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<b>Date</b>	<b>Report No.</b>	<b>Order No.</b>
<b>2018-08-23 / 2018-09-18</b>	<b>1808364MH Rev.1</b>	<b>-</b>

**Inspection of Protector Testing following API 5CT Ed. 2011 9<sup>th</sup> Ed.**

**Components Tested:**

- **Threadless Protector PIN 26" x 1,25" with 4mm steel clamps                    black (4)**
- **Threadless Protector PIN 26" x 1,25" with 5mm steel clamps (var.1)    black (1)**
- **Threadless Protector PIN 26" x 1,25" with 5mm steel clamps (var.2)    black (2)**

**Tests witnessed:**

- **Stripping Test at Ambient Temperature**

**Date and Location:**

**22<sup>nd</sup> August 2018**

**Element Materials Technology Hamburg GmbH**

**Laboratory Mülheim**

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**Contact Person:**

**Mr. Jan-Pit Kroll, Exquip Germany GmbH**

**Testing, Inspection and Reporting:**

**Mr. Eric Uhle, Element Materials Technology Hamburg GmbH, Laboratory Mülheim  
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## 1. Object of Examination

26" x 1,25" Pipeconnector protectors were tested following API 5CT. Therefore, some random protectors were taken from the production batches 10.08.2018 918003 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. The test was performed until the first drop of the applied load was observed. The reason of the force drop was investigated.

After the test the shapes of the connector, the protector and the steel clamps were examined.

**Threadless Protector PIN 26" x 1,25" with 4mm steel clamps**  
**4x 4mm austenitic steel sheet clamps attached by means of two M6x45 10.9 screws**

Value	Requirement	Value
<b>Maximum axial load</b>	For information	34,61 kN
<b>Surface inspection of the connector shape and surface</b>	No damage	Connector shape found in good condition Part failed: steel sheets Type of failure: steel sheets were bent Protector was still hold in place after the first break-loose No damage of the protector observable
<b>Inspection of the protector</b>	No damage	The protector was found in good condition. The protector material showed no damage.
<b>Steel clamps</b>	For information	The steel clamps were bent until they slipped over their counterpart.
<b>Remark</b>		Even after the initial slip, the clamps held the protector in place by jam up with the connector.

**Threadless Protector PIN 26" x 1,25" with 5mm steel clamps (var.1)  
4x 5mm austenitic steel sheet clamps attached by means of two M8x50 A2-70 screws  
Four brass screws M12**

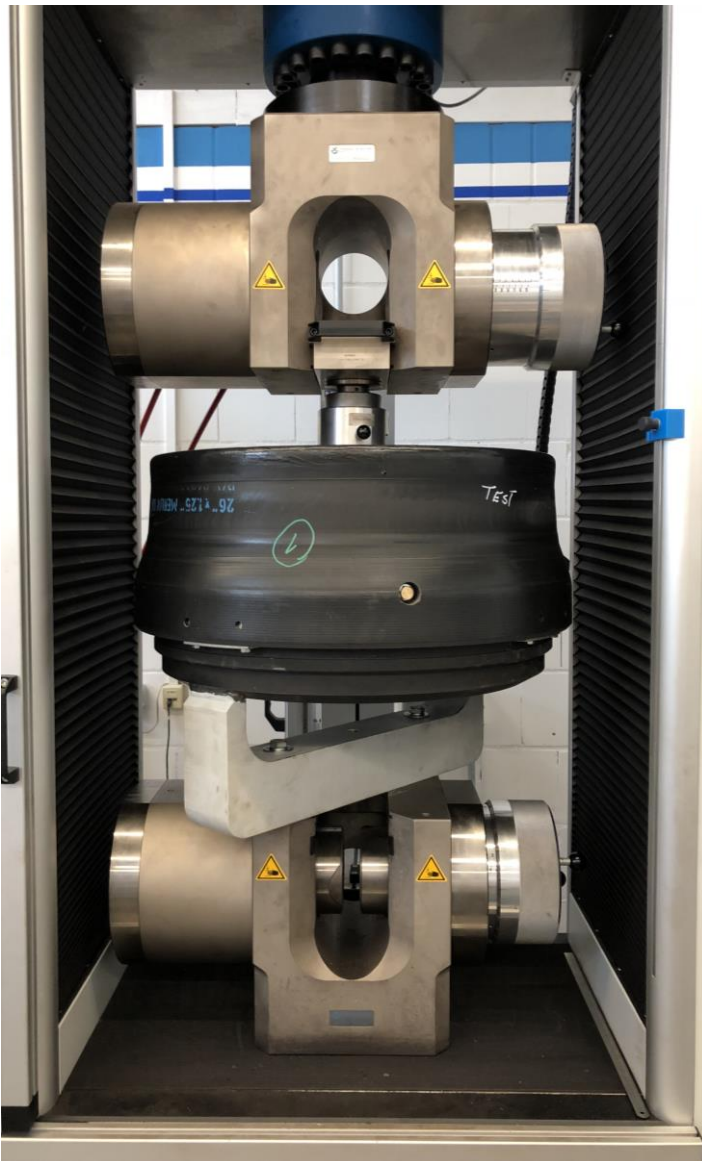
Value	Requirement	Value
<b>Maximum axial load</b>	For information	57,09 kN
<b>Surface inspection of the connector shape and surface</b>	No damage	Connector shape found in good condition Part failed: steel sheets Type of failure: steel sheets were bent Protector was still hold in place after the first break-loose No damage of the protector observable
<b>Inspection of the protector</b>	No damage	The protector was found in good condition. The protector material showed no damage.
<b>Steel clamps</b>	For information	The steel clamps were bent until they slipped over their counterpart.
<b>Remark</b>		Even after the initial slip, the clamps held the protector in place by jam up with the connector.

