

# RECENT FINDINGS IN JSW, ANJAR



**Asset Name:** Screw Down Blower 1

**Total Number of Sensors Installed:** 2

**Sensor location:**

Motor Drive-End and Non Drive End,

**Fault Diagnosed:** Unbalance, Minor misalignment

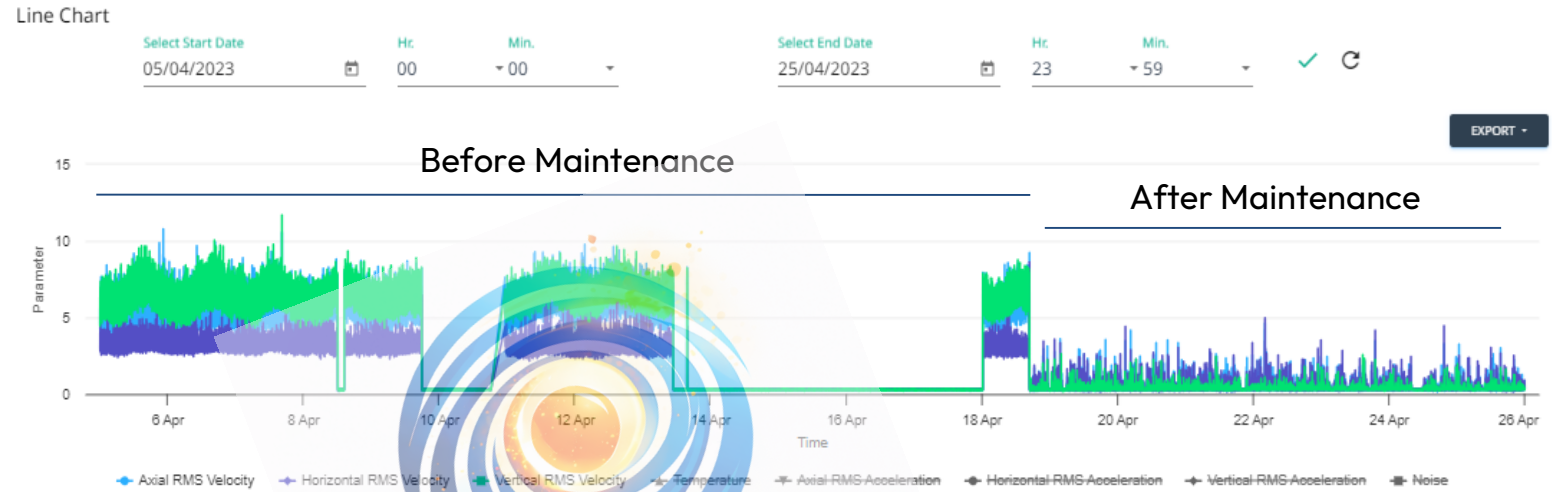
**Final Action** - Fan impeller cleaning done which removed unbalance weight

**Savings:** Reduced downtime and maintenance cost of further deterioration that would have happened on the fan impeller and shaft

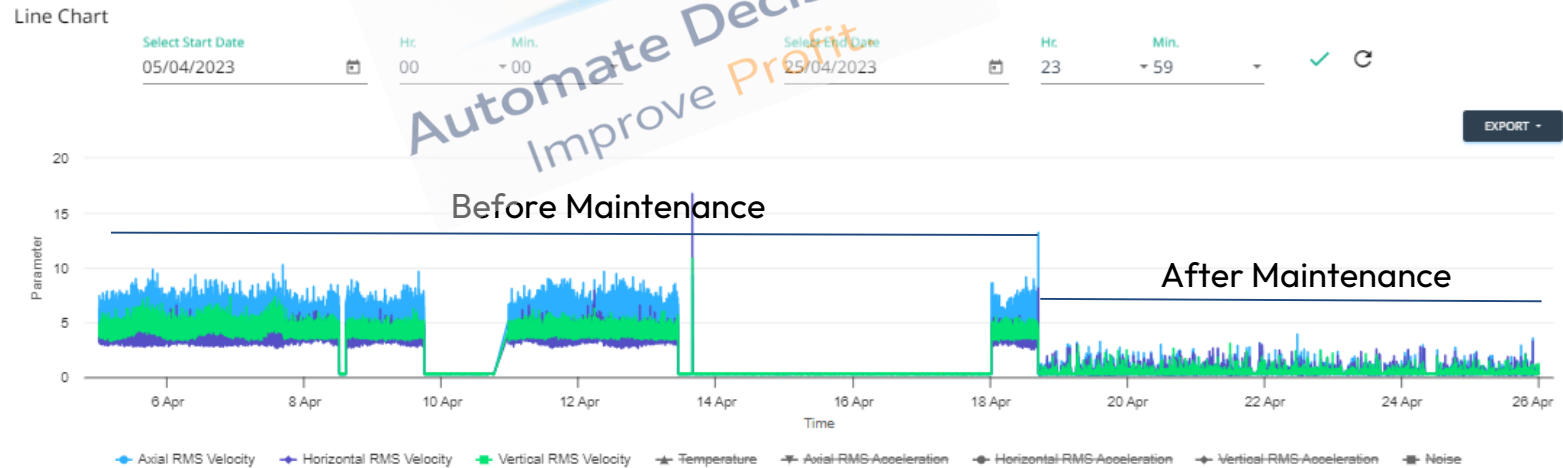
# OVERALL VIBRATION DATA- Vibration Velocity

