

FOUNDATION INSPECTION & REPAIR, NEW DESIGN, RETROFITS

Machine Foundations are a Unique Type of Structure

This is due to nature of the applied loads and foundation performance requirements. Foundation problems that go unresolved can affect equipment performance and increase maintenance costs as components may wear out quicker. Solving machine foundation problems requires a deep understanding of the machine and rotor dynamics, structural dynamics, soil properties, and materials science. It's no surprise that many firms do not offer these services.

Common Signs of a Foundation Problem

Symptoms of a foundation problem manifest in many ways including: machine anchor distortion, increased vibration in the foundation/machine, vibration alarms, machine trips, reduced machine bearing life, frequent machine re-alignment, concrete crack development/growth, grout cracking or creep, displaced concrete, increased foundation settlement, and pipe support distortion.

Why engNovex?

We have over 140 years of combined experience designing new and repairing operating machine foundations globally. We have worked on combustion turbines, steam turbine-generators, ID and FD fans, ball mills, pumps, and reciprocating compressor foundations. We have encountered just about every possible machine foundation problem. We work with the various Codes and Standards from ACI, ASCE, BS, DIN, and Eurocode. EngNovex also actively participates on ACI Committee 351 - Foundations for Equipment and Machinery.

What We Do

Inspection - Working with the owner's representative, we will review information about the machine and conduct an onsite inspection of the foundation. Depending on the nature of the problem, the appropriate data (vibration data, crack width and distribution, corrosion) will be collected during the inspection to characterize the condition.

Assessment/Recommendation – Using the collected data we will assess the condition of the foundation and the operability of the equipment. We will develop the root cause and recommended actions to resolve the condition. Since we do not offer construction services, clients can be assured we are not trying to sell them on unnecessary repairs.

Repair Development – We will develop the necessary drawings and specifications, backed by engineering calculations to enable the constructor to implement the foundation repair and get you back online.

Support the constructor in the implementation phase – We will support the owner's contractor in the implementation of the repair starting with pre-planning, and onsite support during execution and closeout.

Delivering Value

Our broad experience and deep toolbox enable us to efficiently deliver to our clients construction-friendly solutions to resolve their machine foundation issues.

