

## **PREPARATION**

- ✓ Remove as much old paint as possible.
- ✓ Loosen and level the sand. Be sure to make the edges as smooth as you can.
- ✓ Turn the compressors on with the set point at 20°F or 21°F to freeze the sand.
- ✓ Soak the sand to just below the pipes, do not soak to the point where water is allowed to puddle under the insulation this could cause heaving later on.
- ✓ Once the sand is soaked and frozen it should be sprayed until the layer of ice over it will support a flood without melting through.
- ✓ If you are on a cement base, clean the pad, freeze it and start spraying.
- ✓ Lay drywall tape around the perimeter so the water will stay inside the pad.
- ✓ Flood until the pad is level and the pipes are covered.
- ✓ Scrape the ice so it can be painted.
- ✓ Set the surface temperature at 19°F or 20°F for painting.
- ✓ Seal in the white so clean up around the rings is easier.
- ✓ Install the rings and all the yarn.
- ✓ Seal until the ice will support a splash flood (40 to 50 gal. per sheet). The yarn can be covered quicker if after two seals it is sealed again and run over with a sponge roller. The yarn will not move if it is stuck to the ice.
- ✓ Place the rocks out on the carpeted walkway so they can cool down. Cover them so they do not get wet.
- ✓ Flood until the desired thickness is reached with the last flood being a levelling flood with the set point at 25°F or 26°F.
- ✓ Adjust the surface temperature down to just over playing temperature.
- ✓ Pebble and scrape until the pockets of untouched ice disappear.
- ✓ Put the temperature of the surface to the playing temperature. Brine at 23°F should give 25°F or 26°F on the surface.
- ✓ Leave the rocks on plastic mesh on the ice over night and you are ready to play.

## **KEEPING YOUR ICE IN TOP SHAPE**

### **CONTROL OF THE ICE SURFACE**

In most clubs a sensor in the returning brine or in the ice pad will control the start and stop of the compressor. The start temperature will vary because of the thickness of the ice, temperature inside and outside of the building or maybe even the system used to freeze the pad. Usually the temperature at the top of the ice should be around 24°F to 26°F. For a club with an air temperature of 35°F to 40°F, at eye level and humidity between 60% and 70 % this temperature can be realized with the set point in the returning brine at around 22°F to 24°F.

### **CONTROL OF THE HEAT**

The air temperature should be maintained at between 35°F and 40°F. Heaters in the club are a must. They can be used to control the humidity as well as keep the temperature in a comfortable playing range. It will be easier to recruit new curlers and maintain good ice at these temperatures. If the air is too cold the Ice King may have trouble cutting off the old pebble, the rocks will not get up to speed and may be straighter or more swingy depending on the texture of the running surface on your rocks.

### **CONTROL OF THE HUMIDITY**

The humidity should be kept between 60 - 70%. High humidity in the spring and fall will result in drips. As a footnote, if the ceiling or beams are wood the drips that land on the frozen sand or ice should be taken off or the preservative from the wood will come to the top even if it is well below the paint. High humidity will cause frost to form on the sheets of ice making the rocks run straight and heavy.

In times of extremely cold weather the humidity will drop lower than you would like. This will cause uneven sublimation that will affect the whole pad. In this case it will be a good idea to cut your ice fairly aggressively, give it a good pebble and cut a second time, this time less aggressively. This should be done possibly every second or third day until the humidity comes back up.

### **CONTROL OF THE PEBBLE**

The temperature of the pebble water will vary from club to club. What you will be looking for is that the pebble stands as small round droplets on the ice.

If they lie down and show a depression in the centre of the pebble your water is too warm. The rocks will start quick in the first ends but will loose speed as the game progresses.

If you have purified water (DI or RO for example) the pebble temperature may start as high as 120°F to 130°F.

If you have city water base but pebble with purified water you may have to start around 100°F to 115°F.

If you have city water for base and pebble you may have to start as low as 80°F or 90°F.

As the season progresses the ice will cure as well as accumulate some impurities that will cause the pebble to freeze less quickly so a cooler pebble will have to be used.

