



## CASE STUDY:

### DROSS COOLING BUILDING

#### EQUIPMENT

Product install completed by contract installers with support from Allied Mineral Products' personnel

#### PRODUCT

- Packaged in 3000 lb. (1360 kg) bulk bags
- 937,200 lbs. (426,000 kg) 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

- The TUFFLOOR was mixed in concrete mixing trucks and installed over a four-day period with ambient temperatures as high as 100°F (38°C) and material temperatures of 85-95°F (30-35°C).
- 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.
- Retarding and plasticizing additives were used to enhance flow and reduce water requirements.\*
- 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 Portland 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.

**\* Retarders & plasticizers should not be used without approval of Allied Mineral Products**



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Allied Mineral Products, Inc. supplies an entire line of monolithic refractories for the metals industry. For more information or a complete evaluation of your refractory requirements, please contact your local Allied representative.

