
BAN on Hand-dug Caissons

Hand-dug caissons have been used for many years and have had a disturbing history of high accident rate and health hazards to workers.

2. Government has enacted the Buildings (Amendment) Ordinance 1995 on 19 January 1995 to ban the use of hand-dug caissons.

3. "Hand-dug caisson" is defined in Section 2(1) of the Buildings Ordinance as any foundation or earth-retaining structure, or part thereof, the construction of which includes the excavation of a shaft in the ground by means of digging carried out by any person inside the shaft with or without the aid of machine tools. A new section 16(1A) empowers the Building Authority (BA) to refuse to give approval to any plans of building works where they include the construction of a hand-dug caisson. Exemption may be granted only if it can be demonstrated to the satisfaction of the BA personally that the following circumstances exist :

- (a) the depth of the hand-dug caisson does not exceed 3 metres and the diameter of the inscribed circle of the hand-dug caisson is not less than 1.5 metres; or
- (b) for the site concerned --
 - (i) the use of a hand-dug caisson is the only practical construction method; or
 - (ii) there is no other safe engineering alternative.

Examples would be narrow or steeply-sloping sites where difficult access or insufficient working space makes it not possible or not safe to use machine tools.

4. In these exceptional circumstances, the authorized person/registered structural engineer must specify stringent safety requirements in the method statement for the building works and ensure that the registered contractor is fully aware of and complies with all safety requirements. In this respect, the provisions of the Construction Site (Safety) Regulations administered by the Commissioner for Labour should be observed.

5. The booklet "Guidance Notes on Hand-dug Caissons", published by the Hong Kong Institution of Engineers, offers advice on good practice. Reference should also be made to the "Code of Safe Working Practices for Hand-dug Caissons", published by the Occupational Safety & Health Council.

6. A grace period of 12 months is given for adjustment to the new legislation. With effect from 1st February 1996, the BA will not give approval to plans involving hand-dug caissons unless there were exceptional circumstances as specified in section 16(1A) of the Buildings Ordinance.

7. Meanwhile, I have urged authorized persons and registered structural engineers to avoid using hand-dug caissons in the interest of safety for workers. Loss of life or limb is too high a price to pay.

8. A similar practice note has been issued to authorized persons and registered structural engineers.

(Helen C P Lai YU)
Building Authority

Ref. : BD GP/BREG/C/14

First issued May 1993

This revision February 1995 (AD/SE)

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