



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

AC Inspection as Found

Big River Steel (004767)

2027 E State Highway 198
Osceola, AR 72370

FolderID: 152664
FormID: 20192033



AC Inspection - Rev. 2

Location: Default

Serial Number:

Hi-Speed Job Number: 152664

Manufacturer: Rossi

HP/kW: 12.7 (kW)

RPM: 1765 (RPM)

Voltage: 460

Current: 20.6 (Amps)

Phase: Three

Hz: 60 (Hz)

Service Factor: 1.15

Enclosure: TEFC

J-box Included: Complete

Coupling/Sheave: Coupling

Date Received: 04/25/2024

Bearing RTDs: No

Repair Stage: Teardown Inspection

Heaters: No

Winding Type : Random Wound

Bearing Type: Rolling Element

Priorities Found: 5 - High

57 - Good

Overall Condition



1. Report Date

04/25/2024

2. Nameplate Picture

P2



3. Photos of all six sides of the machine.

P3

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4. Describe the Overall Condition of the Equipment as Received
- Gear box was about 3 gallons over full
Seal on input side of gearbox was blown out into the space between the motor and gear box causing oil to fill the motor
Fill cap replaced with bolt on gear box
Motor had about 1 gallon of oil inside*
- Motor is a rewind
No machine work
New seals and bearings*

5. Distance from the end of the shaft to the Coupling/Sheave **inches**
- Shouldered out*

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 **0.0005 Inches**
10. Assembled Shaft End Play **0.001 inches**
11. Air Gap Variation <10% **no provision for measurement**
12. Lead Condition **(P) Pass**
13. Lead Length **8 Inches**
14. Does it have Lugs?, If so what is the Stud Size? **(Yes) Yes**
- 5/16*
15. Lead Numbers **1-6**

16. Stator Temperature Detector Rating and Function

Quantity	Rating	Quantity Passed
1	.575	1

17. Frame Condition **good**
18. Fan Condition **(P) Pass**
19. Broken or Missing Components
- Missing
Fan cover bolt
Encoder*

Initial Electrical Inspection



L2-L3 (Ohms)	0.934 Corr: 0.9...
L3-L1 (Ohms)	0.692 Corr: 0.7...
Max Delta R %	63.759
Coil 1 (Ohms)	0.538 Corr: 0.5...
Coil 2 (Ohms)	0.780 Corr: 0.7...
Coil 3 (Ohms)	0.154 Corr: 0.1...
Megohm Stat...	PASS No Test
Volts (V)	506
I(μA)	0.0137
Resist	36847
At 40°C	9949
PI Status	PIB Pass No Test
Nameplate	Application Results Summary

21. Winding Resistance

P21

1-2

1-3

2-3

.538

.780

.154

Test ID	Te...
024 1:14:...	480V w/o...
2011 11:...	Default
te	4/30/2024 11/23/2011
me	1:14:49 PM 11:30:00 AM
(Ohms)	1.318 Corr: 1.3...
(Ohms)	0.934 Corr: 0.9...
(Ohms)	0.692 Corr: 0.7...
Delta R %	63.759
1 (Ohms)	0.538 Corr: 0.5...
2 (Ohms)	0.780 Corr: 0.7...
3 (Ohms)	0.154 Corr: 0.1...

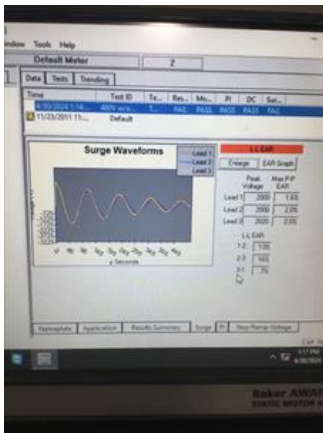
22. Perform Surge Test

(F) Fail

P22

4/30/2024 1:14:...	480V w/o...
11/23/2011 11:...	Default
Test Date	4/30/2024 11/23/2011
Test Time	1:14:49 PM 11:30:00 AM
At 40°C	9949
PI Status	DA Only No Test
Volts (V)	509
DA Ratio	1.7
PI Ratio	>2 OL
DC Status	PASS No Test
Test Type	Step-Voltage
Volts (V)	1996
I(μA)	0.0418
Resist	47756
At 40°C	12894
Surge Status	L-L EAR No Test

