



Communiqué to the construction industry

Sizes of Mobile Plant Outrigger Bases Correction to Formula

20 April 2006

The correct use of outriggers is essential for the safe operation of mobile plant including cranes and concrete boom pumps. To ensure crane stability outriggers must be founded on suitable timber, or equivalent, packers which distribute the maximum applied loads to the soil.

Information previously published in "A Guide to Rigging", a combined WorkSafe Victoria and WorkCover NSW publication, contains advice on the design and installation of crane outrigger bases. A formula on Page 103 of the Guide that calculates the required base sizes is incorrect.

The published formula is dependant on the maximum permissible bearing pressure of the soil and the loads being supported, but does not take into account the total weight of the crane.

The correct formula is:

$$\text{Area (m}^2\text{)} = 0.65 \times \frac{(\text{C}_M + \text{L})}{\text{V}}$$

C_M = Total mass of crane (kN)

L = Total mass of load (kN)

V = Maximum permissible bearing pressure of soil. (kPa)

To find the length of a square outrigger base, find the square root of the area ($\sqrt{\text{Area}}$).

A handwritten signature in black ink, appearing to read "G. Thomas".

GEOFF THOMAS
Construction & Utilities Director
WorkSafe Victoria