

Harness Structural test Report - EN

Inspection certificate number: **PH_288.2019**

Manufacturer data:

Manufacturer name: **Nova Vertriebsgesellschaft m.b.H.**
 Representative: **Lui Depping**
 Street: **Auweg 14**
 Post code place: **6124 Terfens**
 Country: **Austria**

Sample data:

Name: **Itus**
 Type: **ABS**
 Size: **M**
 Serial number: **P16 M Body**
 Impact pad type: ⁽¹⁾ **Airbag**
 Clip-in weight [kg]: **120**

Date of test: **04.11.2019**

Atmosphere AGL:

| | |
|--------|--------------|
| [C°] | 21.4 |
| RH [%] | 40 |
| [hPa] | 978.1 |

Summary of Structural test

| Test id | - EN 1651 | Setup | Req. Load | | Min. duration [s] | Result |
|----------------------|------------|---------------------------------------|-----------|---------------|-------------------|----------|
| | | | [g] | Req. Load [N] | | |
| 01 ⁽³⁾ | ✓ 5.5.1.1 | Positive symmetric load (Slippage) | 4.5 | 5400 | 5 | POSITIVE |
| 03 ⁽³⁾ | ✓ 5.5.1.1b | Positive symmetric load | 15 | 18000 | 5 | POSITIVE |
| 05 | ✓ 5.5.1.2 | Positive asymmetric load | 6 | 7200 | 5 | POSITIVE |
| 09 ⁽³⁾⁽⁴⁾ | ✓ 5.5.1.3 | Positive symmetric load rescue points | 15 | 18000 | 5 | POSITIVE |
| 10 ⁽³⁾⁽⁴⁾ | 5.5.1.4 | Negative symmetric load rescue points | 15 | 18000 | 5 | n/a |
| 14 | 5.5.1.5 | Negative symmetric load towing points | 5 | 6000 | 5 | n/a |
| 06 | ✓ 5.5.1.6 | Negative symmetric load | 6 | 7200 | 5 | POSITIVE |
| 12 ⁽³⁾ | ✓ 5.5.1.7 | Upright (landing) position load | 6 | 7200 | 5 | POSITIVE |
| 11 | 5.5.1.8 | Connecting element for rescue | n/a | 24000 | 0.3 | n/a |
| 08 ⁽⁵⁾ | 5.5.1.9 | Anti falling-out system | 4.5 | 5400 | 5 | n/a |

Rescue deployment test

| Test id | - NfL II 91/09 | Setup | Min load | | Measured [N] | Result |
|---------|----------------|-------------------------|----------|---------------|--------------|----------|
| | | | [N] | Max. load [N] | | |
| RRDT | ✓ 6.1.5 | Default flying position | 20 | 70 | 61.63 | POSITIVE |

Rescue Deployment Handle strength test

| Test id | - EN 12491 | Setup | Req. Load [N] | Min. duration [s] | Breaking strength [N] | Result |
|---------|------------|--------------------------|---------------|-------------------|-----------------------|----------|
| RRST | ✓ 5.3.2 | Two end points of handle | 700 | 10 | 917.45 | POSITIVE |

| Manufacture | Instrument | Type no | S/N | Validity Calibration |
|-------------|--------------------|-------------|----------|----------------------|
| HBM | Load Sensor GE01 | 1-S9M/50KN- | 31314643 | 04.09.2023 |
| Burster | Sensor Burster | 8431-10000 | 1185483 | 04.09.2023 |
| JDC elec | Geos n°11 Skywatch | Geos n°11 | 22 | 08.05.2020 |

Air Turquoise SA, having thoroughly assessed the sample mentioned above, declare it was found conform with

European Standard EN1651:2018, and EN12491:2015

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 than 10 mm at 4500N for 5 s. The marks should be added with a pre-load of 1000N. ⁽⁴⁾ For harness with integrated Y bridle, test in the end loop ⁽⁵⁾ Attach to anti-falling out system
 uncertainty by the coverage factor k = 2. The value of the measurand lies within the assigned range of values with a probability of 95%.

