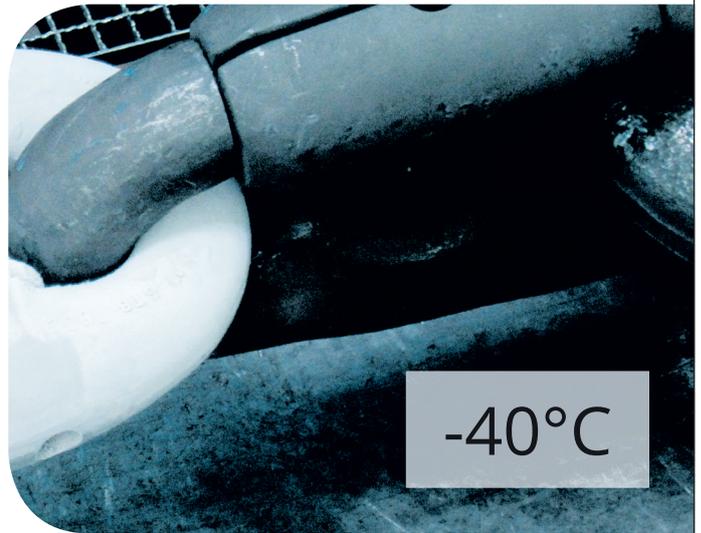


CROSBY FEUBO NDur Link



Made in **Germany**



feubo.com
thecrosbygroup.com

Crosby[®] | feubo

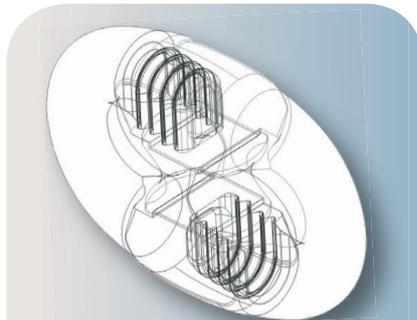
The new benchmark for Kenter Type connecting links



3D Solid Model

In an attempt to further improve the reliability, strength and the fatigue life of connecting links, Feubo did develop the NDur Link.

Whereas the Trident (up to grade 4) and the Raptor shackle (grade 5) were already ahead of any comparable solution on the market, the

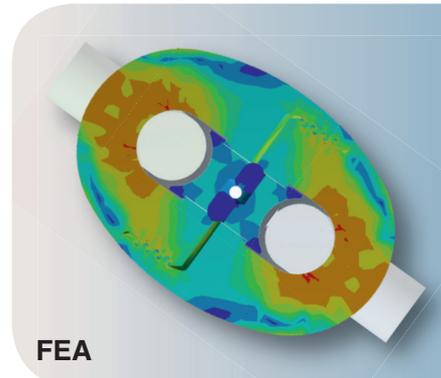


Wire frame model

NDur Link will set further benchmarks, especially for the fatigue life.

It is the result of always increasing requirements for ultimate loads and a longer field life.

The requirement was to clearly achieve a better fatigue life,



FEA

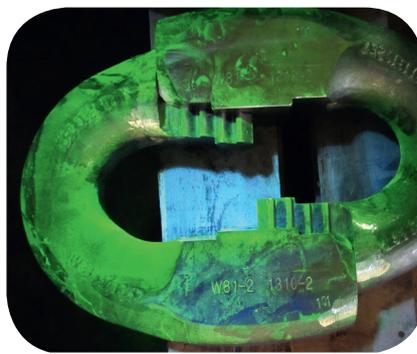
securing our customer's investment for a long time and offer the industry the safety it is looking for.

In order to achieve that, feubo's Engineers utilized the most modern and up to date software for the 3d design and the fatigue calculations.



The parts have been MBL tested up to -40° C

Feubo has joined the Arctic JIP and shared its positive test results with Key clients like **Shell, Sofec, SBM, Technip, ABS, Statoil, Delmar, Intermoor** and many more.



After the theoretical foundations have been laid, Feubo started prototyping the new design.

Material specs and heat treatment specs have been further improved. They exceed any class society standard clearly and are without a doubt the most stringent any manufacturer uses in the industry.



High cycle fatigue tests have been witnessed by DNV.

The parts have been rigorously tested. Dozens of Breaking strength tests have been made.

Fatigue Tests

The most important tests have been the fatigue tests.

They clearly document the progress that has been made.

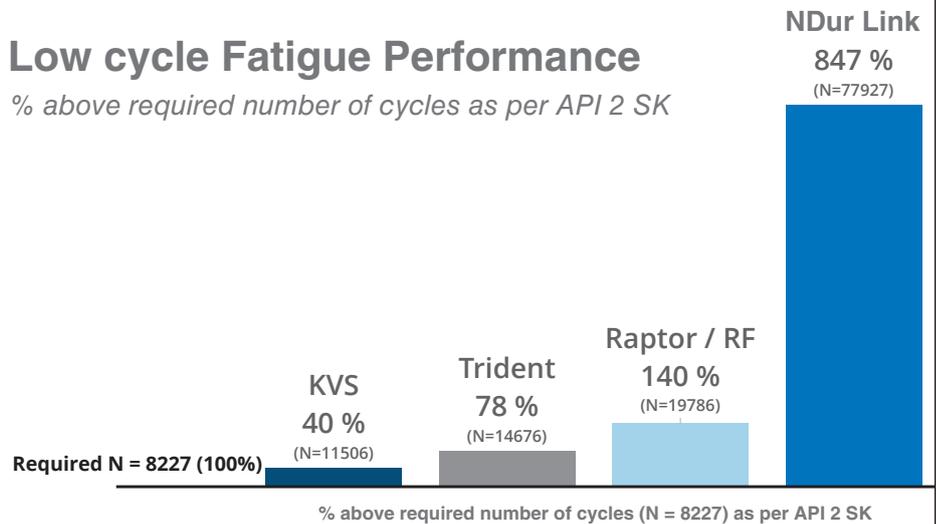
Feubo's **NDur Link** has the same outside shape as a traditional Kenter joining and Raptor Shackle with an outside thickness (D) of 1.30 x d.

The slim shape enables **NDur Link** to be used in every mooring system

Feubo will manufacture those links with a standard taper pin, but also with the newly developed Fast Lock system, which makes the use of sledge hammers and lead plugs obsolete.

Low cycle Fatigue Performance

% above required number of cycles as per API 2 SK



Test KVS, Trident, Raptor/RF: Jahr 2014; Test NDur Link: Jahr 2016
Fatigue test carried out on 76 mm R5 Connector. Mean load and amplitude chosen in acc. with API 2 SK

First and foremost it will considerably reduce the risk of injuries, however it will also speed up the assembly contributing to a reduction of the installation time.



Ultrasonic testing by Level 3 approved personel.

Crosby® | feubo



Approved Quality

All standard sizes for this type of connector will be available with Type approval by **DNV-GL** and **ABS**.
Other class societies upon request.



Contact

Crosby Feubo

Beuler Höhe 16 – 20
D 45525 Hattingen, Germany

Phone +49 2324 950750

Mike Duncan | mike.duncan@thecrosbygroup.com

Phone +34 685 639 969

Stuart Glennie | stuart.glennie@thecrosbygroup.com

Phone +65 915 99 520

feubo.com
thecrosbygroup.com

Crosby[®] | **feubo**