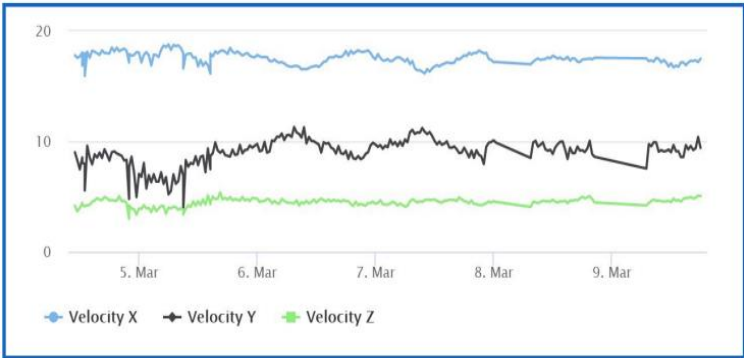




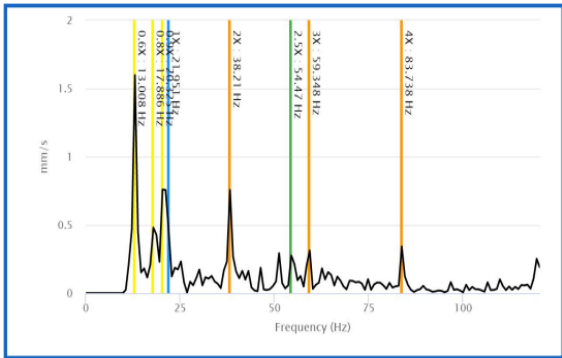
A leading packaging manufacturer added 22 hours of production time with remote diagnostics and digital reliability solutions.

Industry: Packaging for beverage industry
Production Capacity: 700 tonnes of glass containers per annum, with 40ml – 1000 ml container capacity.
Equipment: The blower fans responsible for blow drying glass containers.
Business Case: The sub-optimum performance or frequent breakdowns of blower fan affected the float or curve of the final product. There was a need for real-time condition monitoring and advanced diagnostics to perform root cause analysis to pinpoint problem areas and plan corrective actions.

- Challenges-**
- Single failure was causing multiple failures across the assembly line.
 - Repeated loss of production hours due to equipment shut-down.
 - Structural and rotational looseness issues remaining undiagnosed and damaging the final product.



Triaxial vibrations observed on the blower fan motor NDE



Low frequency harmonics indicating assembly looseness

Solution Deployed –

With a cloud-enabled, remote diagnostic and condition monitoring technology, the plant maintenance team was able to identify the root cause of frequent blower-fan breakdowns and malfunctions. Low-frequency harmonics of $-0.6x$ to $0.8x$ along with high frequency harmonics of $4x$, $6x$, and $8x$ being observed in the spectrum confirmed structural looseness as the critical fault in the overall assembly. Maintenance teams were recommended to perform looseness checks and required tightening. Impending damage to the shaft connecting the motor and blower fan was avoided, ensuring the continuity of operations in a safe and efficient manner.

Business Impact **22+ Hours**
of unexpected downtime saved