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model: **Itus**

Harness Structural test

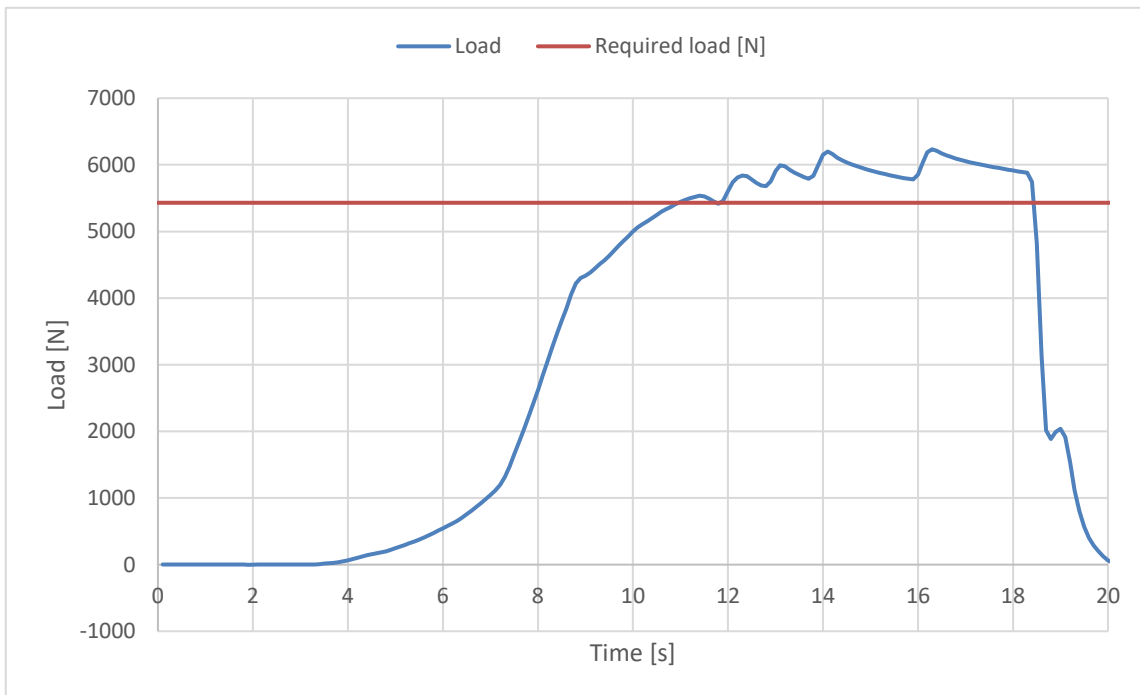
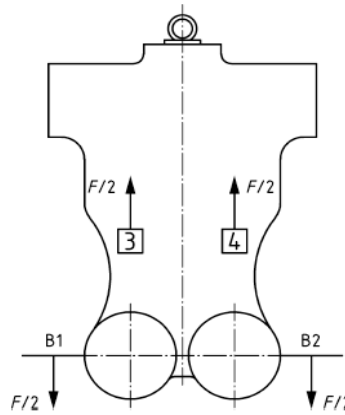
Test ID 01

Standard **EN 1651**
 Reference in standard **5.5.1.1**
 Test setup **Positive symmetric load (Slippage)**
 Attachment points **Both main riser attachment (3,4)**
 Anchor points **Dummy (B1, B2)**

Required load [g] **4.5**
 Required load [N] **5400**
 Minimum test duration [s] **5**

Result

Test duration [s] **6.6**
 Any signs of structural failure **No**
 Slippery test OK **Yes**
 Test results **POSITIVE**



