



Taper/Taper adhesive-bonded Joint



## 765 PSIG Gas Pipeline Sambutan, Semberah Kalimantan BONDSTRAND® pipe and fittings with gas-tight design

EMP Semberah's first GRE gas pipeline project was in 2006 at Sambutan # 2. The project work went smoothly and after successful commissioning, MIGAS issued the Certificate (SKPP) for the first GRE gas pipe in Indonesia. This was a stamp of approval and confidence for EMP Semberah. Today, this GRE gas flow line is transferring gas to Electrical Power Company (PT. PLN ) in Tanjung Batu Power Plant, Samarinda, East Kalimantan

The earlier experience and confidence gained was a boost to EMP Semberah to install another 6" x 4,500 meters gas pipe line from well UKM-01 to UKM-03 and to Well UKM-01 with final tie-in point at VICO.

The Semberah area is close to the sea and fringed by thick jungle vegetation. There are occasional tropical rainfalls and the soil contains coal. This presents a key challenge to buried carbon steel pipe, and an opportunity for GRE, due to the corrosive nature of the soil.

This project was performed by three teams. The pipeline was installed within a four weeks time frame over jungle and hilly terrain.

### Containment Features

Gas applications are designed differently than less critical liquid applications (such as produced water or crude oil). The concerns for permeability of the gases and the high level of potential energy stored in compressed gas pose higher level engineering challenges. Bondstrand 2400 Gas Series is designed to handle gas applications with gas-tight containment features:

- **Reinforced Resin Matrix Inner Line**  
A heavy-duty corrosion resistant liner is incorporated for gas containment. This matrix is manufactured using aromatic amine cured epoxy and reinforced using C-veil.
- **Taper/Taper bonded, High Pressure Joints**  
Joints principles are based on bonded connections as per ASME 31.8. The Taper/Taper bonded joint is non-permeable, using a heat-cured epoxy adhesive system for pipe-to-pipe and pipe-to-fittings connections. To ensure high reliability, the joint connection is designed to be stronger than the pipe laminate.

### Location

Sambutan Semberah Field, Muara Badak, East Kalimantan Province

### Client

TAC Pertamina – PT Semberani Persada Oil (EMP Semberah)

### Pipe system

Bondstrand 2400, 750 psig Gas / LP 1800 API 15 LR  
Diameter: 150 mm (6 inch) / Quantity: 4500 m

### Service conditions

Pressure: 765 psig  
Temperature: 65 °C

### Design standard

ISO 14692, ASME 31.8

### Installation date

2007 / 2008