APPLICATION CASE HISTORY – CHOCKFAST® RED HF

HIGH-SPEED GAS COMPRESSOR PACKAGE GROUT BED REPAIR

Chockfast Red HF is the next generation, three-component, 100% solids epoxy grout. As our latest product in a long line of successful machinery grouting and chocking compounds, Chockfast Red HF offers excellent high-flow qualities for improved working and placement – and it is pumpable. Chockfast Red HF is suitable for small and large volume pours – achieving excellent cured properties for dependable, long-term service under increasingly difficult-to-grout industrial machinery and equipment.

PROJECT DETAILS

Skid dimensions (each)
38.0 ft (11582 mm) L x 11.0 ft (3353 mm) W

Foundation dimensions (each)
39.33 ft (11989 mm) L x 12.33 ft (3759 mm) W

Design grout clearance - 2.0 in (51 mm)
Actual clearance range - 1/16th - 2.0 in (1.6 - 51 mm)

Installation method – The contractor completed installation of Chockfast Red HF using direct-pour, free-flow placement (as an overlay on top of a failed in-situ grout and the accompanying bare concrete areas).

IMPORTANT NOTE: What is distinctive about this application is that the original grout used in the installation was not a Chockfast product. The contractor opted to use a competitive product for the installation. When the initial attempt failed, the contractor and end-user contacted us.

THE ORIGINAL GROUT USED IN THE INSTALLATION WAS NOT A CHOCKFAST PRODUCT

After an onsite inspection, it was apparent that the competitor’s product did not reach all intended areas under the skid flanging before it began to harden. This created a host of areas under the skid lacking in the degree of necessary coverage and flange contact – and left the contractor and end-user looking for solutions.

CHOCKFAST® RED HF EPOXY GROUT
A HIGH-FLOW, PUMPABLE EPOXY GROUT
The contractor tried to pour the competitive grout to an average thickness of 2 in (76 mm) thickness over a very large surface area and ran into several issues:

There were no control joints installed prior to the pour to facilitate compartmental placement of the grout. This resulted in a very large, open surface area - making the approach to grouting more difficult and requiring more equipment and labor than was originally thought needed to attempt the task.

Placement of the competitive grout was made from various points around the skid and generally did not flow well. In addition, the leading edge began to set too soon inhibiting movement of any grout placed behind it.

The described issues resulted in a high percentage of non-contact areas between the grout and the flanges. Achieving contact is critical to proper support and load transference of inertial and vibratory forces from the equipment to the concrete foundation.

To address the problems and provide a solution, we recommended Chockfast Red HF.

The solution proposed was to pour an overlay Chockfast Red HF on top of the in-situ grout or bare concrete areas - allowing it to seep between gaps found between the underlayerment and flanges and establishing desired contact.

The initial intent was to pour each skid section from access holes - cut at opposite ends in each compartment in the skid created by the structural cross members, and allowing the grout to meet at the centerline. The owner was concerned about potential air entrapment from pouring from opposite directions, so Chockfast Red HF was put to the test by pouring it through only one access hole per compartment and seeing how far it would flow.

As occurred in each compartment, Chockfast Red HF was poured into the feed access hole to a head depth of approximately 3-4 in (76-102 mm) thick at the point of placement - enough head pressure to flow across the entire compartment area. Approximately 20 minutes into mixing and placement, Chockfast Red HF flowed across and appeared at the access hole on the opposite end - a distance of 9 ft (2743 mm).

In many areas, Red HF was found to free-flow under the cross-members and into adjacent compartments even before the actual compartment was completely finished! As for the areas under flanges with extremely thin gaps (< 1/16", or 1.6 mm), the HF managed to flow under the 12 in (305 mm) wide-flanges at in about 30 minutes.

**WITH THIS SUCCESSFUL GROUT INSTALLATIONS, SIGNIFICANT GOALS WERE ACHIEVED:**

The high percentage of areas under the skid, which lacked necessary flange contact, was partly due to the poor performance of the competitive grout. This created a serious obstacle in providing the crucial layer necessary for support and load transference between the equipment and foundation.

Using Chockfast Red HF, this contact is now absolute between all support flanges and grout as per the original intent.

This application challenged the problem-solving talents of the group, who obediently passed the test. It also confirmed the versatility of Chockfast Red HF as the best solution for a wide array of difficult applications and conditions where average grouting products may fall short.