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Harness Structural test

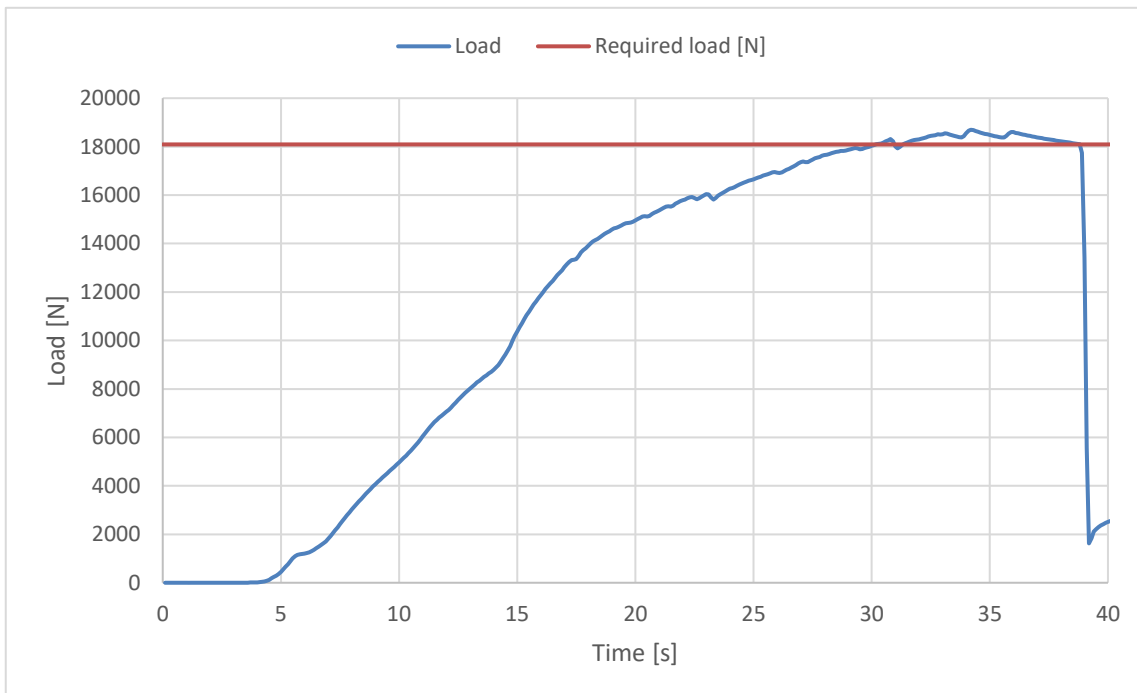
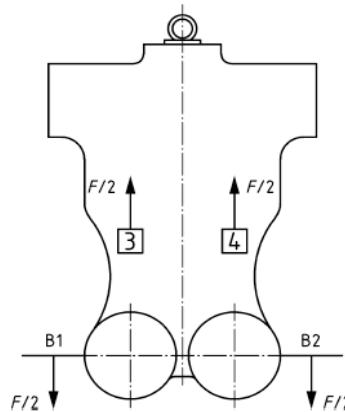
Test ID 03

Standard **EN 1651**
 Reference in standard **5.5.1.1b**
 Test setup **Positive symmetric load**
 Attachment points **Both main riser attachment (3,4)**
 Anchor points **Dummy (B1, B2)**

Required load [g] **15**
 Required load [N] **18000**
 Minimum test duration [s] **5**

Result

Test duration [s] **7.5**
 Any signs of structural failure **No**
 Slippery test OK **Yes**
 Test results **POSITIVE**



