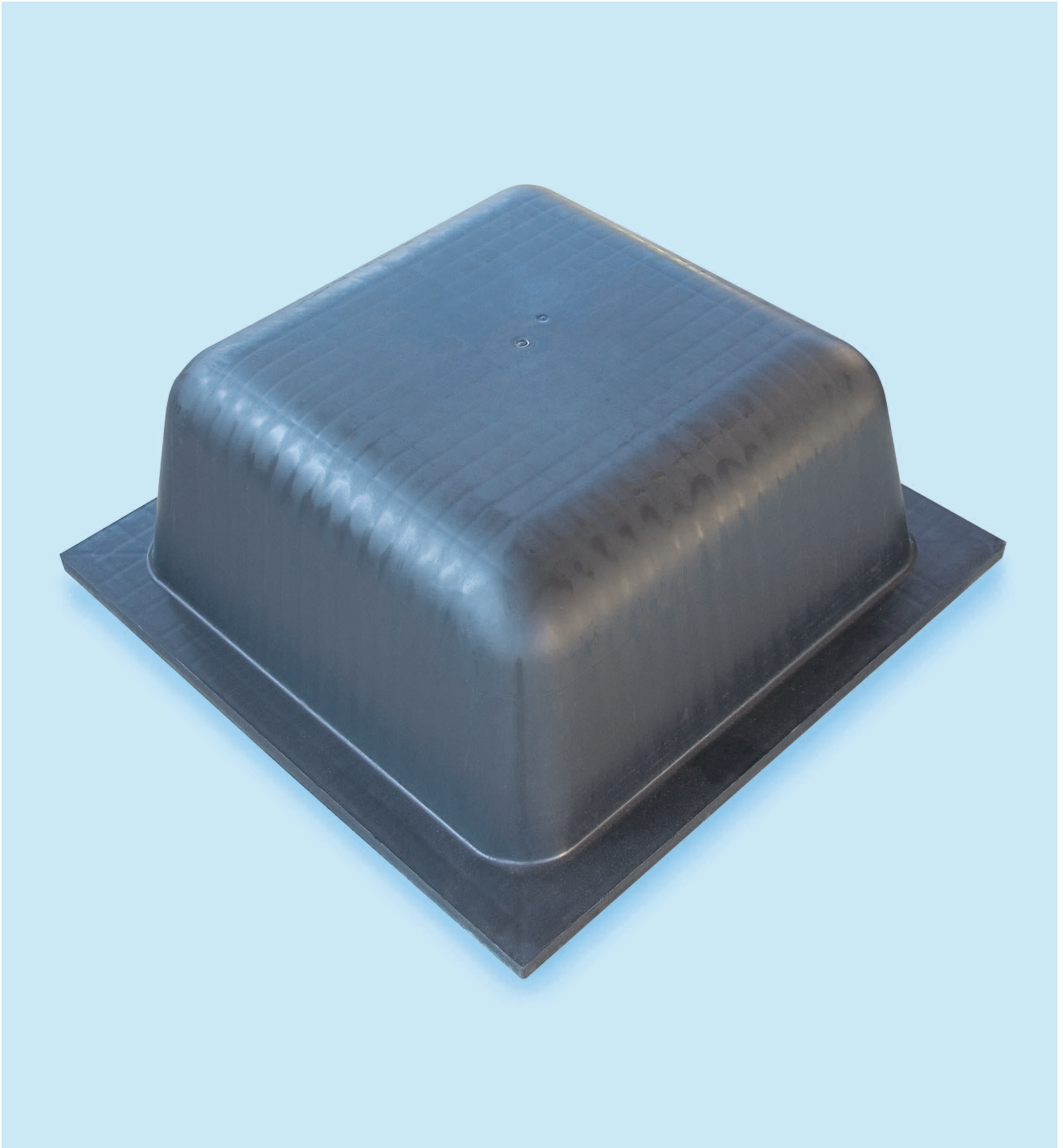




MAINTENANCE & REPAIR

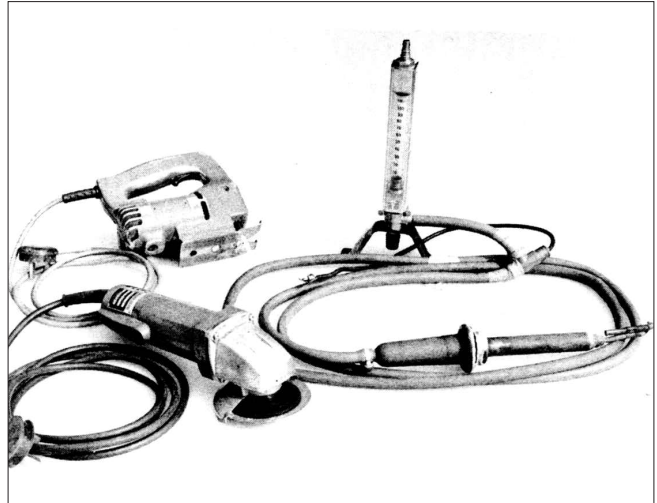


ATEX - The only name for in-situ ribbed floors

Repairs - on site or in a depot

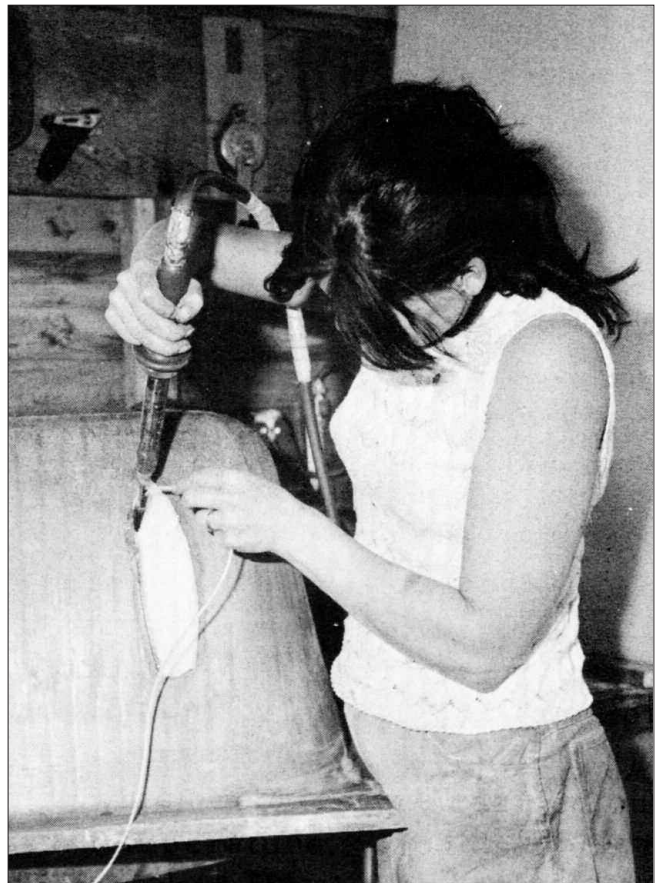
Equipment Required

- 1 Plastic welding kit, gun, etc
- 2 Polisher
- 3 Jigsaw
- 4 Polypropylene Sheet (not shown)
- 5 Plastic Welding Rod (not shown)
- 6 Reciprocator/Compressor (not shown)



Method of Repair

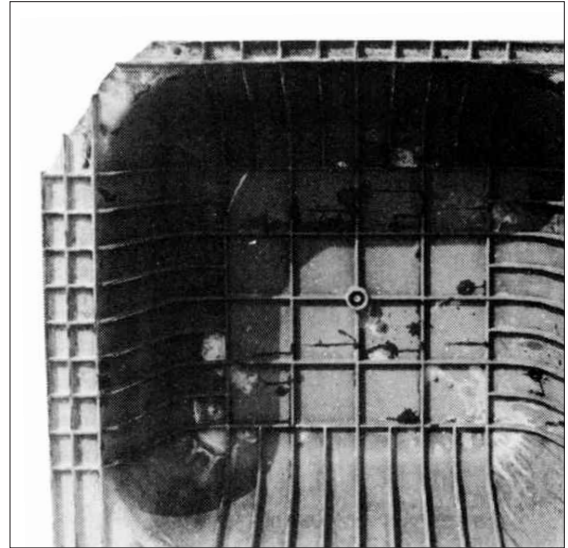
Repairs are carried out by low temperature plastic welding. The workshop in which repairs are carried out should be at a constant warm temperature. Moulds to be repaired (and the materials being used for the repairs) should be kept in this workshop for a few hours before repair. In cases where the mould is cracked, but no material has been lost, the two edges of the crack are welded together with the welding rod from both inside and outside the mould. The crack is then rubbed off clean on the outside with the polisher. If however, a piece of material has been broken from the mould, then a full patching process must be used. First a piece of material is cut from the polypropylene sheet to approximately the same shape as the missing section. This should be slightly smaller than the hole itself to allow for the weld. The replacement piece of material is inserted and held in position with a clamp from outside. The welding process is then carried out as shown in the illustration above. (The welding rod used can be seen being fed into the welding gun).



