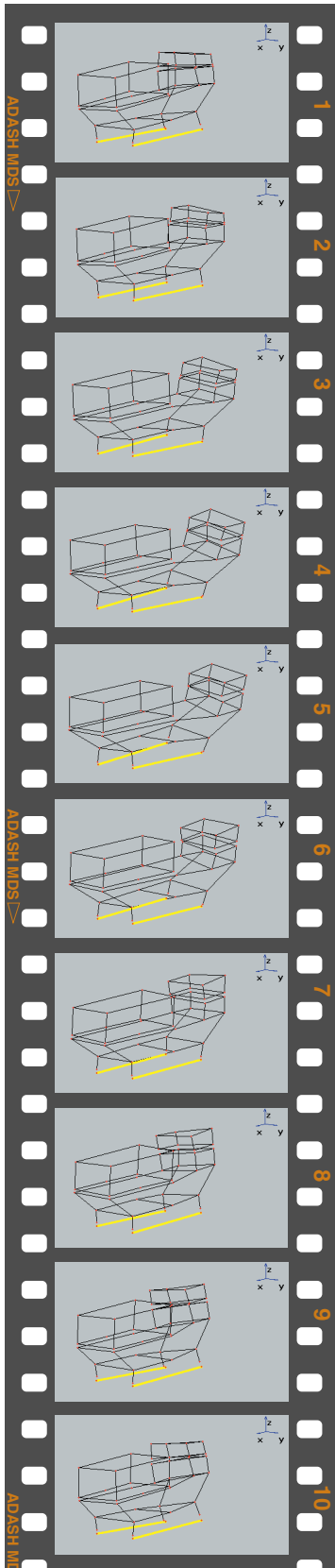




MDS - Machine Deflection Shapes

is the most sensitive and fastest tool to reveal machine condition change and its cause



The Software system MDS is already in its fourth generation of development.

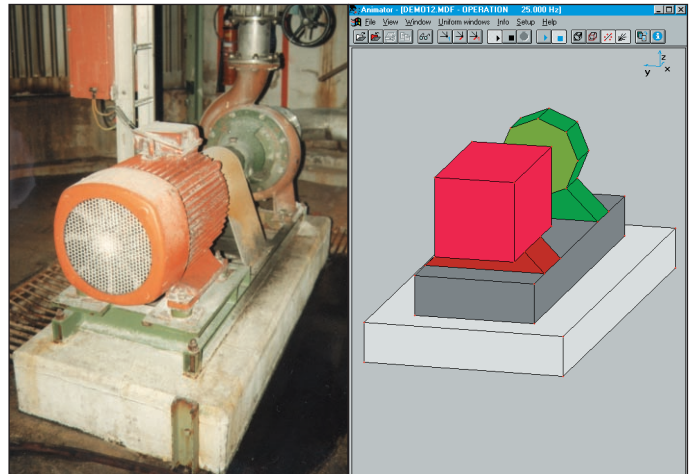
The first version of MDS was created in 1989 and from that time it has been continuously developed and updated. The first version ran under MS-DOS, the next version under Windows 3.1 and the present version was created for Windows 95 and Windows NT.

Why is measurement of Machine deflection shapes so effective and why is it so popular in the vibration diagnostic field? There are two answers, which represent two different views.

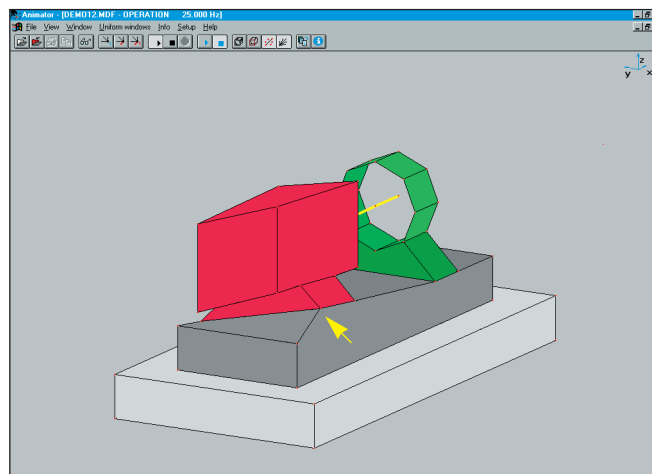
For diagnostic personnel, MDS represents the ability to evaluate vibration behaviour and as a consequence the whole operational condition. The measurement is not restricted to bearings and similar parts, instead measurement points are uniformly placed on the whole machine and its frame. Only in this way can you reveal the very tricky types of failure, for instance, resonance problems. For people in maintenance departments MDS is the most effective and the fastest tool for revealing any condition change and its cause.

The second view on the MDS system is that it provides a simple display of the machine's condition. So simple, that people who are not from a maintenance or vibration background have little difficulty in understanding it. This provides supporting evidence for the maintenance engineer when justifying maintenance projects to management and decision makers. Today hardly any manager is willing to study tables or graphs and, as time for explanations that repair is necessary is limited before failure might occur, this evidence is vital. Results from measurement, which is displayed by MDS is therefore the perfect tool. The

simple animated pictures of the machine and its behaviour represent an excellent way to demonstrate the need of repair or show the result of repair.



