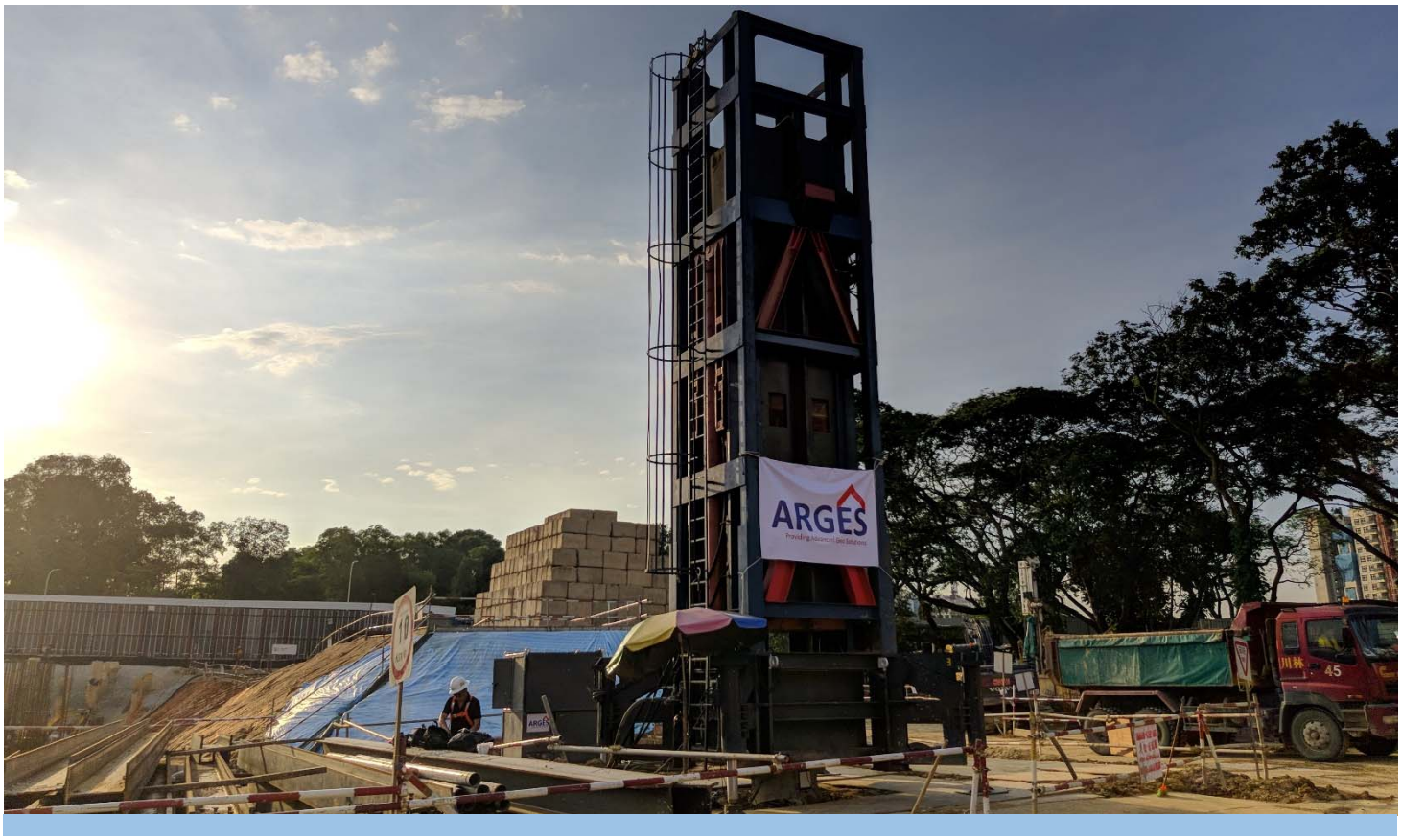
# RAPID LOAD TEST




ARGES, partnered with Japan rapid load test expert, Professor Takaaki Miyasaka to provide the rapid load test service together with strain gauges instrumentation and test correlation with conventional static load test (kentledge). This testing method is proven to be reliable and the work productivity increased significantly.

Data measured will be analysed by using Unloading Point Method (UPM) in accordance to the procedures stated in the ISO 22477-10:2016 (en) standard.

## ARGES RLT SYSTEM:

1. Self-Lifting Impact System c/w Anti-Rebound Device
2. Enhanced Spring Block
3. High Speed Data Acquisition
4. Full Range of Heavy Impact System (From 14 Ton – 120 Ton)
5. Max. Test Load ~ 3000 Ton -45m pile length

