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Broncos Stadium at Mile High

PEXa pipe maintains the temperature of the root zone within the optimum range throughout the year for the Denver Broncos and its foes.

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Turf conditioning system keeps playing field in top condition year-round



Coaches say practice makes perfect. For Chris Hathaway, head turf manager at Broncos Stadium at Mile High, it was the team's practice fields that helped perfect the process used to replace the stadium's hydronic turf heating system.

In January 2015, the players and coaches cleaned out their lockers after a disappointing AFC playoff loss, but Hathaway knew his biggest job of the year lay just ahead. He had a tight, February-to-April time frame to rip up the playing field, remove the original heating system, replace it with a new and improved heating system featuring nearly 20 miles of REHAU 3/4-in RAUPEX (PEXa) pipe, and lay down a new playing field. Planning started long before the first shovel hit the ground.

Hathaway leaned on Broncos Head Turf Manager Brooks Dodson, who oversaw the installation of a REHAU turf heating system at the Broncos training facility just two years earlier, for advice. Hathaway says Dodson shared insights from that experience that helped this one go smoothly.

The original system was divided into five zones and did not heat the field evenly. The old system used a single series of pipes that ran the full length of the field. By the time the water got to the far side of the field, it was not as warm, Hathaway says. To solve the uneven heating problem, the new system heats from both sides of the field.

"We needed to use a lot more pipe, but we no longer have problems with uneven heating, and that's important," says Hathaway. Hathaway hired SCG Fields out of Brecksville, Ohio, to tackle the installation work. SCG Fields Executive Vice President Chris Franks says the company has installed field heating systems in at least six other NFL stadiums. The 8-week time frame for this project during a harsh Denver winter was imposing, but Franks says experience, a solid game plan and teamwork made it happen. Both Hathaway and Franks credit REHAU with providing important on-site support during the work.

The new system circulates hot water through the RAUPEX pipe to maintain a root zone temperature of 60 degrees. Maintaining the temperature of the root zone within the optimum range throughout the year allows grass to grow later into the season, resulting in a safer playing surface.

In sports, the proof is in the performance. The new field performed admirably throughout the 2015 season, including during a tense 20-18 home victory over the New England Patriots in the AFC Championship. The Broncos went on to beat Carolina 24-10 in the Super Bowl.



Project: Broncos Stadium at Mile High, Denver, CO

Construction type: Athletic field, replaced in 2015

Project scope: 114,000 ft (34,747 m) of RAUPEX PEXa pipe

Contractor: SCG Fields

REHAU systems used: Turf Conditioning (RAUPEX® pipe, custom-fabricated headers, RAILFIX™ fixing rail)

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