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

AC Inspection as Found

KTG USA
400 Mahannah
Memphis, TN 38107

FolderID: 152563
FormID: 20067357

AC Inspection - Rev. 2

Location:	Default
Serial Number:	C12T0329NPU 5

Description:200 HP AC

Hi-Speed Job Number:	152563
Manufacturer:	Siemens
Product Number:	1LE23214DA312AA3
Serial Number:	C12T0329NPU 5
HP/kW:	200 (HP)
RPM:	3575 (RPM)
Frame:	447TS
Voltage:	460
Current:	216 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	3
J-box Included:	None
Coupling/Sheave:	Coupling
Date Received:	04/12/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Teardown Inspection
Rewind:	No
Shaft Machined Fit Repairs Required:	No
Bearing Housing Machined Fit Repairs Required:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **5 - High** **6 - Good**

Overall Condition

1.	Report Date	**04/12/2024**

2. Nameplate Picture P2

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

	4.	Describe the Overall Condition of the Equipment as Received ***Great condition, passed all electrical tests. Requires bore and bush both end bells to recondition.***	
	5.	Distance from the end of the shaft to the Coupling/Sheave	**inches** P5

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	**0.002 Inches**
	10.	Assembled Shaft End Play	**0.001 inches**
	11.	Air Gap Variation <10%	**No Provisions for measurement**

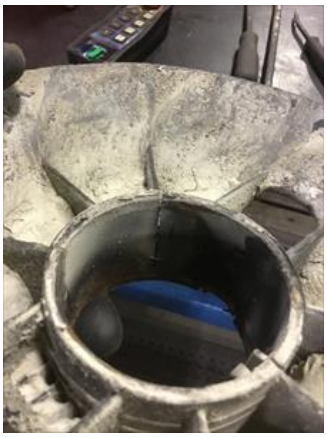
12.	Lead Condition	**(P) Pass**	P12

13.	Lead Length	**22 Inches**	
14.	Does it have Lugs?, If so what is the Stud Size?	**(Yes) Yes**	P14

3/8"

15.	Lead Numbers	**1-3**	
16.	Frame Condition	**Pass**	
17.	Fan Condition	**(F) Fail**	P17

Cracked and requires replacement



18.	Broken or Missing Components	**None**

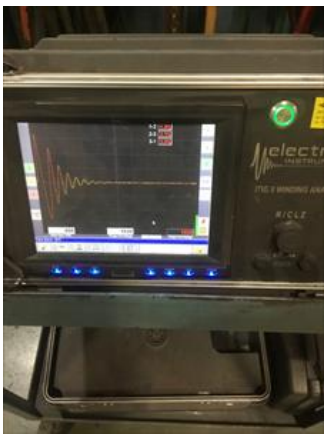
Initial Electrical Inspection

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

20. Winding Resistance P20

1-2	1-3	2-3
.018034	**.018006**	**.018002**

21. Perform Surge Test **(P) Pass** P21



22. Number of Stator Slots **36**

23. Stator Condition P23

24.	Stator Thermistors/Ohms	**N/A**	
25.	Stator Overloads/Ohms	**N/A**	

Mechanical Inspection

26.	Drive End Bearing Brand	**ORD**	P26

27.	Drive End Bearing Number-	**6316 C3**
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	**Normal wear**

34.	Opposite Drive End Bearing Brand	**ORS**	P34

35.	Opposite Drive End Bearing Number-	**6316 C3**
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**
41.	Opposite Drive End Bearing Condition	**Normal wear**

42. Drive End Seal P42

43. Opposite Drive End Seal P43

Rotor Inspection

44.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**	
45.	Growler Test	**(Pass) Pass**	
46.	Number of Rotor Bars	**27**	
47.	Rotor Condition	**Pass**	P47

48. List the Parts needed for the Repair Below

Va-75 x2
6316 ZZ C3 x2

49.	Signature of Technician that Disassembled Motor	**Brandon Woodard**	

Mechanical Fits- Rotor

50.	Shaft Runout	**0.001 inches**	

51. Rotor Runout

Drive End Bearing Fit	Rotor Body	Opposite Drive End Bearing
0.001	**0.002**	**0.001**

52. Coupling Fit Closest to Bearing Housing — P52

0 Degrees	90 Degrees	120 Degrees
2.375	**2.375**	**2.375**

53. Coupling Fit Closest to the end of the Shaft

0 Degrees	60 Degrees	120 Degrees
2.375	**2.375**	**2.375**

54. Drive End Bearing Shaft Fit P54

0 Degrees	60 Degrees	120 Degrees
3.1502	**3.1502**	**3.1502**

Tolerance is 3.1497-3.1503

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

56. Opposite Drive End Bearing Shaft Fit P56

0 Degrees	60 Degrees	120 Degrees
3.1502	**3.1502**	**3.1502**

Tolerance is 3.1497-3.1503

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

58. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal
Pass	**Pass**

Mechanical Fits- Bearing Housings

59. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
6.6953	**6.6953**	**6.6955**

Tolerance is 6.6929-6.6939

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

61.	Opposite Drive End - Endbell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
	6.6952	**6.6955**	**6.6951**
	Tolerance is 6.6929-6.6939		
62.	Opposite Drive End - Endbell Bearing Fit Condition		**(F) Fail**
63.	Bearing Cap Condition		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
	Pass	**Pass**	
64.	End Bell Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
	Pass	**Pass**	
65.	List Machine Work Needed Below		
	Bore and bush both end bells.		
66.	Technician		**Brandon Woodard**

Root Cause of Failure

67.	Failure locations	
	None	
68.	Root cause of failure	
	None	