## TEST BENEFITS:

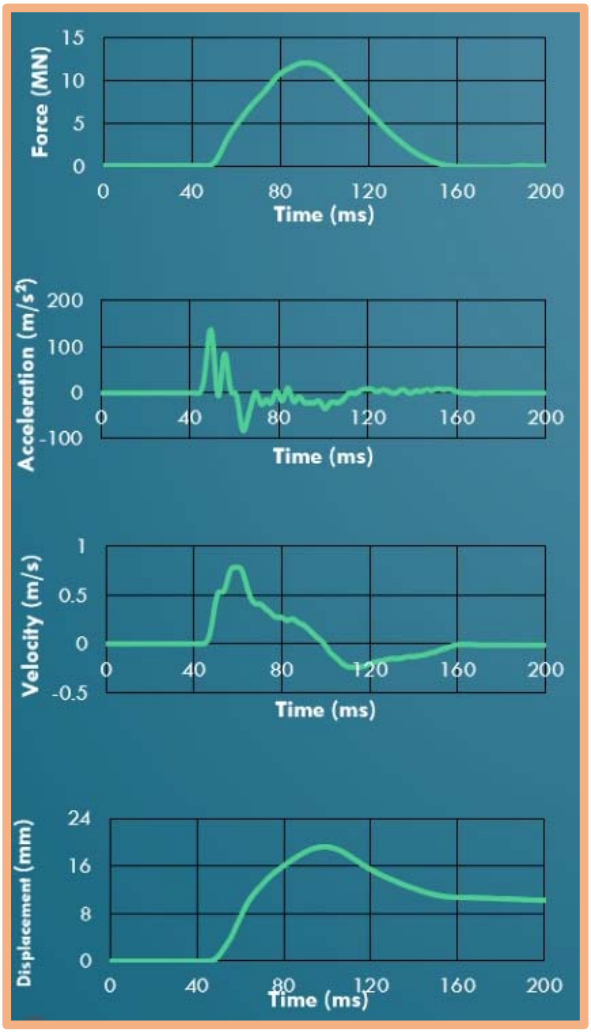
1. Mobile, Fast Setup
2. Highly Productive
3. Reliable Results
4. No Pre-Select Working Test Pile
5. Reduced Cost
6. Onshore or Nearshore Project

Reference Standards: i) ISO 22477-10:2016(en) ii) ASTM D7383-10

For more information, please contact: intouch@arges.com.sg

# RAPID LOAD TEST
# TEST RESULT & INTEPRETATION METHOD

## FIELD DATA

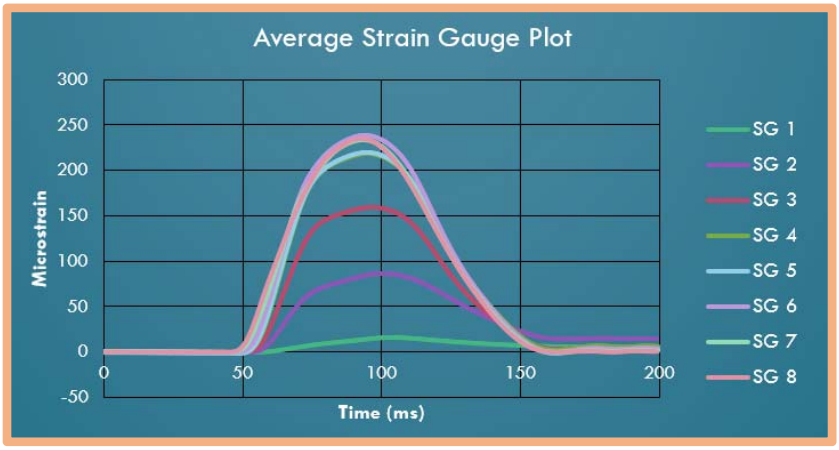



Rapid load test results can be analysed by using the Unloading Point Method (UPM). This method starts with determination of the so-called unloading point where the velocity of the pile is zero. The method is written as:

$$R_{c,ic,tw\text{-}max} = F_{c,tw\text{-}max} - (m \times a_{tw\text{-}max})$$

Where

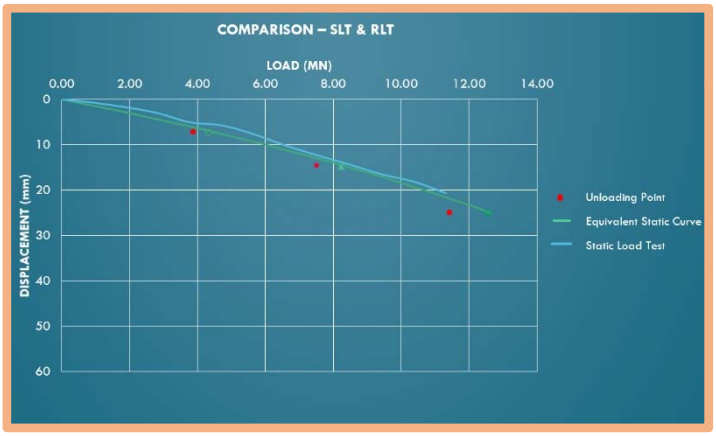
| | |
|---|---|
| $a_{tw\text{-}max}$ | is the acceleration measured during the test at $t_{w\text{-}max}$ |
| $F_{c,tw\text{-}max}$ | is the magnitude of the forced measured during the test at $t_{w\text{-}max}$ |
| $R_{c,ic,tw\text{-}max}$ | is the inertia of corrected pile resistance at $t_{w\text{-}max}$ |
| M | is the mass of the pile and any other components contributing to inertial resistance of the pile |
| $t_{w\text{-}max}$ | is the time some time after the commencement and before the end of the load application phase of the test where the pile velocity effectively becomes 0 m/s or a value close to this |





Demonstration to Housing Development Board (HDB) & Building Construction Authority (BCA), Singapore

## STATIC LOAD TEST & RAPID LOAD TEST COMPARISON

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