

Estimation of Vibration Levels

$$v = \frac{C \sqrt{W}}{r}$$

v = Estimated ppv in mm/s

C = a parameter related to soil type and hammer

W = The hammer energy per blow or cycle (Joules/blow or J/cycle)

r = The horizontal distance from the piling operation to point of interest

| Driving method | Ground Conditions | C |
|----------------|--|------|
| Impact | Very stiff cohesive soils, dense granular media, rock fill with large solid obstructions | 1.0 |
| | stiff cohesive soils, medium dense granular media compact fill | 0.75 |
| | Soft cohesive soils, loose granular media, loose fill organic soils | 0.5 |
| Vibratory | All soil conditions | 0.7* |

*based upon EC3

Input

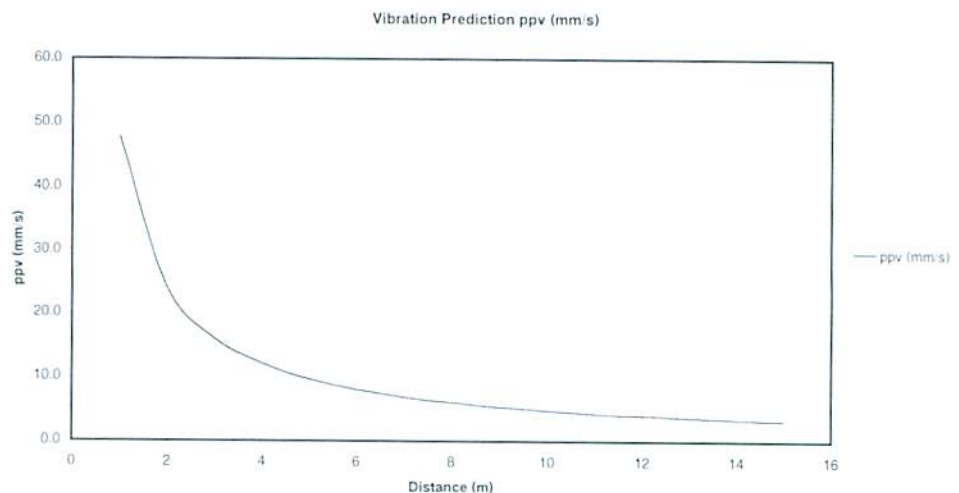
C = 0.7

W = 4665 Joules / cycle

r = 5 m

Formula ppv v = 9.6 mm/s

| Distance (m) | ppv (mm/s) |
|--------------|------------|
| 1 | 47.8 |
| 2 | 23.9 |
| 3 | 15.9 |
| 4 | 12.0 |
| 5 | 9.6 |
| 6 | 8.0 |
| 7 | 6.8 |
| 8 | 6.0 |
| 9 | 5.3 |
| 10 | 4.8 |
| 11 | 4.3 |
| 12 | 4.0 |
| 13 | 3.7 |
| 14 | 3.4 |
| 15 | 3.2 |



This information is offered in good faith and is for information only. Predicted levels may be exceeded in practice.