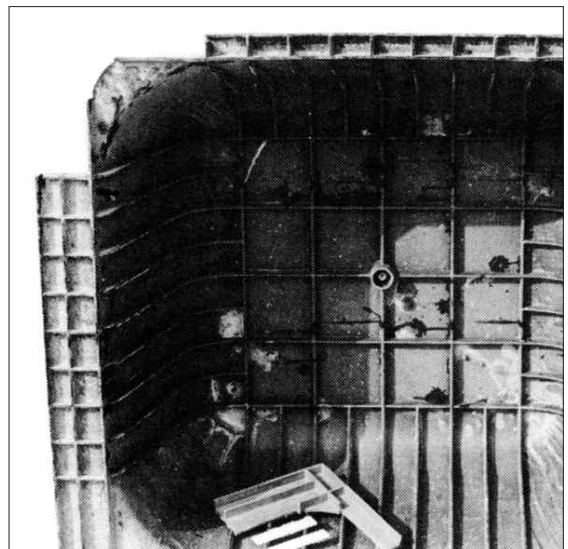
ATEX

Severe damage

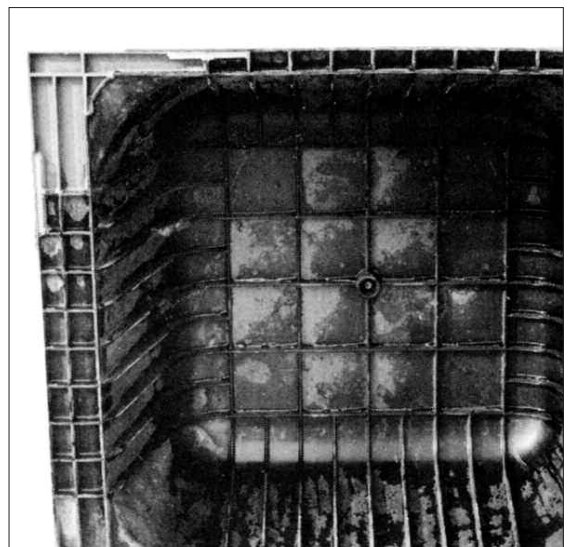
Even severely damaged moulds can be repaired and moulds which have had corners broken off for example (as shown in photograph right) are not beyond repair.



Any damaged parts are cut away to provide the simplest shape for effecting the repair. The new piece to be inserted is cut off from an old damaged mould. Extra pieces of polypropylene material are also used as splints to reinforce the repair.



After some practise, it will be possible to determine whether a damaged mould is capable of being repaired or whether the cost would be uneconomic. In reality, very few moulds are totally scrapped since even those very badly damaged can be cannibalised to provide parts for other less damaged moulds.



Cleaning - in a depot

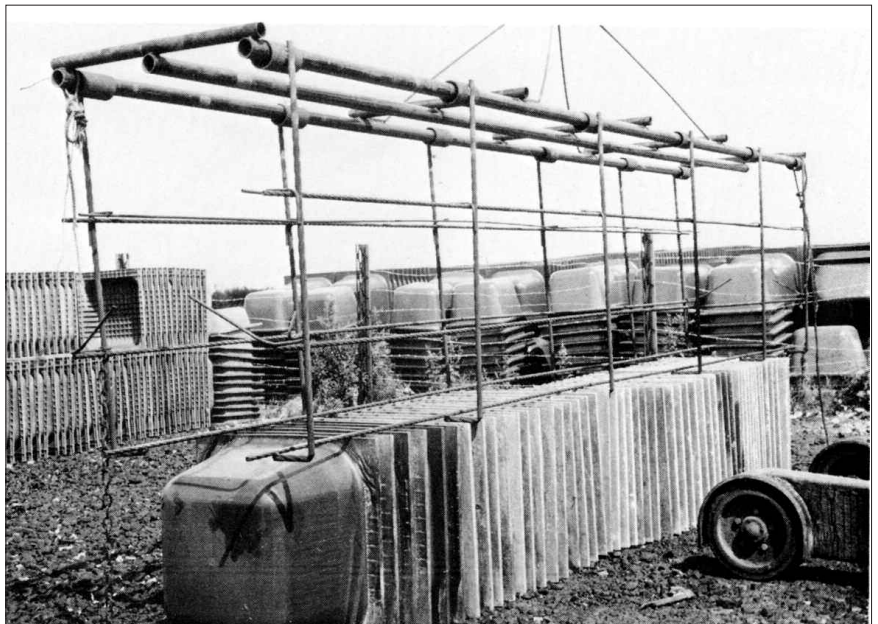
When hiring out moulds or using on multiple contracts, owners will find it essential to supply good clean moulds.