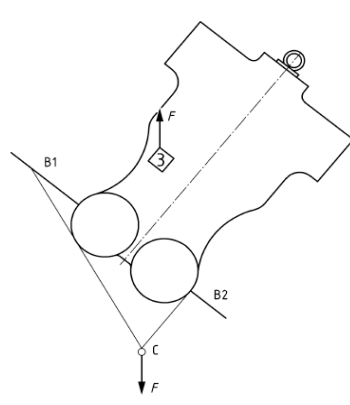
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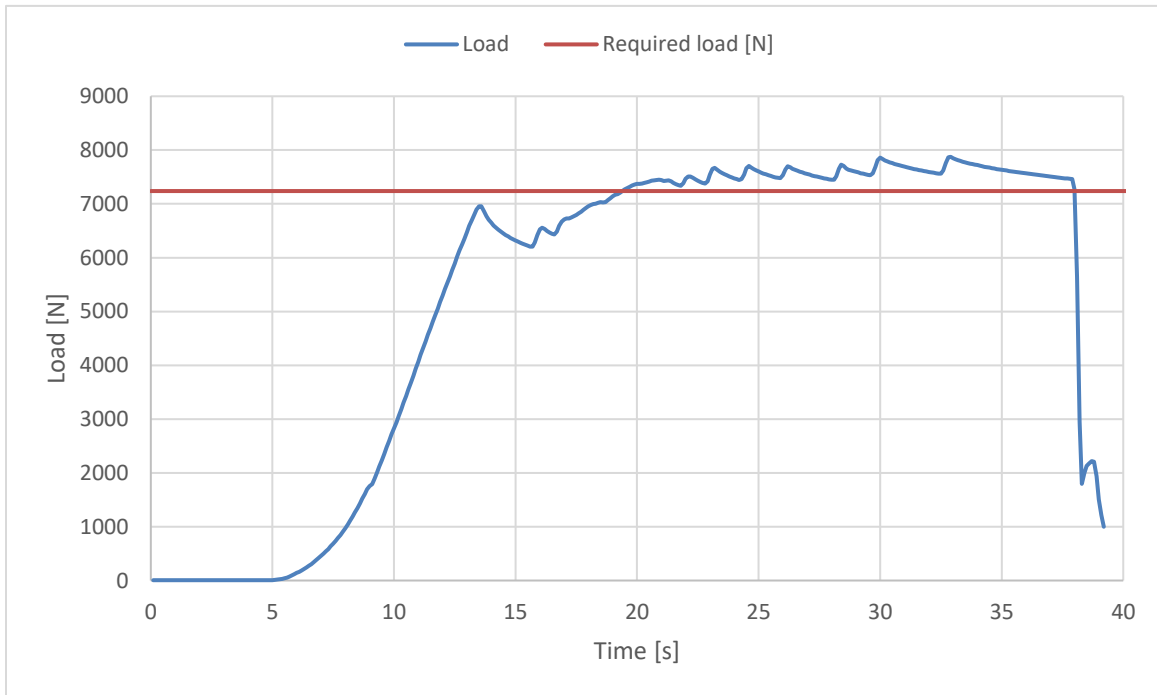
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model: **Itus**

Harness Structural test

Test ID 05

| | | |
|---------------------------------|--------------------------------------|--|
| Standard | EN 1651 |  |
| Reference in standard | 5.5.1.2 | |
| Test setup | Positive asymmetric load | |
| Attachment points | One riser attachment (3 or 4) | |
| Anchor points | Dummy (C) | |
| Required load [g] | 6 | |
| Required load [N] | 7200 | |
| Minimum test duration [s] | 5 | |
| Result | | |
| Test duration [s] | 18.7 | |
| Any signs of structural failure | No | |
| Test results | POSITIVE | |