DIRECTION	BEFORE	AFTER
HORIZONTAL	4.1	1.5
VERTICAL	6.7	0.8
AXIAL	6.0	1.9

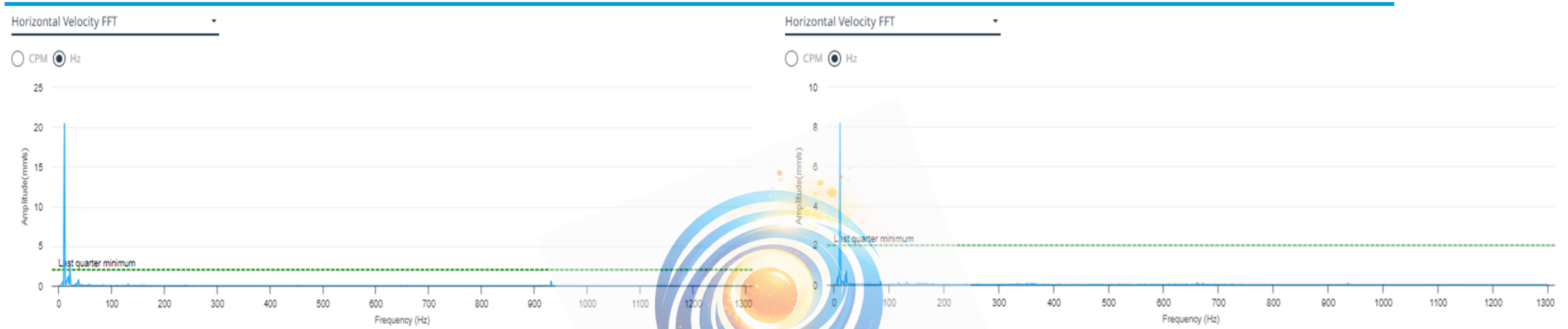
DIRECTION	BEFORE	AFTER
HORIZONTAL	3.4	0.8
VERTICAL	5.1	0.9
AXIAL	5.8	1.2



Motor DE Trend



Motor NDE Trend



SCREW DOWN BLOWER 1

## Observation

- As per ISO-10816 standard Vibration level are in the **MARGINAL** condition.
- As per Analysis we have found that there is an Imbalance and alignment issue on the machine

## Recommendations

- Kindly inspect the Blower FAN for dust accumulation on Fan blades and alignment status as well along with these please ensure the tightness of the foundation both of the motor.

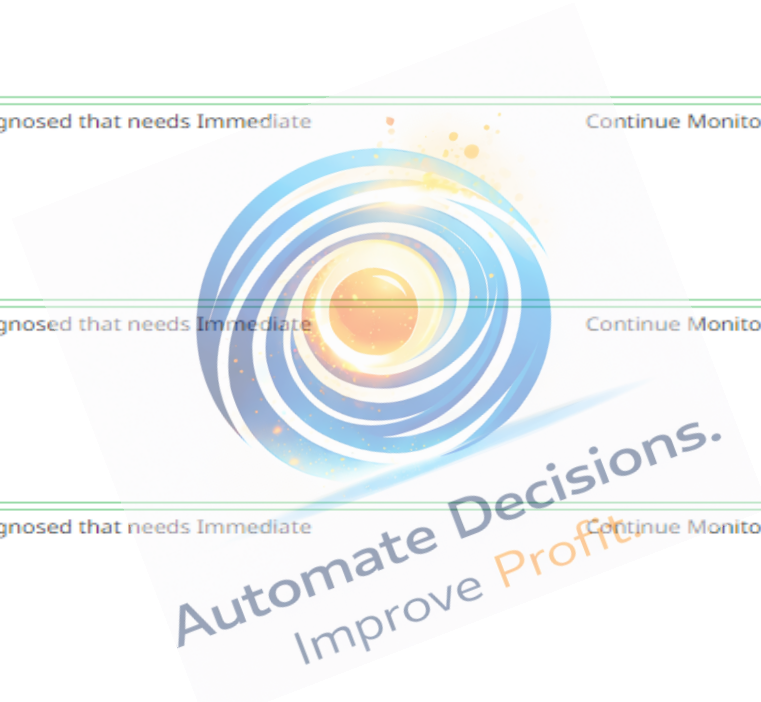
§After Above correction has taken place we'll again monitor the trend of the machine. Keep the machine under observation for further improvements.