The purpose of this operation is to remove any concrete adhering to the surface of the mould after use.

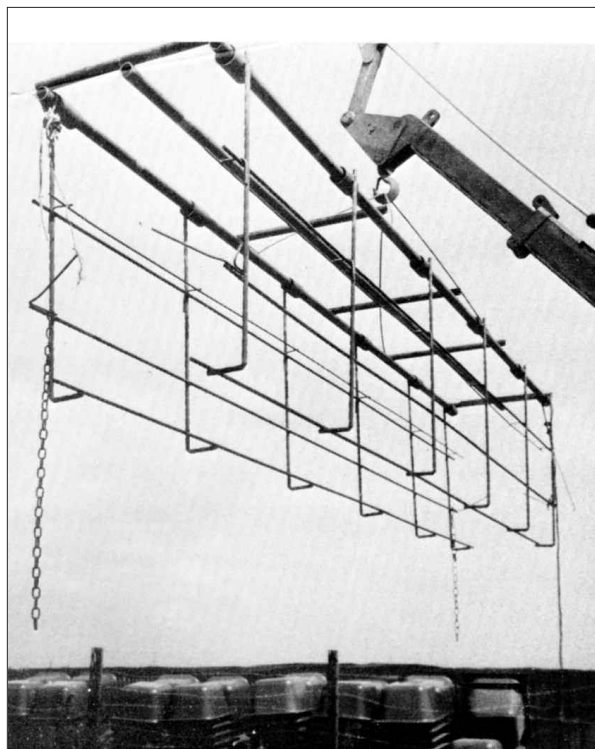
The main piece of equipment used is a fibreglass or plastic tank with a smooth internal surface but well stiffened from the outside to withstand the impact of moulds being dipped into the acid contained in the tank.

The acid used is a non-foaming hydrochloric acid diluted one part acid to one part water.

1. The moulds are lined up on the ground as shown right. (The number depends on the size of the tank).



2. A frame (fabricated of high yield steel to withstand the attack of the acid as long as possible) is then used to pick up the moulds with a mobile crane, or whatever lifting equipment is available.



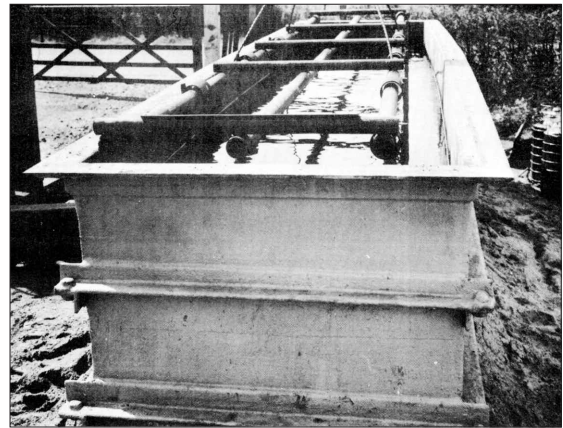
ATEX

Cleaning cont.

3. The moulds are then lifted and lowered into the acid tank, as seen in photograph to the right..



4. In the photograph right, it can be seen that the frame and the moulds are now fully submerged in the acid solution. The frame is then released from the crane and left in position around the moulds.



The moulds are kept submerged for half an hour or longer, depending upon the strength of the acid solution. The solution becomes weaker gradually in use but can be strengthened from time to time by adding more acid.

When moulds are lifted, they should be suspended over the tank for about three minutes to allow any excess acid to drain back into the tank.

5. To remove the last traces of the acid the moulds should either be thoroughly hosed down or transferred to another tank (same dimensions as the first) but containing clean water, and dipped several times. Ideally there should be a constant water flow through this rinsing tank. Finally a check should be made to ensure that all concrete has been removed from the webs before storage. The moulds are stored vertically, on edge, to prevent their distortion. See photograph right.