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Harness Structural test

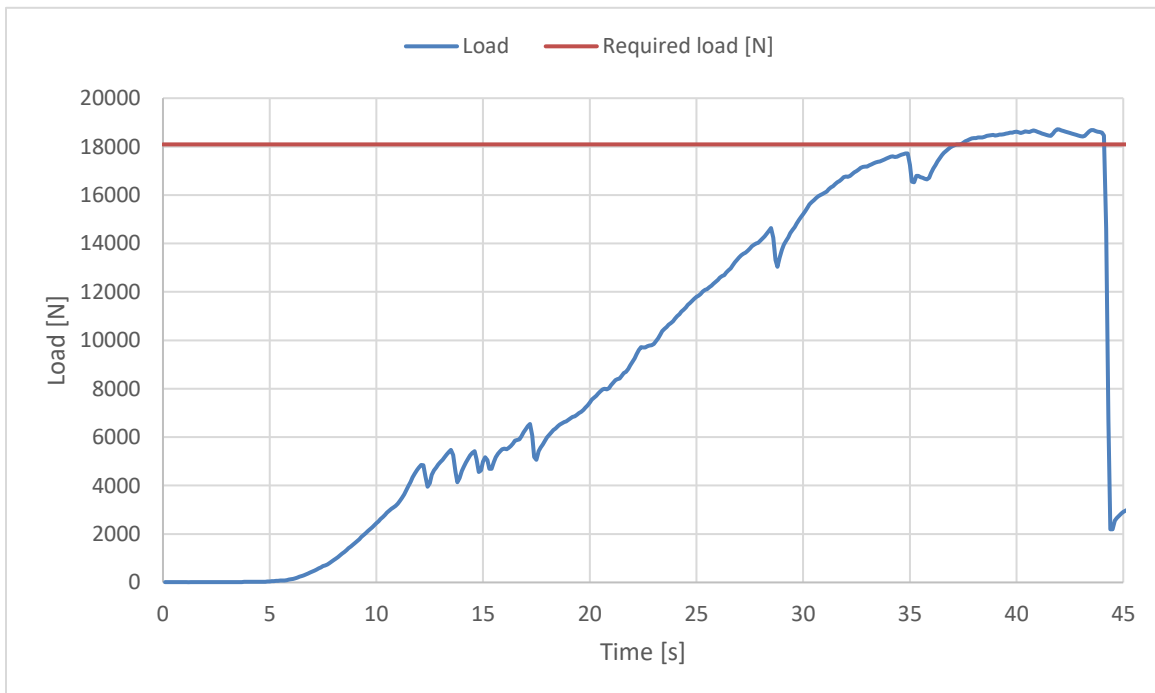
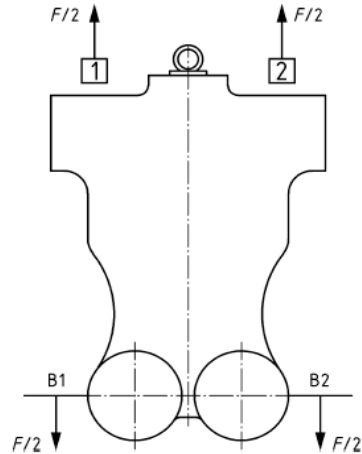
Test ID 09

Standard **EN 1651**
 Reference in standard **5.5.1.3**
 Test setup **Positive symmetric load rescue points**
 Attachment points **Both main riser attachment (1,2)**
 Anchor points **Dummy (B1,B2)**

Required load [g] **15**
 Required load [N] **18000**
 Minimum test duration [s] **5**

Result

Test duration [s] **6.8**
 Any signs of structural failure **No**
 Slippery test OK **Yes**
 Test results **POSITIVE**



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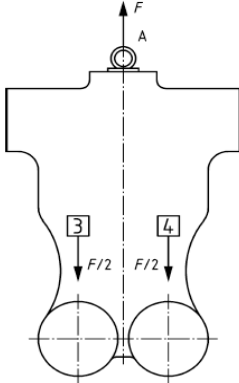
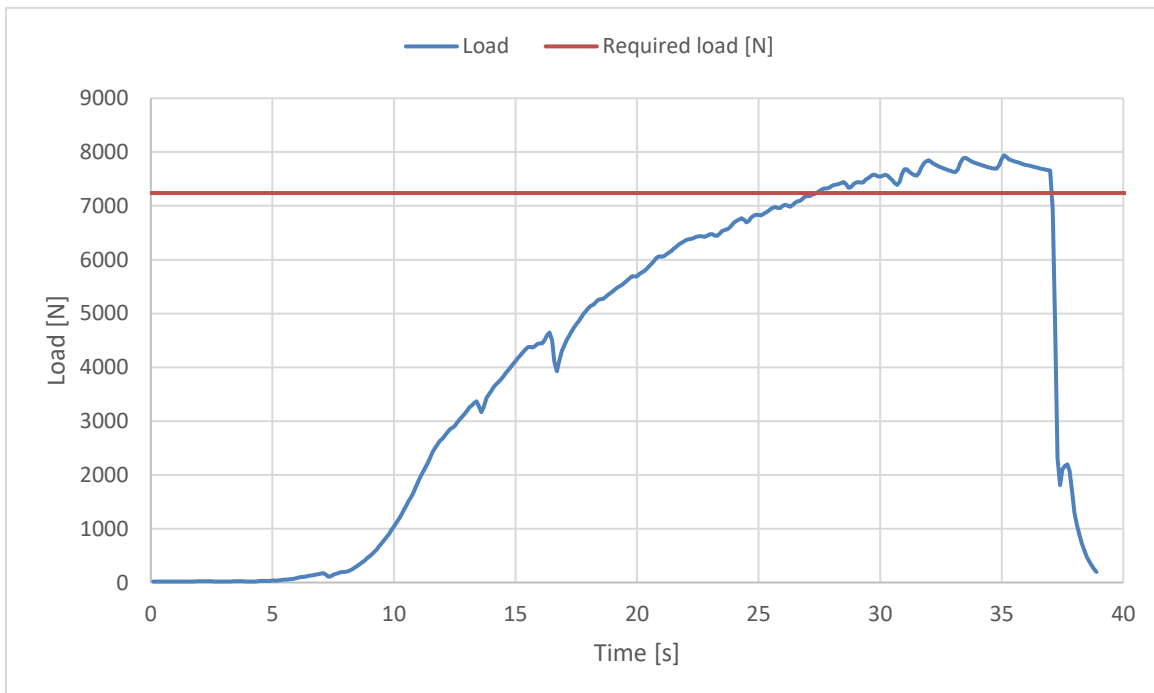
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model: **Itus**

