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: 154910
FormID: 23518109

AC Inspection - Rev. 2

Location:	Melt Shop
Serial Number:	

Hi-Speed Job Number:	154910
Manufacturer:	TECO Westinghouse
Product Number:	AEHH8P
Spec/ID #:	NP040C
Serial Number:	SHV7225006 014
HP/kW:	40 (HP)
RPM:	1770 (RPM)
Frame:	324TC
Voltage:	230 / 460
Current:	92.6 (Amps)
Phase:	Three
Hz:	60 (Hz)
Service Factor:	1.15
Enclosure:	TEFC
# of Leads:	12
J-box Included:	Complete
Coupling/Sheave:	None
Date Received:	02/18/2025
Bearing RTDs:	No
Stator RTDs:	No
Repair Stage:	Teardown Inspection
Rewind:	Yes
Heaters:	No
Winding Type :	Random Wound
Bearing Type:	Rolling Element

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

Overall Condition

1.	Report Date	**02/25/2025**

2. Nameplate Picture P2

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

Ode

	4.	Describe the Overall Condition of the Equipment as Received ***Motor failed winding resistance and meg so it is in need of a rewind***	
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?	**(No) No**
🔴	8.	Assembled Shaft Runout	**0.001 Inches**
	9.	Assembled Shaft End Play	**0.005 inches**
	10.	Air Gap Variation <10%	**no provisions**
🟢	11.	Lead Condition	**(P) Pass**
	12.	Lead Length	**8 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**	P16

17.	Does motor have internal fan?	**(No) No**	
18.	Broken or Missing Components	**none**	

Initial Electrical Inspection

19.	Insulation Resistance/Megger	**3.61 Megohms**	P19

20.	Winding Resistance		P20

1-2	1-3	2-3
.119	**.161**	**.165**

Failed winding resistance

21.	Perform Surge Test	**(F) Fail**	
22.	Number of Stator Slots	**48**	

23.	Stator Condition	**acceptable**	
24.	Stator Thermistors/Ohms	**na**	
25.	Stator Overloads/Ohms	**na**	

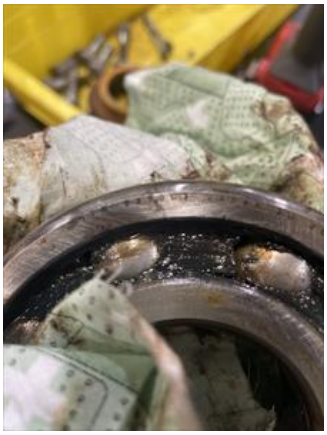
Mechanical Inspection

26.	Drive End Bearing Brand	**skf**	
27.	Drive End Bearing Number-	**6312**	P27

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 present**	
32.	Drive End Wavy Washer/Snap-Ring Other Retention Device?	**lock collar**	P32

33.	Drive End Bearing Condition	**good**	
34.	Opposite Drive End Bearing Brand	**nin**	

35.	Opposite Drive End Bearing Number-	**6310 c3**	P35



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?	**lock collar** P40

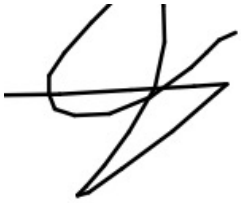
41.	Opposite Drive End Bearing Condition	**good**
42.	Drive End Seal	**none**
43.	Opposite Drive End Seal	**none**

Rotor Inspection

44.	Rotor Type/Material	**(Squirrel Aluminum) Squirrel Cage Aluminum Die Cast**
45.	Growler Test	**(Pass) Pass**
46.	Number of Rotor Bars	**56**
47.	Rotor Condition	**rotor is in acceptable condition**
48.	List the Parts needed for the Repair Below	

1- 6312
1- 6310

49.	Signature of Technician that Disassembled Motor	**Joe Shurtz**



Mechanical Fits- Rotor

50.	Shaft Runout	**0.001 inches**

51. Rotor Runout

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

52. Drive End Bearing Shaft Fit

0 Degrees	60 Degrees	120 Degrees
2.3626	**2.3626**	**3.3627**

Tolerances are 2.3628-2.3623

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

0 Degrees	60 Degrees	120 Degrees
1.9687	**1.9688**	**1.9688**

Tolerances are 1.9690-1.9686

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

56. Shaft Air Seal Fits

Drive End Air Seal	Opposite Drive End Air Seal
pass	**pass**

Mechanical Fits- Bearing Housings

57. Drive End - Endbell Bearing Fit

0 Degrees	60 Degrees	120 Degrees
5.1184	**5.1186**	**5.1186**

Tolerances are 5.1181-5.1191

58.	Drive End - Endbell Bearing Fit Condition	**(P) Pass**
59.	Opposite Drive End - Endbell Bearing Fit	

0 Degrees	60 Degrees	120 Degrees
4.331	**4.3312**	**4.331**

Tolerances are 4.3307-4.3316

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

61. Bearing Cap Condition

Drive End Bearing Cap	Opposite Drive End Bearing Cap
good	**good**

62. End Bell Air Seal Fits

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

63. List Machine Work Needed Below

No machine work needed

64. Technician **Joe Shurtz**

Root Cause of Failure

65. Failure locations

Motor has a failure in the windings

66. Root cause of failure

Motor grounded out