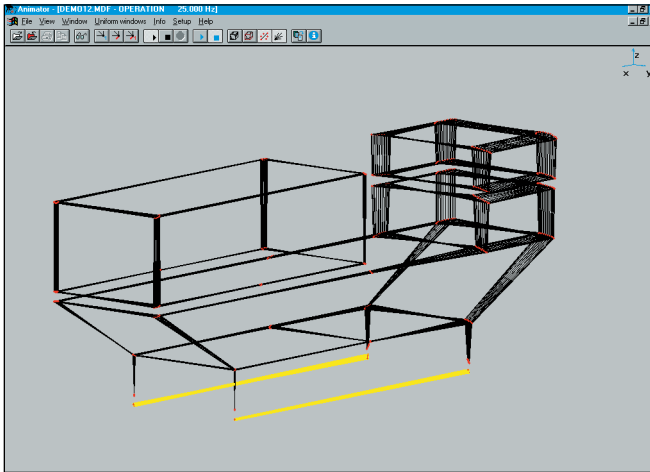
The real machine and simple geometry model created by MDS. Only simple measurements are needed to make the model move.



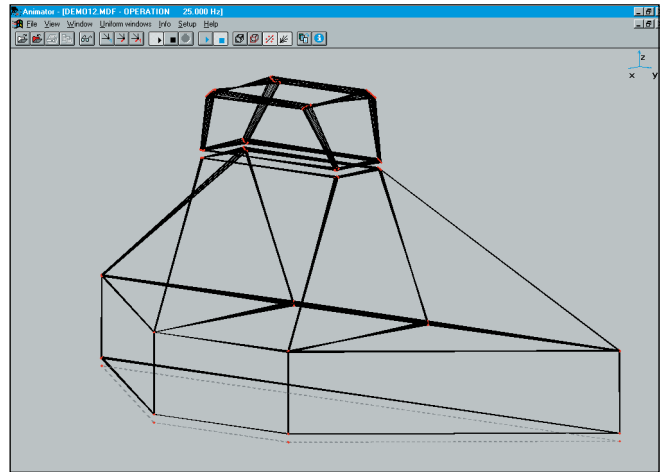
Machine motion seen on the PC screen is a faithful copy of the machine's operational behaviour. The measurements show the cause of problem - looseness of the frame.

The only one difference between normal vibration measurement and machine deflection shapes measurement is the need to measure more points on the machine. The use of the MDS method is not limited to experts. It is one way to evaluate data, which can be used by everybody with a basic knowledge of vibration measurement. Adash Limited organises special courses connected with MDS measurement. There are demonstrations and all questions and aspects of MDS method are explained.

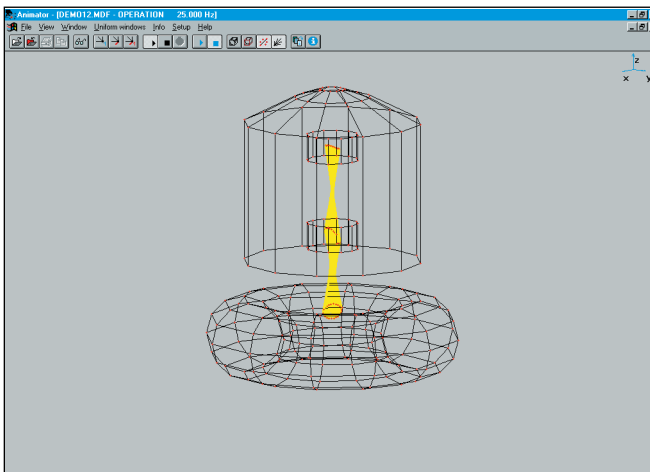
MDS is a very sensitive tool for many types of machine failure which generate vibration in low and middle frequency bands. MDS measurement does not operate in bearing failures (high frequency). All common failures as imbalance, looseness, misalignment or a resonant problem can be indicated by MDS measurement.



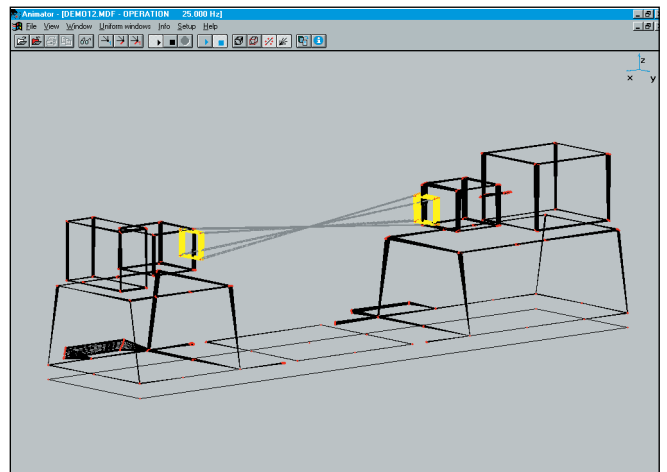
The model shows a motor and a gearbox of a conveyor belt. Loosened connection of the base girders with supports of the machine can be detected by using MDS.



A pedestal of a mill fan in a power station block. Looseness in the bearing stand is evident after using MDS.



Trajectory of shaft vibration of turbine and generator in hydro-power station.



The geometrical model of a primary ventilator in a CHP station block displays an electric drive, two bearing housings and a fan section above the metal pedestal. The measurement disclosed incorrect fastening of the whole machine pedestal into the building floor.

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