Harness Structural test

Test ID 06

| | |
|---------------------------------|---|
| Standard | EN 1651 |
| Reference in standard | 5.5.1.6 |
| Test setup | Negative symmetric load |
| Attachment points | Both main riser attachment (3,4) |
| Anchor points | Dummy (A) |
| Required load [g] | 6 |
| Required load [N] | 7200 |
| Minimum test duration [s] | 5 |
| Result | |
| Test duration [s] | 9.6 |
| Any signs of structural failure | No |
| Test results | POSITIVE |

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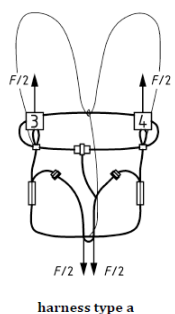
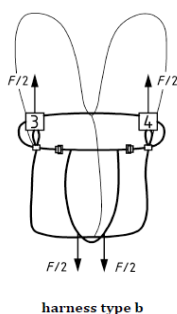
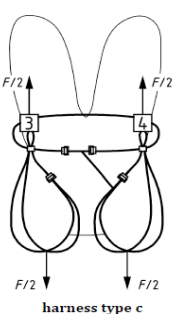
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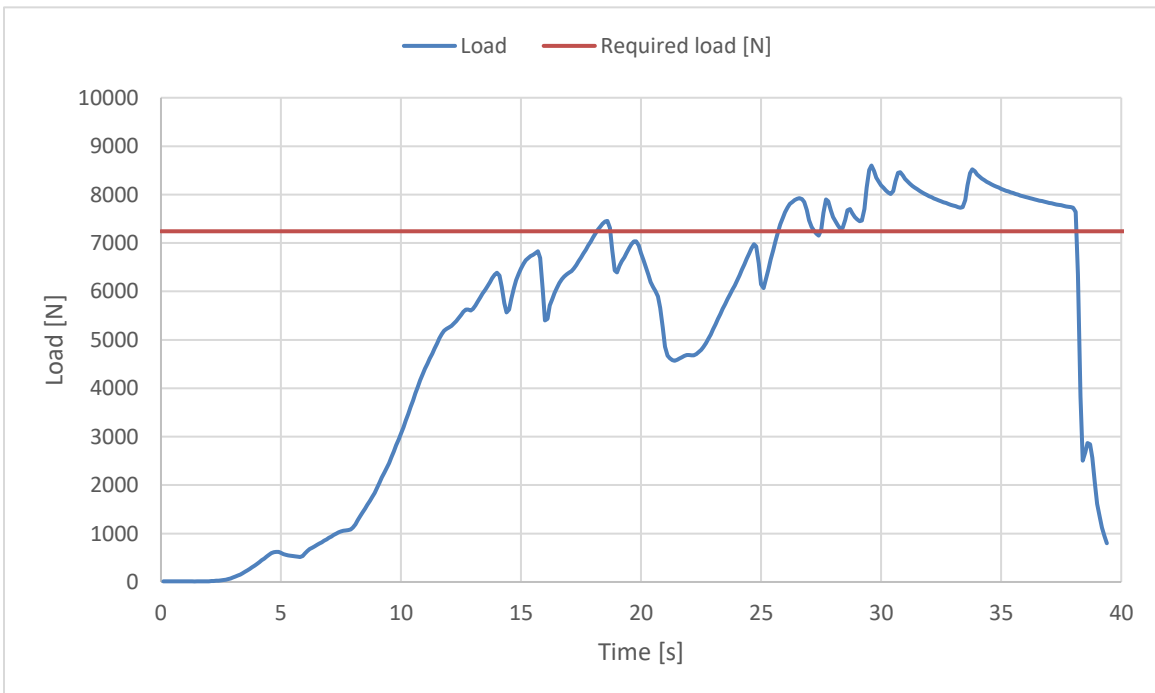
model: **Itus**

