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CONCRETE FLOORS IN COLDROOMS

SCHEDULE FOR LOWERING TEMPERATURE - JANUARY 2004

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Concrete floors in coldrooms – Schedule for lowering temperature.

Initial Cure:

Upto 100mm * total thickness, allow 28 days at ambient with no deviation in temperature caused by refrigeration equipment testing etc.

No foot traffic for five days.
 No forklift traffic for 28 days.

* Over 100mm thickness add five days per 25mm extra thickness.

Note:

Concrete gains strength slowly over a prolonged period of time and it is generally assumed that a satisfactory working strength is not achieved until at least 28 days have elapsed from the laying of the concrete. Therefore any loadings or temperature changes which may have adverse effects must be avoided for this minimum period of time.

Cool Down:

At any time after 28 days, the following procedure must be adopted.
 (In very hot weather refer to contractors office).

Day 1	Down to 10' C (Subject to ambient conditions).
Day 2	Down to 6' C
Day 3	Down to 2' C
Day 4	}
Day 5	}Hold @ 1' C
Day 6	}
Day 7	Down to - 2' C
Day 8	Down to - 4' C

Thereafter a drop of 4' C per day is permissible.

On no account must the cooling down period be accelerated as this will cause problems with the floor slab.

In Service:

Even when running sudden variations in temperature should be avoided and a maximum variation of + or – 5' C per day is recommended. If the floor is allowed to rise above freezing point it is advisable to adopt the cooling down schedule again on re-cooling after any length of time.

Concrete always shrinks on drying and will, of course, also shrink as a result of temperature reduction. This will induce stress at any obstruction or intrusion into a straight boundary ie columns, door openings etc. These stresses may well result in localized cracking. Should these cracks occur they are unlikely to be structurally detrimental and can be treated by grouting in order to reinstate the appearance.

Information is given for guidance only and may change without notice.