

Significance of Vibration Diagnosis of Rotating Machines during Commissioning: Few Case Studies

Jyoti K. Sinha

*Vibration Laboratory, Reactor Engineering Division, Bhabha Atomic Research Centre,
Mumbai 400 085*

Abstract

Satisfactory operation of any machine is always important for plant safety, increased productivity, and low downtime and maintenance overhead. Such requirements could usually be fulfilled by proper design and installation of machines at site. Design part is perhaps more matured in most cases, however installation may play a significant role in the dynamic behaviour even for properly designed machines. Vibration based condition monitoring and codes are well known and widely followed for most of the conventional rotating machines like Pumps, Motors, Turbines, etc. However many rotating machines often used in different processing and power plants are not of conventional types where condition monitoring is also important, but the codes and the diagnostic techniques may not directly be applicable. The vibration measurements and analysis during commissioning is important to resolve the problems related to the machine installation, if any, and identify the parameters for future condition monitoring of different kinds of machines. It has been experienced that the vibration diagnosis during their commissioning give significant information for the proper installation vis-à-vis the vibration parameters to look for and the locations of measurements for future condition monitoring. The paper presents few such case studies of conventional and unconventional rotating machines.

* Corresponding Author. Tel.: +91-22-25591501/02; Fax: +91-22-25505151

Email address: vilred@magnum.barc.ernet.in