<p>Fault Type: <b>Parallel Misalignment</b></p> <p>Status: <b>Medium Risk</b></p> <p>Time: <b>14/04/2023 @ 05:30 am</b></p>	<p><b>Motor Drive End</b> Parallel Misalignment <b>Risk Level:Medium</b> Pattern of parallel misalignment fault observed at lower amplitude. The synchronous energy at 2x and 1x of running speed in radial direction increased.</p>	<p><b>Motor Drive End</b> Parallel Misalignment Continue monitor the fault vibration trend for any significant increase and Check the alignment of coupling face parallel and coincident to the shaft and check the tightness of foundation bolt, if planning for any maintenance activity.</p>
<p>Fault Type: <b>Parallel Misalignment</b></p> <p>Status: <b>Medium Risk</b></p> <p>Time: <b>13/04/2023 @ 05:30 am</b></p>	<p><b>Motor Drive End</b> Parallel Misalignment <b>Risk Level:Medium</b> Pattern of parallel misalignment fault observed at lower amplitude. The synchronous energy at 2x and 1x of running speed in radial direction increased.</p>	<p><b>Motor Drive End</b> Parallel Misalignment Continue monitor the fault vibration trend for any significant increase and Check the alignment of coupling face parallel and coincident to the shaft and check the tightness of foundation bolt, if planning for any maintenance activity.</p>
<p>Fault Type: <b>Parallel Misalignment</b></p> <p>Status: <b>Medium Risk</b></p> <p>Time: <b>12/04/2023 @ 05:30 am</b></p>	<p><b>Motor Drive End</b> Parallel Misalignment <b>Risk Level:Medium</b> Pattern of parallel misalignment fault observed at lower amplitude. The synchronous energy at 2x and 1x of running speed in radial direction increased.</p>	<p><b>Motor Drive End</b> Parallel Misalignment Continue monitor the fault vibration trend for any significant increase and Check the alignment of coupling face parallel and coincident to the shaft and check the tightness of foundation bolt, if planning for any maintenance activity.</p>



**Error Reporting by Auto Diagnostic and Recommendation algorithm before fan impeller cleaning.**

<p>Fault Type: <b>No Fault</b> Status: <b>Low Risk</b> Time: <b>24/04/2023 @ 05:30 am</b></p>	<p>No Significant Fault diagnosed that needs Immediate Action</p>	<p>Continue Monitor Vibration Trend</p>
<p>Fault Type: <b>No Fault</b> Status: <b>Low Risk</b> Time: <b>23/04/2023 @ 05:30 am</b></p>	<p>No Significant Fault diagnosed that needs Immediate Action</p>	<p>Continue Monitor Vibration Trend</p>
<p>Fault Type: <b>No Fault</b> Status: <b>Low Risk</b> Time: <b>22/04/2023 @ 05:30 am</b></p>	<p>No Significant Fault diagnosed that needs Immediate Action</p>	<p>Continue Monitor Vibration Trend</p>
<p>Fault Type: <b>No Fault</b> Status: <b>Low Risk</b> Time: <b>21/04/2023 @ 05:30 am</b></p>	<p>No Significant Fault diagnosed that needs Immediate Action</p>	<p>Continue Monitor Vibration Trend</p>
<p>Fault Type: <b>No Fault</b> Status: <b>Low Risk</b> Time: <b>20/04/2023 @ 05:30 am</b></p>	<p>No Significant Fault diagnosed that needs Immediate Action</p>	<p>Continue Monitor Vibration Trend</p>



**Auto Diagnostic and Recommendation algorithm after fan impeller cleaning.**