CASE STUDY:

TUFFLOOR® FOR DROSS COOLING BUILDING

EQUIPMENT

- Dross cooling bin floors

PRODUCT

- 426,000 kg (937,200 lbs) of TUFFLOOR®

APPLICATION

- Seven 80’ x 15’ (24.4 m x 4.6 m) cooling bin floors.
- 10” (250 mm) thick bin floors reinforced with steel welded wire mesh

INSTALLATION

- TUFFLOOR® was mixed in concrete mixing trucks and installed over a four-day period with ambient temperatures as high as 38°C (100°F) and material temperatures of 30-35°C (85-95°F).
- A polyethylene vapor barrier was installed between the limestone subfloor and the TUFFLOOR® to prevent moisture absorption from the TUFFLOOR® and to reduce the sliding friction between the two materials.
- A curing compound was applied to the surface of the TUFFLOOR® to optimize strength and minimize surface dusting.
- TUFFLOOR® slabs were cast on top of 6” (150 mm) of compacted, crushed, and dried limestone, which was installed over a 12” (250 mm) steel reinforced cement concrete floor slab.

RESULTS

- Random samples were taken, cured, and tested for crushing strength in accordance with ASTM procedures. Strength levels were comparable with laboratory samples.
- Allied provided engineering support. The reinforced dross bin floors were designed to withstand heavy equipment and dross loadings with provisions for differential thermal expansion and loading of the individual bin floor sections.

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