



THE ADVANTAGES OF STAINLESS STEEL IN FOOD PROCESSING EQUIPMENT

Worldwide Acceptance

Stainless steel is accepted as a superior material for food processing equipment around the world. In developed countries such as the United States and those in the European Union, government laws require that food processing equipment be easily cleanable, corrosion-resistant, and have smoothly bonded seams. Stainless steel offers the highest level of compliance to these requirements. The use of stainless steel equipment is a must if the manufacturer is planning to export and also to meet tightening requirements in their own countries.

Legislation and Standards

US CFR 21, Part 110, subpart C, Sec. 110.40 Equipment and Utensils

(a) All plant equipment and utensils shall be so designed and of such material and workmanship as to be adequately cleanable, and shall be properly maintained. The design, construction, and use of equipment and utensils shall preclude the adulteration of food with lubricants, fuel, metal fragments, contaminated water, or any other contaminants. All equipment should be so installed and maintained as to facilitate the cleaning of the equipment and of all adjacent spaces. Food-contact surfaces shall be corrosion-resistant when in contact with food. They shall be made of nontoxic materials and designed to withstand the environment of their intended use and the action of food, and, if applicable, cleaning compounds and sanitizing agents. Food-contact surfaces shall be maintained to protect food from being contaminated by any source, including unlawful indirect food additives.

(b) Seams on food-contact surfaces shall be smoothly bonded or maintained so as to minimize accumulation of food particles, dirt, and organic matter and thus minimize the opportunity for growth of microorganisms.

National Sanitation Foundation (develops standards for food processing equipment)

The NSF materials and finishes guide stipulates that equipment used in the food zone should be "smooth, corrosion resistant, non-toxic, stable and non-absorbent under use conditions. They shall not impart odor, color or taste, not contribute to the adulteration of the food. Exposed surfaces shall be easily cleanable." Smooth is defined as "surface free of pits and inclusions, having a cleanability equal to No3 (100 grit) finish of stainless steel.

Hygiene

Stainless steel has a proven track record in any area where sanitation and ease of cleaning are important, such as in the food manufacturing industry. The product is highly cleanable. It has no pores or cracks to harbor dirt, grime or bacteria, allowing it to be easily cleaned. Also because of ease of cleaning, food manufacturers are able to avoid flavor or odor transfer from batch to batch.

Corrosion resistance

Stainless steel is highly resistant to pitting, maintaining a smooth surface even under decades of heavy use.

Durability

Stainless steel has a very long life because of its great resistance to corrosion. Even though it may be a more expensive option at the beginning, it is usually cheaper in the long run due to its long life and lack of maintenance and repair costs.

Flavor Protection

Stainless steel is non-reactive when in contact with food and water, so it does not take on flavors or odors of the food during the manufacturing process. This makes the equipment easier to use and to clean.

Recycling

Stainless steel is environment friendly. It is theoretically 100% recyclable. Because it can be easily cleaned, aggressive cleaners are not needed and then not added to the wastewater stream.

New ELITE & PLUS ice maker product line for North Star Ice Equipment Corporation

North Star has expanded its flake ice maker line to include Stainless Steel components within its water path and ice making circuit. There are no “options” on the **ELITE** ice machine. Additional to the stainless steel components on our Standard SS machine, the **PLUS** model has a stainless steel evaporator top closure assembly and stainless steel water receiving pan and support arms.

There are twenty-three (23) individual components on the **ELITE** flake ice maker that are fabricated in Stainless Steel and 16 individual components in stainless steel for the **PLUS** ice maker. Customers now have the ability to make a purchasing decision based on the need to have a top-of-the-line piece of process equipment that meets all USDA requirements for Poultry, Meat, Bakery and other industries that consider *ice as food*.

This equipment has grown out of a desire from our customers to have the best equipment available. North Star has responded to this need in the market place with the introduction of the new **ELITE** and **PLUS** product lines.

North Star has locator drawings of the Stainless Steel components that make the **ELITE** and **PLUS** flake ice makers unique to the industry. No other flake ice machine in the world has a design, LIFETIME warranty or Stainless Steel components like the **ELITE** and **PLUS** industrial flake ice machines from North Star.