	Technician		**Roger Ventrini**

Root Cause of Failure

67.	Failure locations
68.	Root cause of failure