Harness Structural test

Test ID 12

| | |
|---------------------------------|--|
| Standard | EN 1651 |
| Reference in standard | 5.5.1.7 |
| Test setup | Upright (landing) position load |
| Attachment points | Both main riser attachment (3, 4) |
| Anchor points | Both legstrap of harness (no dummy) |
| Required load [g] | 6 |
| Required load [N] | 7200 |
| Minimum test duration [s] | 5 |
| Harness type | type a |
| Result | |
| Test duration [s] | 10.7 |
| Any signs of structural failure | No |
| Slippery test OK | Yes |
| Test results | POSITIVE |



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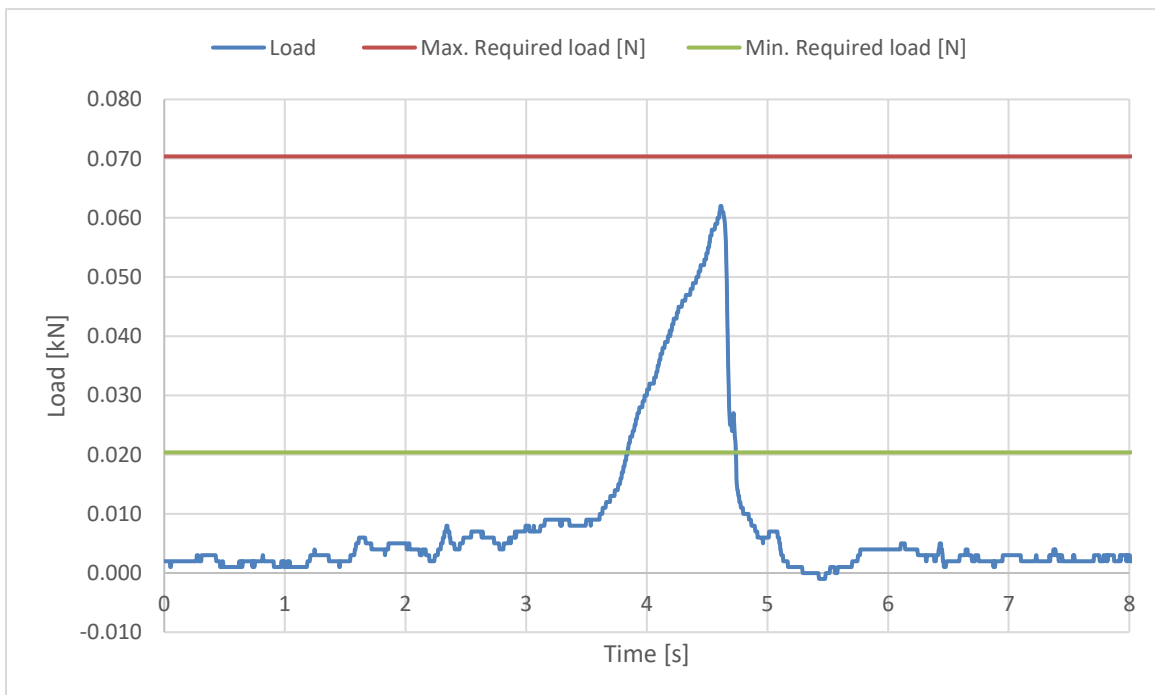
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Rescue Deployment Test

