

SOLUTIONS | Case Study

This facility captures a ton of carbon dioxide every 17 seconds, which means it doesn't enter our atmosphere. The amount of CO₂ it can capture every year is equivalent to taking 350,000 cars off the road.



PETRA NOVA Project

World's Largest Post-Combustion Carbon Capture Plant
Houston, TX

Products:

Five Star® Fluid Grout 100

Five Star® DP Epoxy Grout

Five Star® Special Grout 150



FIVE STAR

Specified by the World's Best™

PETRA NOVA Project



Date of Project: Ongoing from July 2014

Project Owner: NRG and JX Nippon Oil & Gas Exploration

Project Contractor: TIC

Project Owner's Engineer: Sargent and Lundy

Market/Environment: Energy

Project Details

In the second half of 2015, construction began on the joint NRG and JX Nippon Oil & Gas Exploration Petra Nova CCS project — the world's largest post-combustion carbon capture system.

This Petra Nova project is the first of its kind — incorporating a commercial-scale, post-combustion carbon capture technology to the existing coal-fired plant. The new plant captures approximately 90 percent of the carbon dioxide (CO₂) from a 240 MW slipstream of flue gas and can sequester some 1.4 million metric tons of this greenhouse gas annually.

The captured CO₂ is then transported through an 80 mile pipeline to an operational oil field to be utilized for enhanced oil recovery and ultimately sequestered in Vanderbilt, Texas. The project became operational in December 2016.

The Challenge

Finding product that would meet critical requirements such as keeping large scale, volume, and heavy machinery aligned and stable. Constant vibration and pressure requires a secure and stable base to such equipment. This is where Five Star brings superior product solutions to the forefront.

Five Star® Solutions

A range of national and international companies vied to provide product. Investing their time on the job site to support product installation methods were Five Star Products' Kermit Palmer, Regional Engineering Specialist, Houston, covering the job site; and Greg Gibson, SIP, Manufacturer's Representative for Five Star Products.

The products selected for this project in varied applications include: Five Star® Fluid Grout 100 for grouting pumps, structural columns and tanks; Five Star® DP Epoxy Grout to grout vertical pumps; and Five Star® Special Grout 150 used for large tank grouting.

Learn more about these products at FiveStarProducts.com:

[Fluid Grout 100](#)

[DP Epoxy Grout](#)

[Special Grout 150](#)

FIVE STAR® SERVICES

- Design-A-Spec™ engineering specification assistance
- Technical on-call center with field and project experienced staff
- Field support representatives for on-site consultation
- Corporate research laboratory available to customize products for unique applications



For worldwide availability, additional product information and technical support, contact your local Five Star® licensee, distributor, local sales representative, or you may call the Five Star Products' Engineering and Technical Service Center at 1-800-243-2206.



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