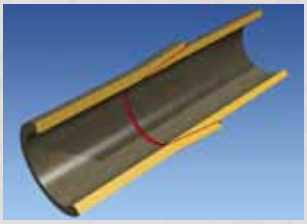

Taper/Taper adhesive-bonded Joint

Sinopec Tahe Oilfield
using Bondstrand® 2400 - 1300 psig Gas

The Sinopec Tahe Oilfield was experiencing steel pipe failures in 3 to 4 months due to combined corrosion/erosion effects. The selection of Bondstrand Glassfiber Reinforced Epoxy (GRE) pipe was made to break this cycle.

When wet, the CO_2 content of natural gas will form carbonic acid, which is corrosive to steel. The corrosion products were eroded from the steel pipe wall by particulates in the gas, exposing new steel to the corrosive effects. The aromatic amine-cured epoxy composite pipeline, with Taper/Taper bonded joints to prevent permeation, was the most economical choice to provide the performance and reliability needed.

Product features

Gas applications are designed differently than the less critical liquid transportation (such as produced water or crude oil). The potential energy stored in compressed natural gas and the presence of CO_2 pose special challenges to engineering design. Bondstrand 2400 gas series is designed to handle gas applications with gas-tight containment features.

Reinforced Resin Matrix Inner Liner

A heavy-duty corrosion resistant liner is incorporated for gas containment, manufactured using aromatic amine-cured epoxy reinforced with C-glass veil. The structure of the pipe is manufactured with the same resin system reinforced with continuous E-glass fiberglass roving.

Taper/Taper Bonded High Pressure Joints

To ensure high reliability and performance, the Taper/Taper bonded joint is designed to be stronger than the pipe wall itself. The joint is made using a heat cured epoxy adhesive for permanent pipe-to-pipe and pipe-to-fittings connections.

Location
Kuche, Xinjiang, China (YK-6H)

Client
Tahe Oilfield, Sinopec

Pipe system
Bondstrand 2400 series with Taper/Taper adhesive-bonded joints

Diameter:	6 inch
Quantity:	2.200 m

Service conditions

Fluid:	Gas and Crude Oil
Operating Pressure:	1160 psig
Design Pressure	1320 psig Gas
Field Hydrotesting pressure:	2320 psig
Operating Temperature:	80 °C
Design Temperature:	93 °C

Installation date
August - September 2008

CH2005 supersedes FP 1042 - June 2012

Surface Preparation

Heat Cured Epoxy Joint

Taper Male Joint Preparation

Flange Assembly