

ADVANCED SYSTEM ANALYSIS AND DIAGNOSTICS TESTING

INTRODUCTION

ProPump Services has the experienced engineers equipped with the tools to identify and solve your most complex pump, drive and system related problems.



TYPICAL SCOPE OF WORK

A Diagnostic Specialist will visit the site, review the pump operating and maintenance history, interview operation and maintenance personnel, and perform required specialized testing such as:

Modal Analysis

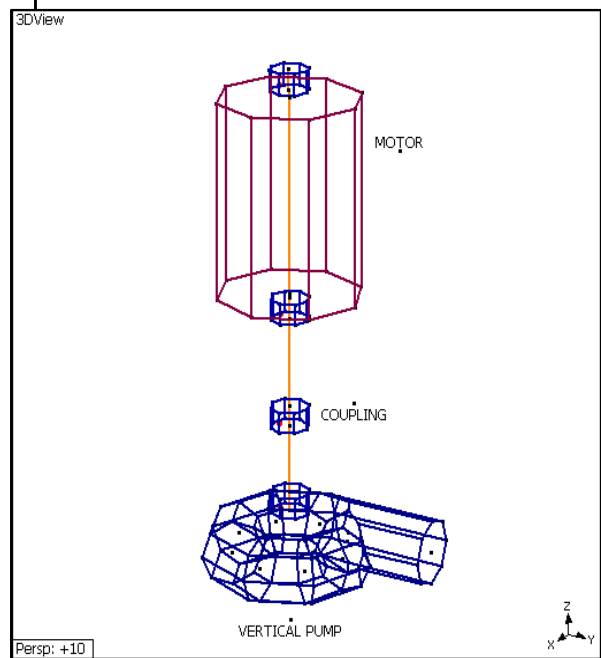
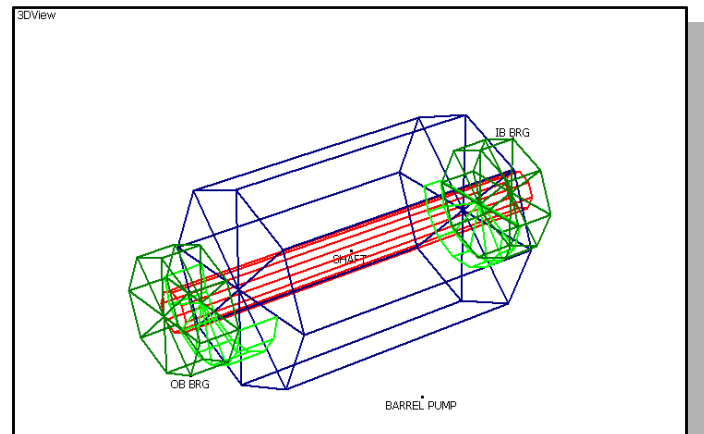
Modal Analysis is used to characterize resonant vibration in machinery and structures.

Resonant vibration can cause or contribute to a wide variety of machinery problems which include:

- Inability to maintain tolerances
- Accelerate component wear
- Premature fatigue
- Unacceptable noise levels

Operating Deflection Shape (ODS)

An ODS is the simplest way to see how a machine or structure moves during its operation, either at a specific frequency or at a moment in time. These shapes are used to determine resonant vibration as well as internal and external excitation forces.



ODS Models

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Other specialized testing includes:

Advanced Vibration and System Analysis

- Impact Testing
- High Resolution Analysis
- Bearing/Gear Analysis
- Run-up and Coastdown Testing
- Cross Channel Amplitude/Phase
- Orbit Plotting
- Pressure Pulsation Testing

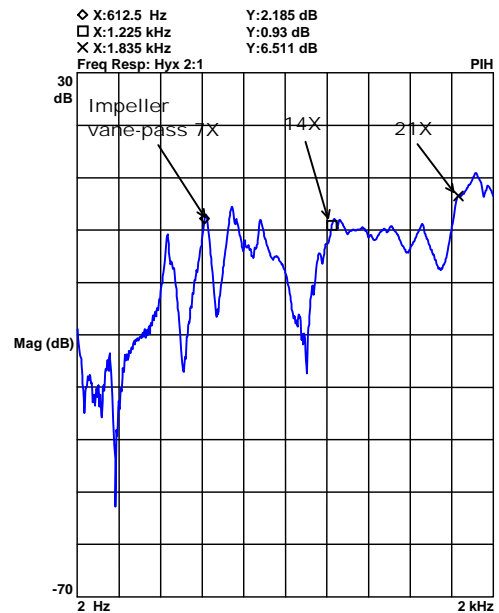
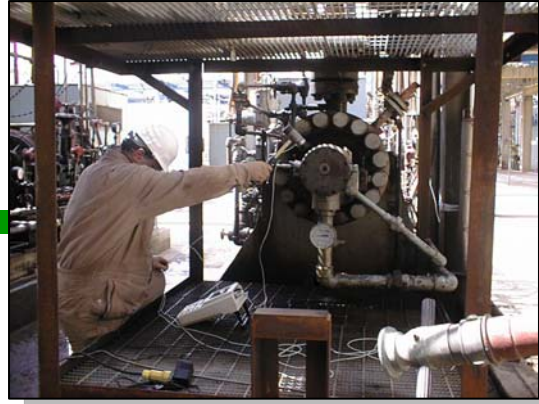
TYPICAL INSTRUMENTATION

- Multi-channel vibration spectrum analyzer
- Post Processing Modal and ODS Software
- Calibrated Impact Hammer
- Infrared Temperature Measurement
- Digital Camera

DELIVERABLES

Advanced Vibration Analysis Report will include:

- Historical Background, Comments and Recommendations
- Testing Methods, Test Data, Discussion of Data
- Digital Movies™ – MS AVI file to view the Modal and ODS animation



Resonance Frequency Response