Test Type	Step-Voltage
Volts (V)	1996
I(μA)	0.0418
Resist	47756
At 40°C	12894
Surge Status	L-L EAR No Test
Peak Volt(V) L1	2000
Peak Volt(V) L2	2000
Peak Volt(V) L3	2020
Max P-P EAR(...)	1.6/2.0/2.0
EAR 1-2/2-3/...	13/16/7
Nameplate	Application Results Sum



23.	Number of Stator Slots	36	
24.	Stator Condition	rewind	
25.	Stator Thermistors/Ohms		
26.	Stator Overloads/Ohms		
Mechanical Inspection			
27.	Drive End Bearing Brand	ntn	
28.	Drive End Bearing Number-	6309 2rs c3	
29.	Drive End Bearing Qty.	1	
30.	Drive End Bearing Type	(Ball) Ball Bearing	
31.	Drive End Lubrication Type	(Grease) Grease Lubricated	
32.	Drive End Bearing Insulation or Grounding Device?	none present	
33.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	wavy washer	
34.	Drive End Bearing Condition	normal wear	P34



35.	Opposite Drive End Bearing Brand	ntn	
36.	Opposite Drive End Bearing Number-	6309 2rs c3	
37.	Opposite Drive End Bearing Qty.	1	
38.	Opposite Drive End Bearing Type	(Ball) Ball Bearing	
39.	Opposite Drive End Lubrication Type	(Grease) Grease Lubricated	
40.	Opposite Drive End Bearing Insulation or Grounding Device?	none present	
41.	Opposite Drive End Wavy Washer/Snap-Ring Other Retention Device?	2 snaprings	

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43. Drive End Seal 45-60-8

44. Opposite Drive End Seal 45-60-8

Rotor Inspection

45. Rotor Type/Material (Aluminum Bar) Aluminum Barred Rotor

46. Growler Test (Pass) Pass

47. Number of Rotor Bars 29

48. Rotor Condition good

49. List the Parts needed for the Repair Below

2- 46-60-8 lip seals
2- 6309 2rs c3 bearings
1- 80-100-10 lip seal
1- 120-150-12 lip seal
All lip seals need to be viton

50. Signature of Technician that Disassembled Motor Nigel Hill

Mechanical Fits- Rotor

51. Shaft Runout 0.0005 inches

52. Rotor Runout

Drive End Bearing Fit

Rotor Body

Opposite Drive End Bearing

0.0005

0.0005

0.0005



Good.

53. Coupling Fit Closest to Bearing Housing

0 Degrees

90 Degrees

120 Degrees



Good

54. Coupling Fit Closest to the end of the Shaft

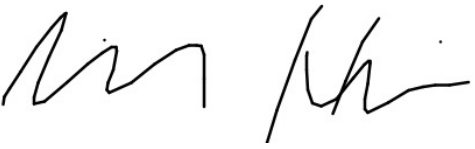
0 Degrees

60 Degrees

120 Degrees



Good

55.	Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
	1.7721	1.7721	1.772
	Tol. 1.7722-1.7718		
56.	Drive End Bearing Shaft Fit Condition (P) Pass		
57.	Opposite Drive End Bearing Shaft Fit		
	0 Degrees	60 Degrees	120 Degrees
	1.772	1.7719	1.772
	Tol. 1.7722-1.7718		
58.	Opposite Drive End Bearing Shaft Fit Condition (P) Pass		
59.	Shaft Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
	n/a	n/a	
Mechanical Fits- Bearing Housings			
60.	Drive End - Endbell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
	3.9375	3.9375	3.9374
	Tol. 3.9370-3.9379		
61.	Drive End - Endbell Bearing Fit Condition (P) Pass		
62.	Opposite Drive End - Endbell Bearing Fit		
	0 Degrees	60 Degrees	120 Degrees
	3.9376	3.9377	3.9377
	Tol. 3.9370-3.9379		
63.	Opposite Drive End - Endbell Bearing Fit Condition (P) Pass		
64.	Bearing Cap Condition		
	Drive End Bearing Cap	Opposite Drive End Bearing Cap	
	n/a	n/a	
65.	End Bell Air Seal Fits		
	Drive End Air Seal	Opposite Drive End Air Seal	
	n/a	n/a	
66.	List Machine Work Needed Below No machine work needed		
67.	Technician		Nigel Hill
			
Root Cause of Failure			
68.	Failure locations		
69.	Root cause of failure		