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TSI and Vibration Monitoring Systems - Commissioning Plan

Key Points:-

1. A project plan has to be jointly prepared at the outset of the order with the Client and MIL in agreement and commitment to the outcome.
2. The **Guide to System Installation and Commissioning of VMS** is given below. This illustrates the main steps in the installation process.
3. Refer to the **Project Plan Spreadsheet** for multiple sites.
4. If MIL has prepared system drawings approved by the Client then these will be the basis for the installation.
5. Sensor mounting pads should be prepared or installed prior to machinery erection. MIL can advise details on this or offer consultancy services on-site to identify optimum points.
6. MIL to undertake installation of systems where possible.
7. MIL Engineers to commission the VMS units at site after (Item4) above is completed.
8. The Client to devise a site schedule and give MIL advance notice (14days) for commissioning of system.
9. Standard Warranty is 12 months from delivery but will be extended to two years if MIL Engineers undertake the commissioning.
10. If MIL Engineers are required to revisit the sites in the event that Instrument Systems are incorrect or not ready, then the Consulting daily rate applies.

condition management solutions

Guide to System Installation and Commissioning of MIL VMS

PREPARATION

1. Check that MIL systems delivered to site are in the same condition as left the MIL Works. If damaged it should be returned under an insurance claim. Do not try to 'fix' units, this usually is cause for unreliability in future.
2. Prepare Sensor mounting areas on bearing check points.
3. Mount Sensor Pads either by screwing or welding.
4. If a vibration signature analysis can be undertaken then this will indicate the optimal sensor position and transmission route of the vibration signal.

INSTALLATION

1. Mount Sensors on Pads ensuring sensor cables are secured near the sensor. Terminate cables at site Junction Boxes.
2. Connect bulk multi-core cable from Junction Box to main control room where instrument Panel is located.
3. Erect Instrument Panel after ensuring cut-outs are made if using existing panels.
4. Position main bulk cable to Panel area.
5. Install MIL Monitors and Relay Expander etc in Panel along with cable trunking and independent terminal strips etc.
6. Fit Strip Chart Recorder to Panel (if same site) if applicable.
7. Wire MIL Monitor to Relay Expander and Recorder, using field terminal strips.
8. Connect site Sensors via bulk cable to MIL monitor terminal Strips.
9. Connect Power Cable to Relay Expander and Recorder if applicable; If fan and light is installed to connect these as well.
10. Check if start-up attenuation signal input is required, if so, connect.
11. Advise MIL that site is ready for commissioning (7days notice required).

COMMISSIONING

1. Undertake a Sensor loop check of each measurement channel.
2. Set up individual Channel alarm & trip levels.
3. Test each channel by activating site sensors with a System Tester where practical or by signal injection.
4. Once the Turbine is commissioned and running, check that vibration levels and the Recorder is working satisfactorily.
5. Client to sign off the system when functioning correctly.

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