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

AC Inspection as Found

MIG Construction (0004123)
228 Rush Street
Lexington, TN 38351

FolderID: 153239
FormID: 21177454

AC Inspection - Rev. 2

Location:	Shop
Serial Number:	

Hi-Speed Job Number:	153239
Manufacturer:	Other
Product Number:	7-850095-01-ON
Spec/ID #:	NA
Serial Number:	BT04
HP/kW:	10 (HP)
RPM:	1430 (RPM)
Frame:	S215T
Voltage:	230 / 460
Current:	32.2/16.1 (Amps)
Phase:	Three
Hz:	60 (Hz)
Enclosure:	DP
# of Leads:	9
J-box Included:	Half
Coupling/Sheave:	Sheave
Date Received:	08/01/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Teardown Inspection
Rewind:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **1 - High** **10 - Good**

Overall Condition

1.	Report Date	**08/01/2024**	
2.	Nameplate Picture		P2

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

4. Describe the Overall Condition of the Equipment as Received

Stator is in need of rewind due to failing surge test

5. Distance from the end of the shaft to the Coupling/Sheave **0 inches** P5

Flush

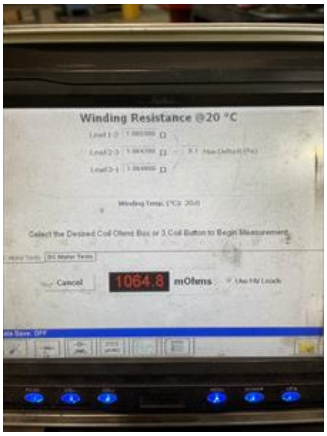
Initial Mechanical/Electrical

6.	Does Shaft Turn Freely?	**(Y) Yes**	
7.	Does the shaft require T.I.R in Lathe to identify additional repairs?	**(No) No**	
8.	Does Shaft Have Visible Damage?	**(No) No**	
9.	Assembled Shaft Runout	**0 Inches**	
10.	Assembled Shaft End Play	**0.02 inches**	
11.	Air Gap Variation <10%	**no provisions for measurement**	
12.	Lead Condition	**(P) Pass**	
13.	Lead Length	**9 Inches**	
14.	Does it have Lugs?, If so what is the Stud Size?	**(No) No**	
15.	Lead Numbers	**9**	
16.	Frame Condition	**good**	
17.	Fan Condition	**(N) NA**	
18.	Broken or Missing Components	**none**	

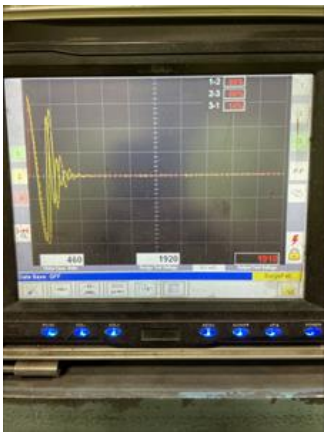
Initial Electrical Inspection

19.	Insulation Resistance/Megger	**92000 Megohms**	P19

20.	Winding Resistance			P20
	1-2	1-3	2-3	
	1.0653	**1.0648**	**1.0647**	



21.	Perform Surge Test	**(F) Fail**	P21

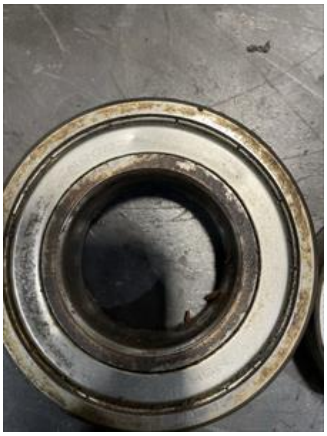


22.	Number of Stator Slots	**36**
23.	Stator Condition	**acceptable**
24.	Stator Thermistors/Ohms	**na**
25.	Stator Overloads/Ohms	**na**

Mechanical Inspection

26.	Drive End Bearing Brand	**nsk**

27.	Drive End Bearing Number-	**6208z**	P27
	Shielded on one side		



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**
34.	Opposite Drive End Bearing Brand	**nsk**
35.	Opposite Drive End Bearing Number-	**6206z**
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?	**wavy washer** P40

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

Rotor Inspection

44.	Rotor Type/Material	**(Aluminum Bar) Aluminum Barred Rotor**
45.	Growler Test	**(Pass) Pass**

46.	Number of Rotor Bars	**28**
47.	Rotor Condition	**acceptable**
48.	List the Parts needed for the Repair Below ***1- 6206z*** ***1- 6208z***	
49.	Signature of Technician that Disassembled Motor	**Joe Shurtz**

Mechanical Fits- Rotor

50.	Shaft Runout	**0.0001 inches**

51. Rotor Runout

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
0	**0**	**0**

52. Coupling Fit Closest to Bearing Housing

0 Degrees	90 Degrees	120 Degrees
1.3783	**1.3783**	**1.3783**

53. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees
1.375	**1.375**	**1.375**

Tolerance is 1.375

54. Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.5753	**1.5752**	**1.575**

Tolerance is 1.5753-1.5749

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

56. Opposite Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
1.1813	**1.1814**	**1.1814**

Tolerance is 1.815-1.1812

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

58. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal
na	**na**

Na

Mechanical Fits- Bearing Housings

59. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
1.5753	**1.5753**	**1.5753**

Tolerance is 1.5748-1.5754

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

61. Opposite Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
1.1814	**1.1814**	**1.1814**

Tolerance is 1.1811-1.1816

62.	Opposite Drive End - Endbell Bearing Fit Condition		**(P) Pass**
63.	Bearing Cap Condition		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
	Na		
64.	End Bell Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
	na	**na**	
	Nana		
65.	List Machine Work Needed Below		
	None needed		
66.	Technician		**Js**

Root Cause of Failure

67.	Failure locations	
	Failed surge test	
68.	Root cause of failure	
	Root cause is a break down in insulation between phases	