**Threadless Protector PIN 26" x 1,25" with 5mm steel clamps (var.2)  
4x 5mm austenitic steel sheet clamps attached by means of two M8x50 A2-70 screws  
Four brass screws M12**

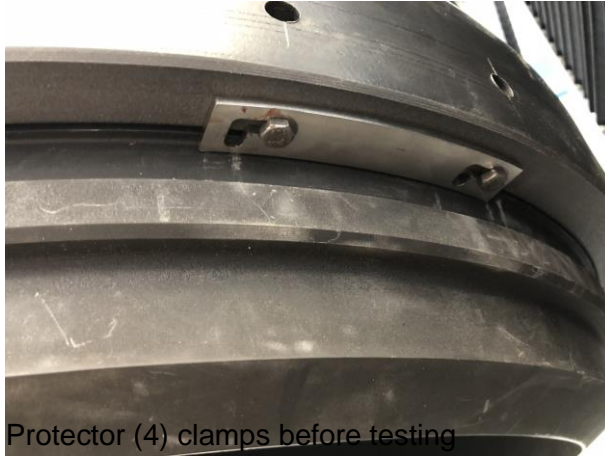
Value	Requirement	Value
<b>Maximum axial load</b>	For information	62,41 kN
<b>Surface inspection of the connector shape and surface</b>	No damage	Connector shape found in good condition Part failed: steel sheets Type of failure: steel sheets were bent Protector was still hold in place after the first break-loose No damage of the protector observable
<b>Inspection of the protector</b>	No damage	The protector was found in good condition. The protector material showed no damage.
<b>Steel clamps</b>	For information	The steel clamps were bent until they slipped over their counterpart.
<b>Remark</b>		Even after the initial slip, the clamps held the protector in place by jam up with the connector.

### 3. Pictures

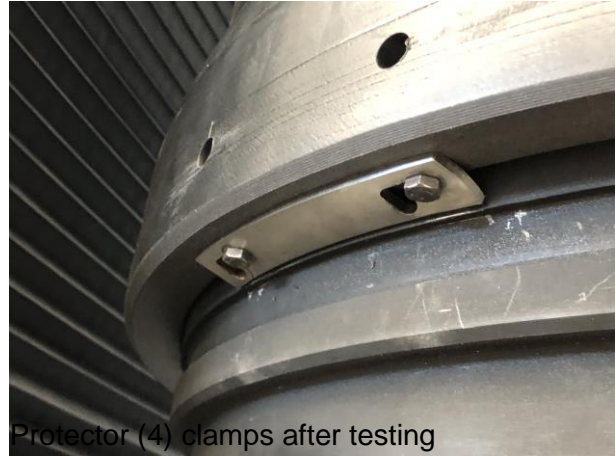
#### 3.1 Pictures Stripping Test at ambient temperature



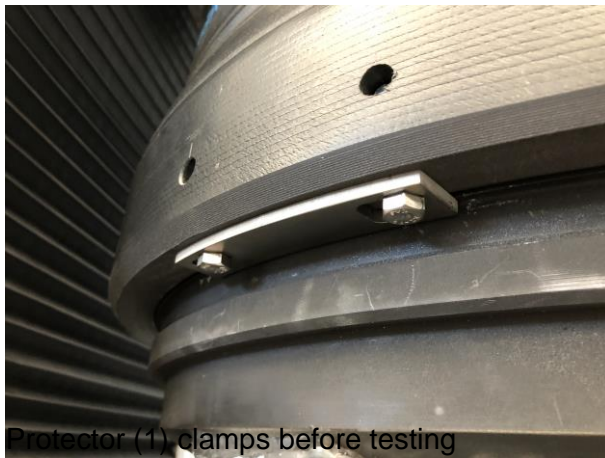
Testing device with installed protector (1)



Protector (4) clamps before testing



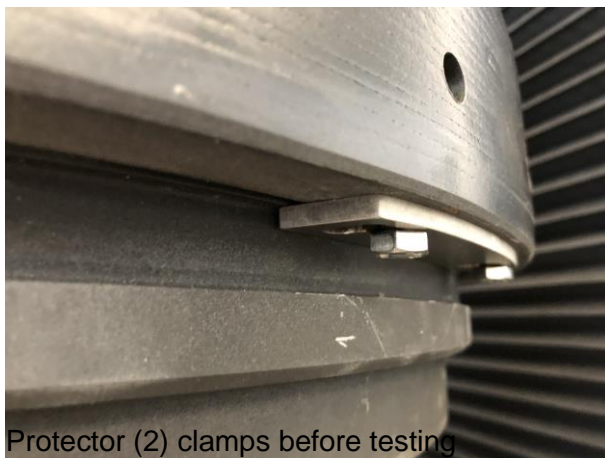
Protector (4) clamps after testing



Protector (1) clamps before testing



Protector (1) clamps after testing



Protector (2) clamps before testing



Protector (2) clamps after testing

## 4. Summary

Three protectors were tested according to customers specification following the API 5CT. No requirements were given by the customer. No observable damage was found neither on the connector nor on the protector after testing. At all tests the steel clamps were bent until the clamps slipped over the notch of the connector. After the initial slipping the protector was still held in place by bracing with the connector.



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