Pile Driving Monitor

The Berminghammer "Pile Driving Monitor" or "PDM" is a device that measures the impact velocity of a pile driving hammer. The impact velocity (or energy) can be used to verify, monitor, and record the performance of a pile driving hammer.

Using two magnetic proximity switches, the PDM senses the ram position and calculates the velocity just prior to impact. The PDM calculates the kinetic energy by using the equation:

$$E = \frac{1}{2}mv^2,$$

*where **m** is the ram mass, and **v** is the impact velocity*

The proximity switches are mounted directly on the side of the hammer in a pre-machined port. All Berminghammer hammers manufactured since 1990 are equipped with such ports.

Other data stored by the PDM include:

- Job name and location
- Pile number and pile type
- Hammer model
- Time driving starts and stops
- Total number of blows
- Hammer blow rate (blows per minute)
- Impact velocity
- Impact energy

The above data is easily downloaded from the PDM to a computer via a standard serial or USB cable. Once downloaded to a computer, the data can be imported to a spreadsheet or other program for analysis.
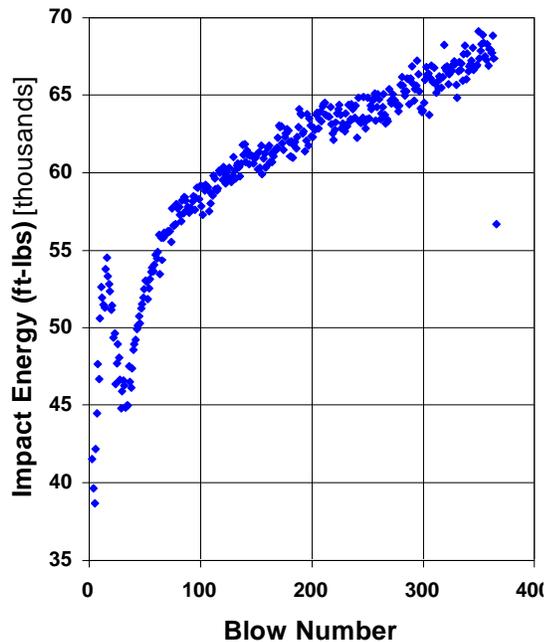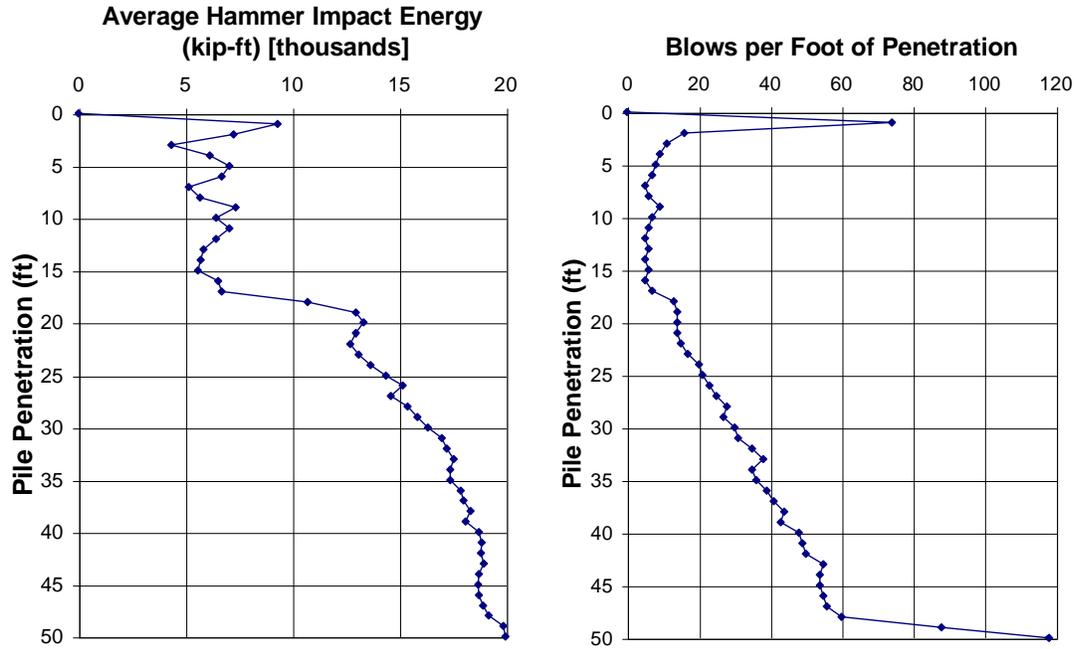
Using the pile penetration logger the PDM will store the average impact energy per unit of penetration as well as the number of blows per unit of penetration. Data can be exported to a spreadsheet and displayed as follows:

Average Hammer Impact Energy (kip-ft) [thousands]

Blows per Foot of Penetration

The PDM comes with a rugged carrying case, suitable for site work as well as airline travel.

Originally, developed to prove the superior performance of the Berminghammer line of diesel pile driving hammers, the PDM is now used more frequently as a quality control and quality assurance tool for contractors, consultants, and governments.

When combined with a Berminghammer Pile Driving Hammer, with infinitely controllable stroke, the PDM offers the ultimate in pile driving quality and controlable energy.