Test ID RRDT

| | |
|---------------------------|--|
| Standard | LTF NfL II 91/09 |
| Reference in standard | 6.1.5 |
| Test setup | Default flying position |
| Attachment points | Sensor connect to handle, and pull in opening direction |
| | The test is to simulate the load required to open the emergency parachute(1st action). |
| Min. Required load [N] | 20 |
| Max. Required load [N] | 70 |
| Result | |
| Load for first action [N] | 61.63 |
| Test results | POSITIVE |



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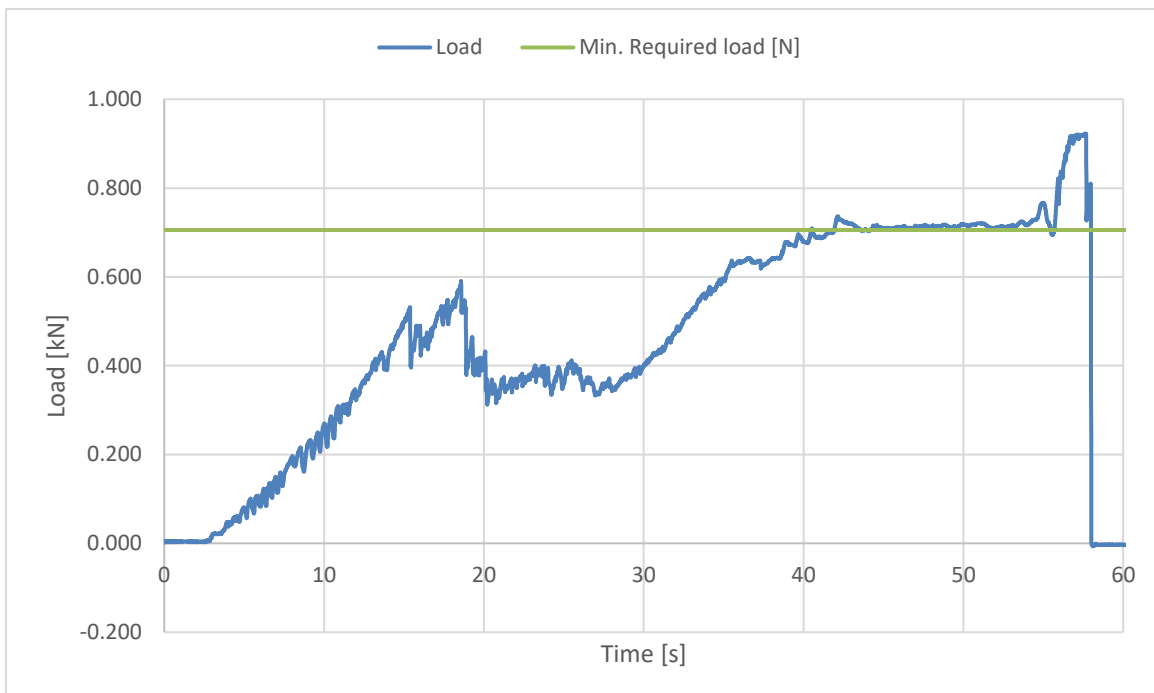
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model: **Itus**

Rescue Deployment Handle strength test

Test ID RRST

| | |
|---------------------------|---|
| Standard | EN12491:2015 |
| Reference in standard | 5.3.2 |
| Test setup | Two end points of handle |
| Attachment points | Sensor connect to end of handle, pull on the other side |
| | The handle must support min 700 N for 10 s, after measure breaking strength |
| Min. Required load [N] | 700 |
| Minimum test duration [s] | 10 |
| Result | |
| Test duration [s]: | 11.3 |
| Breaking strength [N] | 917.45 |
| Test results | POSITIVE |



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