Introduction to Flake Ice Machine

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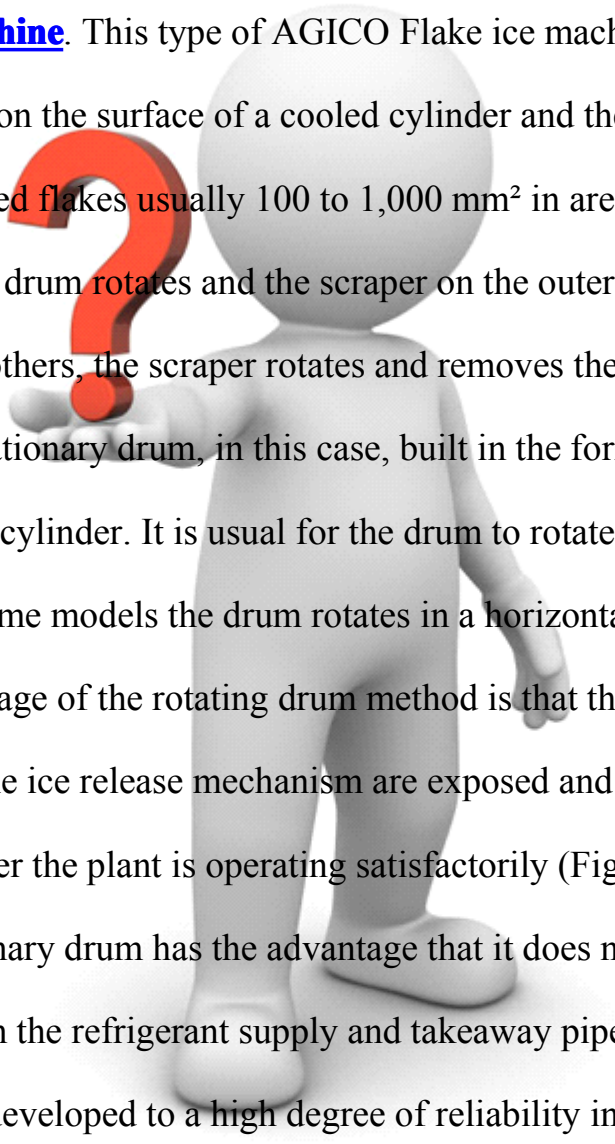
Flake ice is a kind of ice which consist of irregular shaped pieces. These pieces can vary in size from very small, almost snow like particles up to fairly large pieces of ice 50mm across and in thickness from 2mm up to 3mm.

Application

- **Boats and Marinas**
- **Fish Market**
- **Lab**
- **Universities**
- **Healthcare**
- **Concrete mixing plants**

How a flake ice machine works?



Flake ice machine. This type of AGICO Flake ice machine forms ice 2 to 3 mm thick on the surface of a cooled cylinder and the ice is harvested as dry subcooled flakes usually 100 to 1,000 mm² in area. In some models, the cylinder or drum rotates and the scraper on the outer surface remains stationary. In others, the scraper rotates and removes the ice from the surface of a stationary drum, in this case, built in the form of a double-wailed cylinder. It is usual for the drum to rotate in a vertical plane but in some models the drum rotates in a horizontal plane. One distinct advantage of the rotating drum method is that the ice-forming surfaces and the ice release mechanism are exposed and the operator can observe whether the plant is operating satisfactorily (Fig. 3). The machine with the stationary drum has the advantage that it does not require a rotating seal on the refrigerant supply and takeaway pipes. However, this seal has been developed to a high degree of reliability in modern machines. The ice is subcooled when harvested, the degree of sub-cooling depending on a number of factors but mainly the temperature of the refrigerant and the time allowed for the ice to reach this subcooled temperature. The subcooling region of the drum is immediately before the scraper where no water is added for a part of the drum's rotation and the

ice is reduced in temperature. This ensures that only dry subcooled ice falls into the storage space immediately below the scraper. The refrigerant temperature, degree of subcooling and speed of rotation of the drum are all variable with this type of machine and they affect both the capacity of the machine and the thickness of the ice produced.

