
Element Materials Technology Hamburg GmbH • Lahnstr. 26 • 45478 Mülheim an der Ruhr

Exquip Germany GmbH

Mr. Kroll

Auf dem Knuf 12

59073 Hamm

Date	Report No.	Order No.
2019-12-12	20011526MH Rev.1	-
2020-01-10		

Inspection of Protector Testing following API 5CT Ed. 2018 10th Ed.

Components Tested:

- **24" x 0,688" Protector PIN** **black (1.2)**
 - **24" x 0,688" Protector PIN** **black (3.2)**
- Protector material: Exquip Polypropylene**

Tests performed:

- **Stripping Test at Ambient Temperature**
- **Stripping Test at +66°C**

Date and Location:

12th of Dec 2019 and 10th of Jan 2020
Element Materials Technology Hamburg GmbH
Laboratory Mülheim
Lahnstraße 26
45478 Mülheim, Germany

Contact Person:

Mr. Jan-Pit Kroll, Exquip Germany GmbH

Testing, Inspection and Reporting:

Mr. Eric Uhle, Element Materials Technology Hamburg GmbH, Laboratory Mülheim
Operations Manager Laboratory Mülheim
Mr. Klaus Empting
Senior Technician Laboratory Mülheim

1. Object of Examination

24" x 0,688" Protector PIN made from *Exquip Polypropylene* were tested following API 5CT. Therefore, some random protectors were taken from the production lot 03.12.2019 to be tested.

2. Tests

2.1 Stripping Test at ambient temperature

The Stripping Test was performed following API 5CT. The protector was installed using the manufacturer's common practice for field installation with a steel bar. A proof load of 50kN was applied for 60s. After releasing the load, the connector and the protector were investigated.

After the test the shapes of the connector and the protector were examined.

Protector 24" x 0,688" Protector PIN

Value	Requirement	Value	Evaluation
Axial load	46 kN	50 kN	passed
Surface inspection of the connector / protector threads	No damage	Protector and connector threads found in good condition No damage to the protector threads observable	passed

2.2 Stripping Test at +66 °C

The Stripping Test was performed according to API 5CT. The protector was heated to +66 °C and soaked for 45 min. The protector was installed using the manufacturer's common practice for field installation with a steel bar. A proof load of 50kN was applied for 60s. After releasing the load, the connector and the protector were investigated.

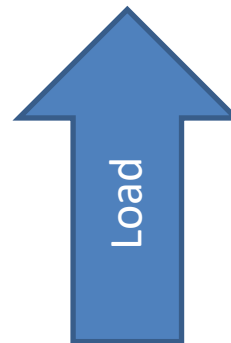
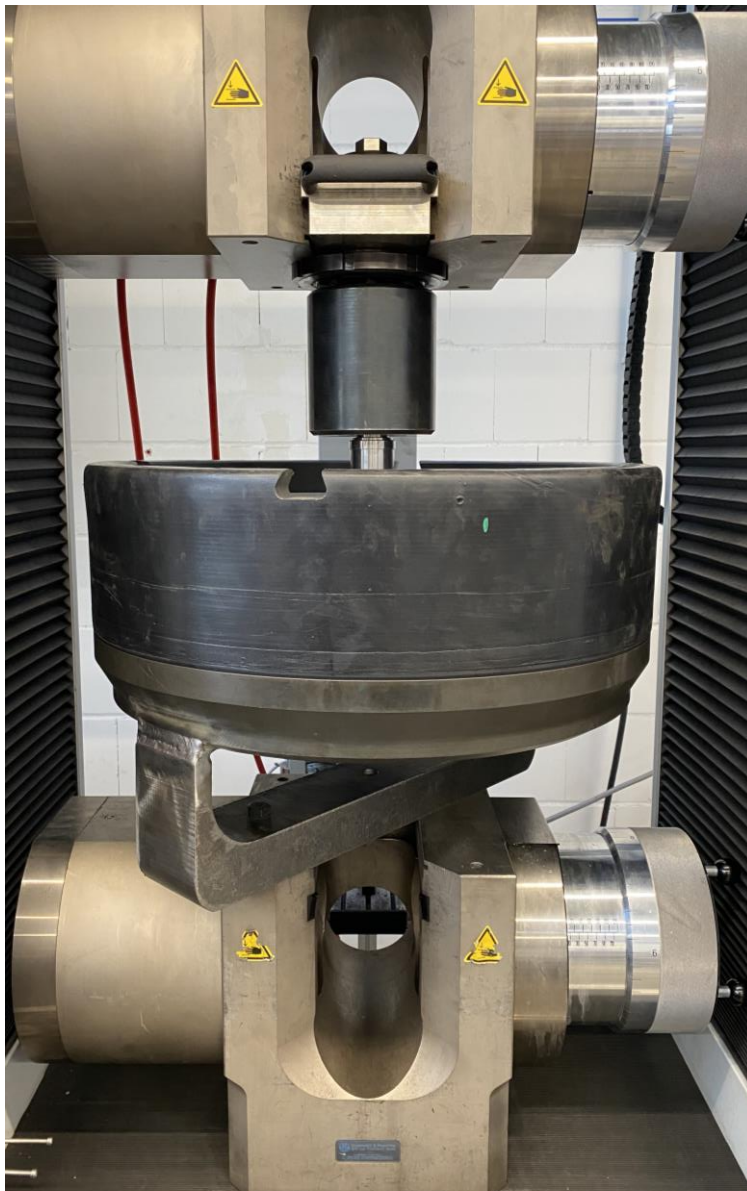
After the test the shapes of the connector and the protector were examined.

Protector 24" x 0,688" Protector PIN

Value	Requirement	Value	Evaluation
Axial load	46 kN	50 kN	passed
Surface inspection of the connector / protector threads	No damage	Protector and connector threads found in good condition No damage to the protector threads observable	passed

3. Pictures

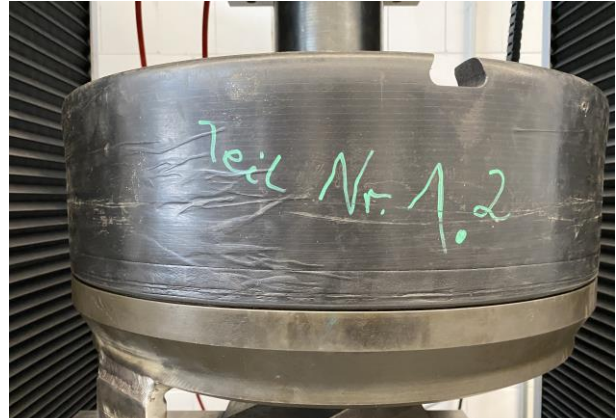
3.1 Pictures Stripping Test at ambient temperature



Testing device with installed protector (1)



Protector (1.2) before testing



Protector (1.2) after testing

3.2 Pictures Stripping Test at + 66 °C



Protector (3.2) before testing



Protector (3.2) after testing

4. Summary

All requirements are fulfilled for the tested protectors, so the validation regarding stripping test at ambient temperature and at +66 °C were successful and the protectors meet the requirements according to API 5CT.



M.Sc. Eric Uhle

Element Materials Technology Mülheim
+49 (0) 208 58982-27
eric.uhle@element.com