

Innovative technology for pipe protection

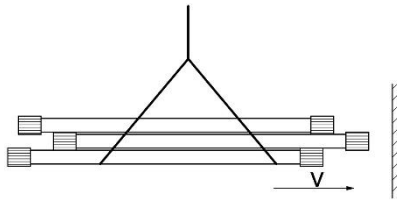
20" Thread Protector Test

Tested protectors: 20" x 0.625" PIN Protektor

Issue Date: 27-JUL-2018

Validation Procedure:

Axial Impact Test



heated in water bath at +72°C



	Name	Position	Signature
Tested by	A. Burghoff	Engineering	<i>A. Burghoff</i>
Written by	A. Burghoff	Engineering	<i>A. Burghoff</i>
Reviewed by	J.-P. Kroll	Man. Dir. Engineering	<i>J.-P. Kroll</i>
Approved by	T.J. Kroll	Managing Director	<i>T.J. Kroll</i>

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Axial Impact Test for PIN at 72°C

Tests performed based on API 5CT 9th Ed., Annex I, with modified Exquip values (higher values) for the size range 18 5/8" to 24 1/2"

Temp °C	Impact Load Joules	Result
+ 72	2848	OK, no connection damage



Test description:

The PIN Protector has been heated in a hot water bath at 72°C. The hot protector has been taken out of the water bath and immediately installed on the connector. Protector installation was unproblematic. The connector with the protector has been placed under our test guillotine, actual hammer weight: 253 kg. The hammer was pulled to 1,15 meters height to achieve an impact energy of min. 2848 Joules.

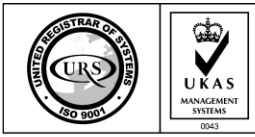
$$E = m \times g \times h \mid 2854 \text{ Joules} = 253 \text{ kg} \times 9,81 \text{ m/s}^2 \times 1,15 \text{ m}$$

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Test results:

After the impact, the protector has been deinstalled with a bar using the dovetail slots of the protector (unlike metal-plastic protectors, the ExquiP Polypropylene Protector can relax to achieve easy deinstallation). The protector showed signs of the impact, but the material absorbed the impact and left the connector completely undamaged.



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References

- API Specification 5CT, 9th Edition, July 1, 2011
- General technical information for Exquip protectors
(<https://www.exquip.de/en/quality/23-general-technical-information-for-exquip-protectors>)
- IADC/SPE 17209 & 11396