



DET NORSKE VERITAS

STATEMENT OF COMPLIANCE

Name of owner: Petrobras

Name of pipeline system: Gasline 18" PPER-1/Cacimbas

Location: Espírito Santo Basin

Description of objects: Verification of engineering calculations for trenching. The following documents have been reviewed:

- Trenching of nearshore sections; design data and design criteria
- Prop Analysis
- Trenching of nearshore sections 22" gas line trenching analysis
- Allowable bending moments for the pipeline in the nearshore sections

Operational limitations: Pressure: 125 barg (design)
Temperature: Max. 35 °C (Min. ambient)
Service: Transportation of gas

Statement: The engineering calculations for trenching of 18" PPER-1/Cacimbas pipeline have been verified to comply with the requirements of the DNV Offshore Standard OS-F101 Submarine Pipeline systems 2000, for the operational limits stated above and with the remarks given in DNV Verification Report No. 2005-0005.

The battery limits for the nearshore trenching is from KP -47.740 (offshore end) to KP 52.331 (onshore end, i.e. pull in head on the beach)

Verification involvement: This verification has been performed in accordance with DNV Offshore Service Specification OSS-301 Certification and Verification of Pipelines 2000 at *level Low* with the scope of work described in DNV Short Form Agreement 71400000-J-2084 (and Sec.4.1.1. of DNV proposal No: DNV-RSA-OFF-694)

This verification level has been accepted by DNV to be satisfactory for the risk to the integrity of the pipeline system identified for the above mentioned objects.

Reference documents: This statement must be read in conjunction with DNV Report No. 2005-0005

Issued at: Oslo, Norway

Date: 2005-01-05

for Det Norske Veritas

Bente H. Leinum

Bente Helen Leinum

Project Manager





DET NORSKE VERITAS

STATEMENT OF COMPLIANCE

Name of owner: Petrobras

Name of pipeline system: Gasline 22" PGP-1/Ponto A

Location: Campos Basin

Description: Verification of engineering calculations for trenching. The following documents have been reviewed:

- Trenching of nearshore sections; design data and design criteria
- Prop Analysis
- Trenching of nearshore sections 22" gas line trenching analysis
- Allowable bending moments for the pipeline in the nearshore sections

Operational limitations: Pressure: 130 barg (design)
Temperature: Max. 25 °C (Min. ambient.)
Service: Transportation of gas

Statement: The engineering calculations for trenching of 22" PGP-1/Ponto A pipeline have been verified to comply with the requirements of the DNV Offshore Standard OS-F101 Submarine Pipeline systems 2000, for the operational limits stated above and with the remarks given in DNV Verification Report No... 2005-0005.

The battery limits for the nearshore trenching is from KP ~82.150 (offshore end) to KP 83.232 (onshore end, i.e. pull in head on the beach)

Verification involvement: This verification has been performed in accordance with DNV Offshore Service Specification OSS-301 Certification and Verification of Pipelines 2000 at *level Low* with the scope of work described in DNV Short Form Agreement 71400000-J-2084 (and Sec.4.1.1. of DNV proposal No: DNV-RSA-OFF-694)

This verification level has been accepted by DNV to be satisfactory for the risk to the integrity of the pipeline system identified for the above mentioned objects.

Reference documents: This statement must be read in conjunction with DNV Report No. 2005-0005.

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