After pebbling you should drag rocks or nip. If the nipper is used your pebble temperature can be lower and still have a low break factor. Break factor is the number of pebbles smashed by a rock. With the nipper the smashed pebble should be around an inch or more apart. When dragging the break factor will have more concentration and will be more severe.

### **CARE OF YOUR ROCKS**

Now that more clubs are using the blue hone running surface and the ice is cleaner the running surfaces may tend to polish. The blue hone is used because it does not pit as much as trefors and other granites. This lack of pitting and the polishing will tend to make the rocks straighten out. You would think that this is not a good thing but it is. The granite that pits can never be counted on to pit exactly the same for all the rocks, so with the blue hone surface it is a matter of scratching the running surface to keep the curl where you want it. This job is very simple and as long as you control the width of the running surface by alternating the methods that have been proven to work you will not hurt your rocks

## RESURFACING YOUR ICE

If you have draws in the morning, afternoon and evening, the ice should be resurfaced (scraped, mopped pebbled and nipped) in the morning and before the first evening games.

During the season sheets may develop certain characteristics, (such as high shoulders or runs). Outside sheets may start to lean to the wall. These low areas can be fed with extra pebble periodically before a cut so they will not get out of hand.

## CARE OF YOUR BLADE

Many curling clubs use the Ice King scraper. The blades on these machines are precision sharpened and will last at least one season but they may have to be touched up. The more it is used, of course, the more frequently it will need to be honed. The top of the blade is sharpened with a cutting tool that leaves it with a slight concave surface called a hollow ground surface, and the bottom edge is back ground so that the cutting edge is a little higher than the flat bottom of the blade.

Touching up the blade may consist of a light stoning with a fine-grained stone on the top and then on the bottom. The stone over the top of the blade will sharpen the edge but will also gently persuade the steel to point downward. This will cause the blade to leave marks on the ice if you scrape without touching the bottom of the blade.

When doing the bottom of the blade remember that it is back ground so the stone flat on the blades bottom side will not touch the edge. The stone must be at a slight angle up to this edge. The best way to do this is by wrapping electrical tape around the stone. The same stone can be used for the bottom and top but when using it for the top it should be blocked from swaying. (I use a piece of one inch square steel tubing between the blade frame and the stone.)

Later in the blade's lifetime a more aggressive way of touching up be needed. A 120 grit emery cloth brushed lightly under the palm will bring the blade back more quickly than a stone, but still use the stone on the top and bottom so the blade will not leave scratch marks.

## THE TENSIONER

The tensioner is an important piece of equipment for the blade. The tensioner's job is to make sure the blade does not dig in on the edges. Even though blades seem sturdy and rigid it is possible for them to change shape with exposure to changes in temperature. Most blades are stored on the boards where the temperature is slightly higher than on the ice surface. This causes the blade to bow down on the edges. Tightening the tensioner very slightly will lift the edges up. The shape of the ice may also warrant its use. Just every day pebbling will cause a dish in the ice. The tensioner relieves the blade so it will not dig into the ice when one edge comes to the side of the dish. The Ice King can then be used to cut out the dish by various cutting patterns such as the three pass. Almost any pattern will work if the first passes are on the outside of the sheet riding the crest of the shoulder of the dish. Feeding extra pebble in the centre of the sheet will also quicken the job.

## SUMMARY

Cut your ice every day. If you have curling in the daytime and at night cut for both groups. If you have playdowns try to cut for each draw. Never let anyone play more than three games on a cut if you can avoid it.

The numbers below are common to most clubs. If for some reason your rocks do not react favourably then systematically try different combinations to find the one that works at your club.

Surface Temperature of the ice--- 24<sup>o</sup>F to 26<sup>o</sup>F.  
Air Temperature at eye level----- 35<sup>o</sup>F to 40<sup>o</sup>F.  
Humidity in the building - - - - - 60% to 70%

Pebble Temperature  
:With tap water-----80<sup>o</sup>F to 90<sup>o</sup>F.  
:With DI or RO-----120<sup>o</sup>F to 130<sup>o</sup>F.

These pebbling temperatures will lower as the ice gets used more during the season.

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# ONTARIO CURLING ASSOCIATION

## *Ice Makers' Reference Guide*



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