



**CDI**  
PRODUCTS®

*A Michelin Group Company*

# PERFORMANCE PRODUCT SPOTLIGHT

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**OIL & GAS  
SOLUTIONS**

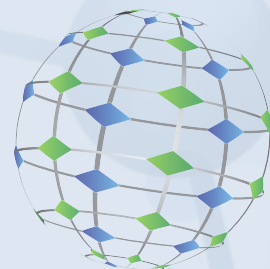
CFT SEALS IN ACCORDANCE  
WITH API 6A 21ST EDITION  
ANNEX F.1.11

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# CFT SEAL OVERVIEW

Seal Type	CFT Seal
Validation Test Standards	API 6A 21st Ed. Annex F.1.11
Testing Pressure	10,000 psi (68.95 MPa)
Test Medium	Nitrogen Gas
Min. Temperature	0°F (-18°C)
Max. Temperature	300°F (150°C)

CFT Seal Certified  
Performance Testing



To learn more about this performance product or how CDI Products can improve performance in your operations, please visit our website [cdiproducts.com](http://cdiproducts.com)

## CHALLENGE

### Validation of the CDI CFT Seal

The emerging trend in the Oil and Gas Industry introduced the necessity of the standard FS-seals commonly used in casing and tubing wellheads validation against the pressure rating of 10,000psi (68.95MPa) and more, in the temperature range of 0°F-300°F, along with the pressure-temperature cycling (PR2F), as specified in API 6A 21st Ed. Annex F.1.11. Standard profiles of FS-seals have not been able to fulfill these requirements due to their inherent design features and hence failed to meet these requirements. CDI has been in continuous collaboration with several OEMs in developing an alternate profile to meet this challenging requirement and succeeded with the CFT Seal design while retaining all the functional requirements, such as product flexibility. The modified CFT Seal design has been tested with a high performance RGD resistant HNBR compound - CDI 9140211.

## RESULTS

### Certifying a Qualified Seal Design

The test was conducted on the size 9-5/8 against the minimum casing dimension for 10,000psi (68.95MPa), with Nitrogen Gas, in the presence of a third-party witness, with the help of an external testing vendor, and was found to meet the requirements stated in API 6A PR2F Annex F.1.11 with minimal leakage of 4cm<sup>3</sup>/hour in the last pressure cycle, and with no leakage at high-pressure hold at room temperature.

The descriptions, design, and performance information, and recommended uses for the products described herein are based generally on our design and manufacturing experience, product testing in specific conditions, and industry standards. The foregoing information is for general guidance only and does not constitute a guaranty or warranty of design or warranty of performance. Every effort has been made to ensure the information provided is accurate and up to date. However, the information provided herein is provided "as-is" and we make no representations or warranties of any kind, express or implied, with respect to the information provided. We reserve the right to make product changes from time to time, without prior notification, which may change some of the information provided herein. All warranties regarding the products described herein will be given in writing at the time of sale of such products. Each purchaser of such products must decide if the products are suitable for the intended use of such purchaser.

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