

Title (en)
SPIRAL IMMERSION CONVEYOR, SYSTEM, AND METHOD FOR USE

Title (de)
SPIRALTAUCHFÖRDERER, SYSTEM UND VERFAHREN ZUR VERWENDUNG

Title (fr)
TRANSPORTEUR A VIS D'IMMERSION, SYSTEME, ET PROCEDE D'UTILISATION ASSOCIE

Publication
EP 1318956 A2 20030618 (EN)

Application
EP 01973101 A 20010914

Priority
• US 0129046 W 20010914
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Abstract (en)
[origin: WO0222470A2] An improved method of transporting materials or products for chilling or freezing comprising the use of a multi-tiered, spiral path conveyor belt capable of tight radial turning in a restricted area to immerse the materials or products into a tank containing a cooling fluid and circulating the cooling fluid past the material or product is presented. The materials or products may or may not undergo chemical preparation prior to immersion, depending on the type of materials or products to be chilled or frozen. The cooling fluid, which can be food-grade solute, is circulated past the material at a substantially constant predetermined velocity and temperature to freeze the material or product. The cooling fluid is preferably between -20 degrees centigrade and -30 degrees centigrade, and the velocity of the cooling fluid past the material is about 35 liters per minute per foot of cooling fluid through an area not greater than about 24 inches wide and 48 inches deep. Alternatively, the speed of the multi-tiered, spiral path conveyor belt can be adjusted to increase or decrease the rate of immersion of the materials or products into the cooling fluid. All components of the multi-tiered, spiral path conveyor belt can be constructed of food-grade plastics.

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