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

AC Inspection as Found

Almatis Inc/RCP Bauxite (10014)
4701 Alcoa Road
Bauxite, AR 72011

FolderID: 103039
FormID: 20517170

AC Inspection - Rev. 2

Location:	LR Motor Shop
Serial Number:	P1022397037 KD
Description:	75HP LOUIS ALLIS

Hi-Speed Job Number:	103039
Manufacturer:	Louis Allis
Product Number:	LAM75 18 365T
Spec/ID #:	UL CERTIFIED
Serial Number:	P1022397037 KD
HP/kW:	75 (HP)
RPM:	1785 (RPM)
Frame:	365T
Voltage:	230 / 460
Current:	171.6/85.8 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.25
Enclosure:	TEFC
# of Leads:	12
J-box Included:	Complete
Coupling/Sheave:	None
Date Received:	05/29/2024
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Teardown Inspection
Rewind:	No
Shaft Machined Fit Repairs Required:	Yes
Bearing Housing Machined Fit Repairs Required:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

Priorities Found: **2 - High** **9 - Good**

Overall Condition

1. Report Date **06/05/2024** P14

2. Nameplate Picture P37

3. Photos of all six sides of the machine. P45

4. Describe the Overall Condition of the Equipment as Received

Good condition, passed all electrical tests. Requires machine work to shaft and end bells.

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?	**(Yes) Yes**	P26

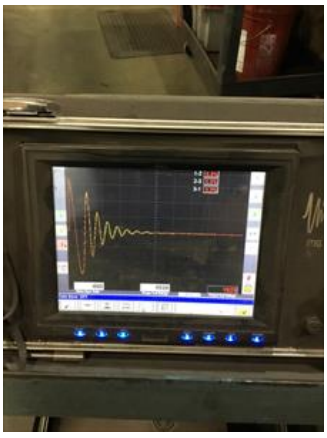
🔴	8.	Assembled Shaft Runout	**0.003 Inches**	
	9.	Assembled Shaft End Play	**0.001 inches**	
	10.	Air Gap Variation <10%	**No Provisions for measurement**	
🟢	11.	Lead Condition	**(P) Pass**	
	12.	Lead Length	**16 Inches**	
🟢	13.	Does it have Lugs?, If so what is the Stud Size?	**(No) No**	
	14.	Lead Numbers	**T1-12**	
	15.	Frame Condition	**Pass**	
🟢	16.	Fan Condition	**(P) Pass**	
	17.	Broken or Missing Components	**Lifting eye**	

Initial Electrical Inspection

	18.	Insulation Resistance/Megger	**92000 Megohms**	P8

19.	Winding Resistance			P20
	1-2	1-3	2-3	
	.06811	**.06811**	**.06806**	

20.	Perform Surge Test	**(P) Pass**	P57



21.	Number of Stator Slots	**48**	
22.	Stator Condition		P84

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

Mechanical Inspection

25.	Drive End Bearing Brand	**NSK**	P12

26.	Drive End Bearing Number-	**6316**	
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?	**None**	
31.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**None**	
32.	Drive End Bearing Condition	**Normal wear**	P82

33.	Opposite Drive End Bearing Brand	**NSK**	P92

34.	Opposite Drive End Bearing Number-	**6313**
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**	
39.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	**Wavy Washer**	
40.	Opposite Drive End Bearing Condition	**Normal wear**	P118

41. Drive End Seal — P120

42. Opposite Drive End Seal — **65 85 10** — P123

Rotor Inspection

43.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**
44.	Growler Test	**(Pass) Pass**

45.	Number of Rotor Bars	**38**	
46.	Rotor Condition	**Pass**	P41

47. List the Parts needed for the Repair Below

6316
6313
M20 lifting eye
65 85 10 seal

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

Mechanical Fits- Rotor

49.	Shaft Runout	**0.002 inches**

50. Rotor Runout

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

51. Coupling Fit Closest to Bearing Housing

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

52. Coupling Fit Closest to the end of the Shaft

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

53.	Drive End Bearing Shaft Fit			P79
	0 Degrees	60 Degrees	120 Degrees	
	3.1502	**3.1502**	**3.1502**	
	Tolerance is 3.1497-3.1502			

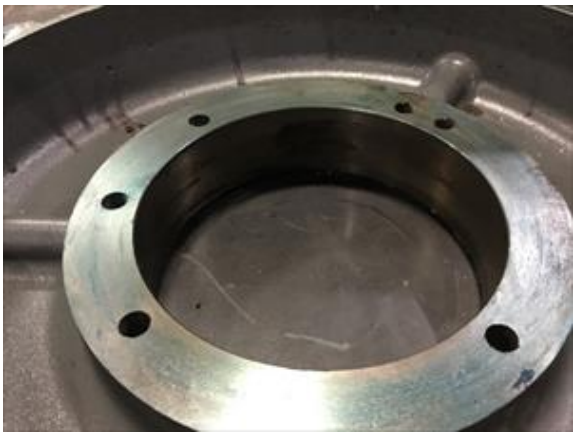
54.	Drive End Bearing Shaft Fit Condition		**(P) Pass**
55.	Opposite Drive End Bearing Shaft Fit		P89
	0 Degrees	60 Degrees	120 Degrees
	2.5598	**2.5597**	**2.5597**
	Tolerance is 2.5592-2.5597		

56.	Opposite Drive End Bearing Shaft Fit Condition		**(P) Pass**
57.	Shaft Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
	Pass	**Pass**	

Mechanical Fits- Bearing Housings

	58.	Drive End - Endbell Bearing Fit		P2
	0 Degrees	60 Degrees	120 Degrees	
	6.6952	**6.6952**	**6.6953**	

Tolerance is 6.6929-6.6939. Out of tolerance and requires bore and bushing.



	59.	Drive End - Endbell Bearing Fit Condition	**(F) Fail**
	60.	Opposite Drive End - Endbell Bearing Fit	P30
	0 Degrees	60 Degrees	120 Degrees
	5.5141	**5.514**	**5.5139**

Tolerance is 5.5118-5.5128. Out of tolerance and requires bore and bushing.

	61.	Opposite Drive End - Endbell Bearing Fit Condition	**(NA) Not Applicable**
	62.	Bearing Cap Condition	
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
	Pass	**Pass**	
	63.	End Bell Air Seal Fits	
	Drive End Air Seal	Opposite Drive End Air Seal	
	N/A	**N/A**	
	64.	List Machine Work Needed Below	

Bore and bush both end bells.
Weld turn and cut new key in drive end of shaft.

	65.	Technician	**Brandon Woodard**

Root Cause of Failure

66. Failure locations

None

67. Root cause of failure

None