Full line of Pile Driving Analyzer® sensors with wireless transmission

Dynamic Foundation Testing has been the test of choice for reliable and simple evaluation of the load bearing capacity of all types of deep foundations for several decades. The test requires the installation of reusable sensors (accelerometers and strain transducers) into the foundation, the acquisition of sensor data by a Pile Driving Analyzer® (PDA), and the analysis of the data by a qualified engineer. Recent technological breakthroughs in this type of testing include real-time data transmission from the test site to an office and, most recently, wireless sensors.

Wireless sensors replace the cables that connect the sensors to the PDA with a dedicated radio transmitter. The wireless option is available with the PDA model PAX, by Pile Dynamics, Inc.
"It's the future ... it is really helpful and quite amazing" said Aksan Kawanda, an engineer with Geotech Engineering in Jakarta, enthusiastically describing the use of the wireless sensors on a near-shore jetty, part of a Coal Fired Power Plant in Indramayu, West Java, Indonesia. Several of the jetty supporting piles were dynamically tested with a PDA model PAX using wireless sensors. The accelerometers and strain transducers on the near shore pile transmitted data to the PDA, which remained safe and dry on shore a considerable distance away (transmission range is typically 100 meters). A similar setup was used in the Port of Koper, Slovenia, to the delight of Gorazd Strniša, principal of the company SLP in that country (fig. 1). In addition to the clear benefits for projects such as ports, jetties, and others where the setup of equipment can be challenging, the elimination of cables significantly reduces weight, an advantage for air transport of the testing equipment. Pile Dynamics has now expanded its line of wireless PDA sensors to include piezoelectric (PE) accelerometers (Fig. 2). While piezoresistive (PR) accelerometers have been available with wireless transmission option for over a year and are suitable for any testing application, some PDA testers prefer using PE accelerometers. Pile Dynamics products are available directly from its Cleveland OH headquarters or through its network of worldwide representatives.

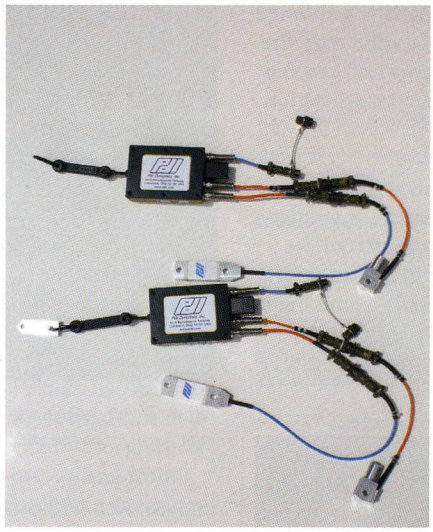


Fig. 2. *The line of wireless PDA sensors is expanded to include piezoelectric (PE) accelerometers (© Pile Dynamics)*

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Fig. 1. *Gorazd Strniša, who leads the company SLP in Slovenia, using the wireless Pile Driving Analyzer® (PDA)*