



## USING MOTION AMPLIFICATION TO DETECT MECHANICAL LOOSENESS

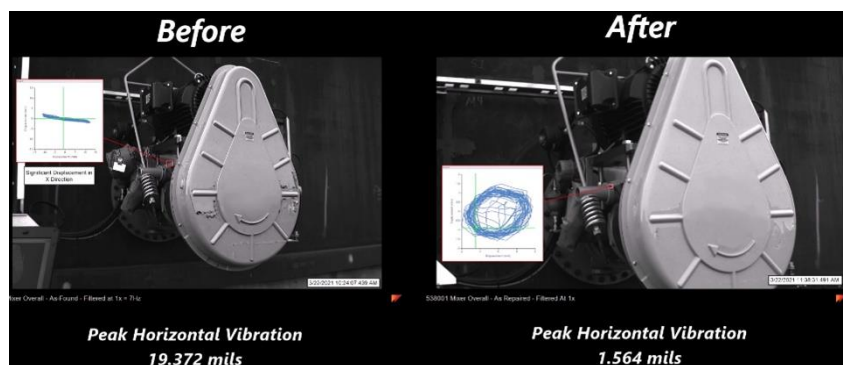
### THE CHALLENGE

Side entry mixers in a crude oil tank farm were exhibiting significant vibration. Site operations were concerned that the vibrations could accelerate fatigue on the mounting connections which would elevate the probability and risk of failure.

### SOLUTION & OUTCOME

Westpower's Reliability Engineering Services team was contracted to investigate and remedy the vibration. The team leveraged state-of-the-art technology - Motion Amplification, to help diagnose the issue. Westpower's reliability engineer quickly identified an area of mechanical looseness within the system and pinpointed it to a worn-out component. The team completed a successful replacement of the part and confirmed the system no longer showed looseness.

In one short trip, the problem was identified and subsequently rectified. Vibrations of the system were reduced dramatically, and the reliability assurance of the client's assets was significantly increased.



Quickly identify, analyse and solve tough problems with Westpower's unparalleled capabilities & expertise

## WESTPOWER HELPS YOU REALIZE YOUR POTENTIAL

### WHY MOTION AMPLICATION?

- Visualize equipment vibration
- Get recommended solutions from Westpower experts quickly
- Westpower's diagnosis tool of choice for low frequency and high amplitude vibration
- Filter data and visualize movement at specific frequencies to find the source of a problem
- Accurately measure subtle displacements

**92%**

REDUCTION  
IN VIBRATION

**Increased  
Reliability  
Assurance**

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