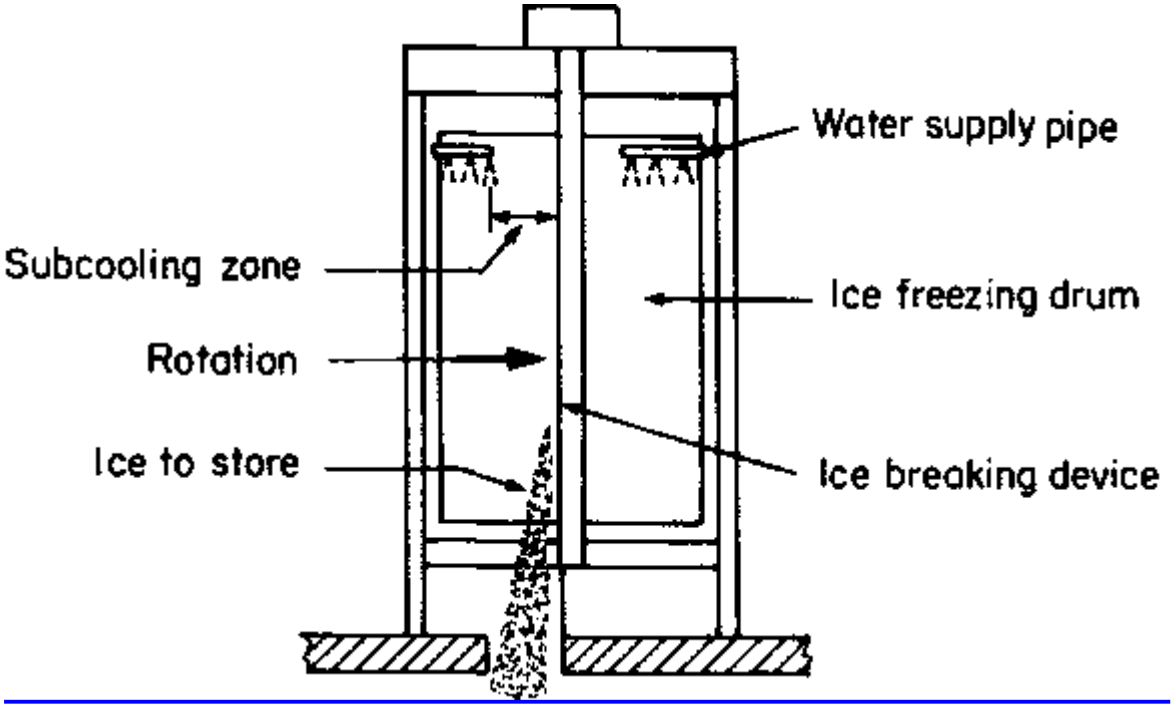
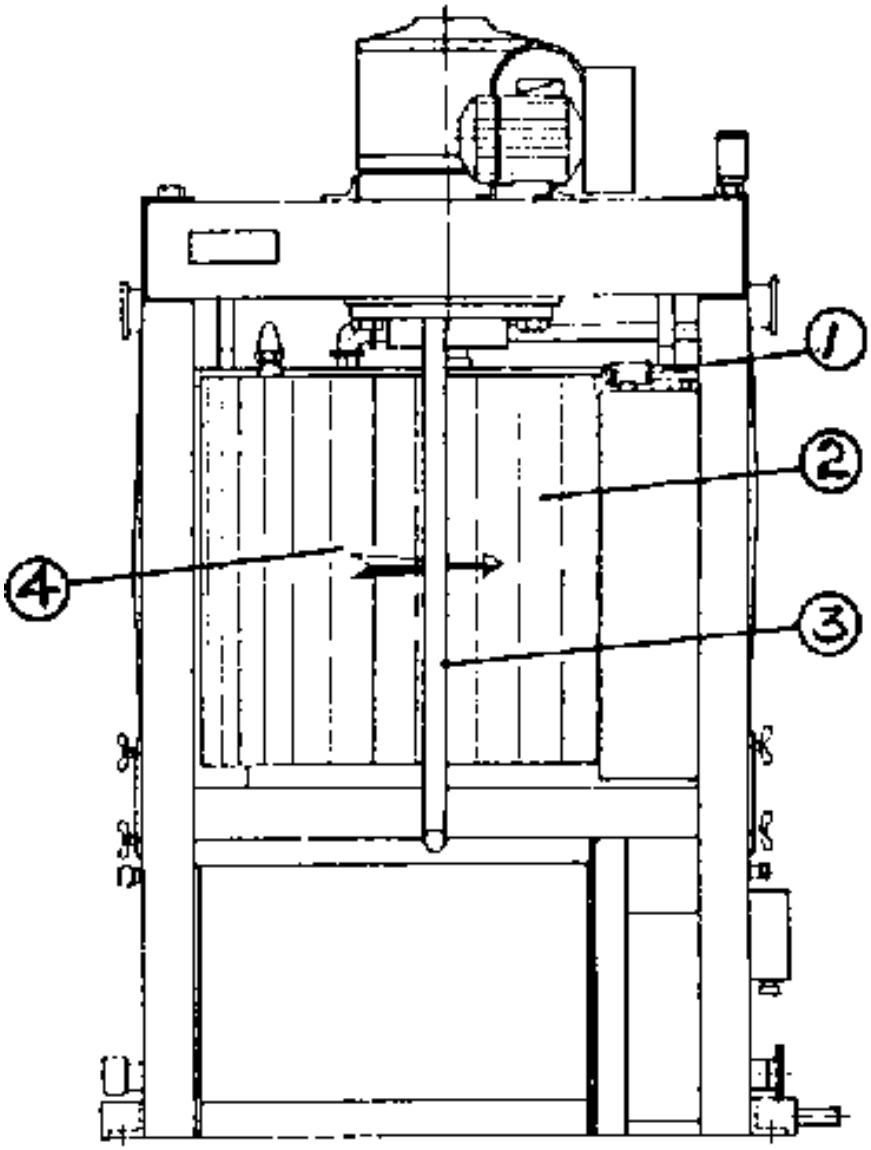


Fig. 3



1. Water supply pipe.
2. Rotating drum.
3. Scraper bar.
4. Ice subcooling zone.

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