

CASE STUDY

Transportation

Project Specs

Location: North Pole, Alaska

Application: Drainage Walkway

Product: Fibergrate's Chemgrate® FS-25 grating, 1" deep with 2" x 2" square mesh

Overview

Flint Hills Resources, wholly owned by Koch Industries, Inc., is a refining and chemicals company with more than 6 decades of experience. Flint Hills Resources' North Pole refinery is located near Fairbanks, Alaska where it processes North Slope crude oil and supplies gasoline, jet fuel, heating oil, diesel, gasoil and asphalt to local and statewide markets.

Problem

Flint Hill Resources needed to create a walkway over existing track pans in the North Pole refinery's fuel car loading zone where operators perform loading duties beneath and around the rail cars. The specifics of this application required a corrosion resistant, fire retardant material with a slip resistant drainage surface. Additionally, the material needed to be light enough so that it could be removed from the pan to allow for cleaning snow and ice within the track pan and also withstand temperatures as low as 60°F below zero. Finally, the customer wanted a product that would provide drainage with maximum open area for maximum capacity to collect and drain jet fuel and other petroleum products in case of a spill.

Solution

Fibergrate was able to provide grating materials that met all of the specific requirements of this harsh, demanding application. Fibergrate's Chemgrate® FS-25 grating, 1" deep with 2" x 2" square mesh, weighs only 70 pounds per panel allowing for easy removal during removal of snow. The FS-25 resin system can also withstand the corrosive environment with capable fire retardant properties, which is an important factor in a fuel loading zone. Fibergrate also designed a custom solution to elevate the grating in the track pan without taking up too much holding volume. Special footings were designed using excess project grating and were attached using M-4 clips which minimized the space used by the grating support and still provided the removable, lightweight panels desired. The successful installation of the grating provided a safe working environment for terminal operators and will last for years to come even while allowing for rapid collection of harmful spilled chemical products. This cold case application was closed with no objections.

