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SUB/ES/DCT	TITLE:			<b>FAT</b>	
				<b>I</b>	

## INDEX OF REVISIONS

REV.	DESCRIPTION AND/OR REVISED SHEETS
0	ORIGINAL
A	Added requirements for end-fitting ports and sealing systems to be tested to Section 6
B	New Section 7 Sections 5, 6 and 7 adjusted to reflect new annulus classes

	REV. 0	REV. A	REV. B	REV. C	REV. D	REV. E	REV. F	REV. G
DATE	18/12/2019	01/11/2021	31/07/2023					
PROJECT	SUB/ES/DCT	SUB/ES/DCT	SUB/ES/DCT					
EXECUTION	Walter (UQ9R)	Walter (UQ9R)	Walter (UQ9R)					
CHECK	Eder (CSN8)	Eder (CSN8)	Eder (CSN8) Gasparetto (BEJH)					
APPROVAL	Lancelotti (CXAX)	Lancelotti (CXAX)	Lancelotti (CXAX)					

AS INFORMAÇÕES DESTE DOCUMENTO SÃO PROPRIEDADE DA TRANSPETRO, SENDO PROIBIDA A UTILIZAÇÃO FORA DA SUA FINALIDADE.

FORMULÁRIO PADRONIZADO PELA NORMA PETROBRAS N-381-REV.L.



TECHNICAL SPECIFICATION

N

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This Technical Specification is part of I-ET-3000.00-1519-291-PAZ-001 – Flexible Pipe Technical Specification. Please refer to the Flexible Pipe Technical Specification for instructions, definitions and abbreviations.

## 1. General

## 2. Gauge Test

Additionally to the Acceptance Criteria presented in API 17J, there shall be no shavings or carcass particles in the pig or in the water coming from the test. If shavings or particles are found after the first passage of the pig, the manufacturer shall propose procedure to remove them.

## 3. Hydrostatic Pressure Test

## 4. Electrical Continuity Test

## 5. Gas-venting System Test

The gas-venting system test is applicable according to specified annulus class, as per I-ET-3000.00-1519-291-PAZ-005, Table 1-1.

## 6. Sealing Test


Unless otherwise agreed, flexible pipes shall be delivered with a dry, leaktight annulus. Pipes that, for any reason, had the annulus previously wet may be reject by Petrobras at its own discretion.

The sealing test is applicable according to specified annulus class, as per I-ET-3000.00-1519-291-PAZ-005, Table 1-1. The manufacturer may carry out vacuum tests and refill the annulus with N<sub>2</sub>. Only inert gases shall be injected in the pipe annulus after the vacuum test or during the pressure test.

The annulus shall be leak tested for at least 4 hours as per Section 9.6 of API 17J. During the test period, the maximum allowable pressure change is 4%.

The Sealing Test data shall be recorded for further use as a reference for in-situ or onshore tests of the annulus integrity. Test data shall include the annulus volume of each section and the ambient conditions during the test.

The sealing test shall only be approved if the pipe body is deemed leak tight by the Sealing Tests described herein.

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## 7. End Fitting Sealing Test

In addition to the pipe-body sealing test described in Section 6 above, the end fitting sealing systems shall also be subjected to sealing tests.

The end fitting sealing test is applicable according to specified annulus class, as per I-ET-3000.00-1519-291-PAZ-005, Table 1-1.

Only inert gases shall be injected in the pipe annulus or end fitting sealing system test ports after the vacuum test or during the pressure test.

All of the end fitting vent ports, epoxy injection ports, seal testing ports and sealed interfaces (e.g. between jacket and body) shall be tested after mounting to guarantee intact, leak tight annulus spaces. Every sealing system in the end fitting, internal, external or intermediate, shall be tested with N<sub>2</sub> and shown to be leak tight up to their design pressure (external or internal, whichever is largest).

All vent ports and sealing systems shall be leak tested with N<sub>2</sub> for a minimum period of 15 minutes after pressure stabilization. During the test period, the maximum allowable pressure change is 4%.

The end fitting sealing test shall only be approved if the end fitting is deemed leak tight by the Sealing Tests described herein.