

Certificate of Test

Freudenberg Oil & Gas Technologies' 13 5/8" x 5,000 psi NBR 162 Ultra annular packing unit was successfully tested for Extreme High Temperature design validation at 350°F in accordance with API 16A, Fourth Edition, section 4.7.3.29 PR2 procedures and acceptance criterion.

Product Details: **FOGT 13 5/8" x 5,000 psi Ultra Annular Packing Unit NBR 162**

Manufacturer: Freudenberg Oil & Gas Technologies
Part Number: 10108521-33
Batch Number: 2013-2020
Compound Description: NBR 162 Elastomer

Test Parameters

Validation Test Standard: API 16A Fourth Edition PR2, Extreme High Temperature Test
BOP Type: Annular, 13 5/8" x 5,000 psi
BOP Model: BOP Products Series 800 13-5/8" 5K
BOP Serial Number: B263-19/BR-008
Wellbore Temperature, minimum: 177 °C 350 °F
Temperature Class: F 350 °F
Wellbore Pressure, minimum: 358 bar 5186 psi
Closing Pressure, maximum: 103 bar 1494 psi
Test Medium: Cosmolubric B230
Hold Duration: 60 minutes
FOGT Work Order: 2020 050

Test Details

Test Performed by: Freudenberg Oil & Gas Technologies
Test Location: Materials Development & Product Testing Lab
4535 Brittmoore Rd. Houston, TX 77041
Internal Test Procedures: SOP-00130/1, in accordance with API 16A Fourth Edition, PR2
Test Completion Date: May 19, 2020
Test Results: No leakage during the hold period

Authorized by:

Michael LoGiudice



Manager, HOU LAB Facility