



## *Resin-rich material resists thermal shock conditions*

**E**veryday, the Hudson Food's plant in Albert Lea, MN, produced hot dogs. Everyday, after the product was cooked, the racks of hot dogs were

wheeled into a blast freezer at  $-40^{\circ}\text{F}$ .

Everyday, the fat dripped off the hot dogs and resulted in a 2- to 3-inch ice buildup. Everyday, plant employees would use steam to melt the ice as part of their routine cleanup.

This everyday occurrence delivered a beating to the blast freezer floor. The thermal shock conditions resulted in delamination and cracking of the existing epoxy overlayment, as well as the second coating on top. The floor failure was a violation of Hudson Food's sanitary standards, so it had to be repaired.

It wasn't all that easy, though. The replacement material had to be an epoxy that offered improved thermal shock resistance, but could hold up to mechanical wear. In addition, Hudson Foods required the 100% solid epoxy to be formulated to cure within a relatively short period of time. It had to be installed quickly on the weekend so the freezer could return to full use by midnight Sunday. Also, there couldn't be any lingering odors.

After contacting several flooring contractors, Hudson Foods selected a resilient material supplied by International Coatings, Rosemont, IL. International Coatings ICO-Guard 51 was applied by Commercial Contracting, Melrose, MN.

On a Friday night, the freezer was shut down to allow for removal of the existing epoxy by scarification and hand scrapers. After a thorough degreasing and rinse, the floor was primed with the solid epoxy primer. The  $\frac{1}{4}$ -inch epoxy was hand-trowelled on a Saturday at a temperature of approximately  $40^{\circ}$  to  $50^{\circ}\text{F}$ . Silica quartz was broadcast into the still-wet floor to achieve an anti-slip texture. Because of the epoxy's resin-rich formulation, the floor required no top coat and was ready for service by midnight Sunday.

After being subjected to the same thermal shock conditions everyday for an entire year, the plant reports no deterioration of the material. Says Rick Bohonek of plant maintenance, "It was the only flooring system I had seen that could hold up to the intense thermal shock conditions in the blast freezer." □

*For more information on International Coatings ICO-Guard 51, circle No. 308 on the Reader Service Card.*

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