

LEAKAGE TEST REPORT

R2TK KNAPHEIDE

LEAKAGE TEST

ISO 1402 : 2009

ITEMS :

*1/4" – 3/8"-1/2"-5/8"-3/4"-1" R2TK (2SC-P) KNAPHEIDE
FDG0404-FDG0606-FDG0808-FDG1010-FDG1212-FDG1616
B1SC04-B1SC06-B1SC08-B1SC10-B1SC12-B1SC16*

- 1. 1/4" R2TK (2SC-P) KNAPHEIDE : LEAKAGE TEST AT 1344 bar*
- 2. 3/8 " R2TK (2SC-P) KNAPHEIDE : LEAKAGE TEST AT 1120 bar*
- 3. 1/2" R2TK (2SC-P) KNAPHEIDE : LEAKAGE TEST AT 980 bar*
- 4. 5/8" R2TK (2SC-P) KNAPHEIDE : LEAKAGE TEST AT 840 bar*
- 5. 3/4" R2TK (2SC-P) KNAPHEIDE : LEAKAGE TEST AT 784 bar*
- 6. 1" R2TK (2SC-P) KNAPHEIDE : LEAKAGE TEST AT 630 bar*

DATE: 29/05/2017

TESTER: CQ3

1. 1/4" R2TK (2SC-P) KNAPHEIDE : LEAKAGE TEST AT 1344 bar

LEAKAGE TEST

ISO 1402 : 2009

HYDROSTATIC PRESSURE TEST - UNI EN ISO 1402

EN8572SC


| Hose Type | Sample number | Ferrule | C.D. (mm) | Fittings/ Adaptors/ plugs | WP (bar/ psi) | Test press. (TP) | Test cycle |
|---------------------------------|---------------|---------|-----------|---------------------------|--|--|---|
| 1/4" R2TK 2SC-P KNAPHEIDE | 1 | B1SC04 | 15.85 | FDG0404 ATMG04 | HOSE: 480/6960 FITTINGS: 450/6500 | 1344 bar 19493 psi (70% MIN B.P.) | 1ST STEP) 5 minutes at (TP) 2ND STEP) 0 BAR 3RD STEP) 5 minutes at (TP) |



| TEST | RESULTS |
|--------|---|
| TEST 1 | TEST COMPLETED WITHOUT LEAKAGES AT 1344 bar |



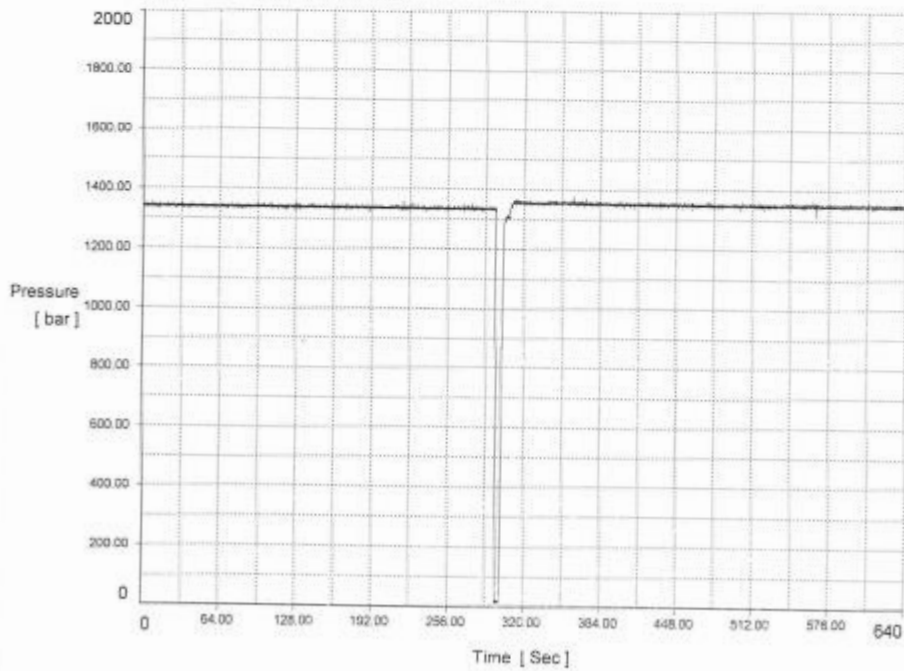
Vitillo



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|  | LEAKAGE TEST REPORT | Date: | 29/ 5/ 2017 | Test N° |
| | | Time: | 10.46.45 | |

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| Batch N°: | 4Q 17 W44F | Hose Type: | 1/4" R2TK |
| Standard: | EN857 2SC | Internal Diameter (mm): | |
| Elongation: | | Reinforcement Diameter (mm): | |
| Test Fluid: | ANDEROL PS46 | Outside Diameter: | |
| Customer: | | Nipple: | FDG0404 |
| Working Pressure (bar): | 480 | Ferrule: | B1SC04 |
| Note 1: | LEAKAGE TEST 1344 bar | Crimping Diameter: | 15.85 |
| Note 2: | KNAPHEIDE R2TK | Standard Burst Pressure (bar): | 1920 |

Maximum Pressure Value = 1377.44 bar

PRESSURE CURVE



Operator:  Technical Manager: 

2. 3/8" R2TK (2SC-P) KNAPHEIDE : LEAKAGE TEST AT 1120 bar

LEAKAGE TEST

ISO 1402 : 2009

HYDROSTATIC PRESSURE TEST - UNI EN ISO 1402

EN8572SC

| Hose Type | Sample number | Ferrule | C.D. (mm) | Fittings/ Adaptors/ plugs | WP (bar/ psi) | Test press. (TP) | Test cycle |
|---------------------------------|---------------|---------|-----------|---------------------------|--|--|---|
| 3/8" R2TK 2SC-P KNAPHEIDE | 1 | B15C06 | 18.9 | FDG0606 ATMG06 | HOSE: 400/5800 FITTINGS: 450/6500 | 1120 bar 16244 psi (70% MIN B.P.) | 1ST STEP) 5 minutes at (TP) 2ND STEP) 0 BAR 3RD STEP) 5 minutes at (TP) |



| TEST | RESULTS |
|--------|---|
| TEST 2 | TEST COMPLETED WITHOUT LEAKAGES AT 1120 bar |



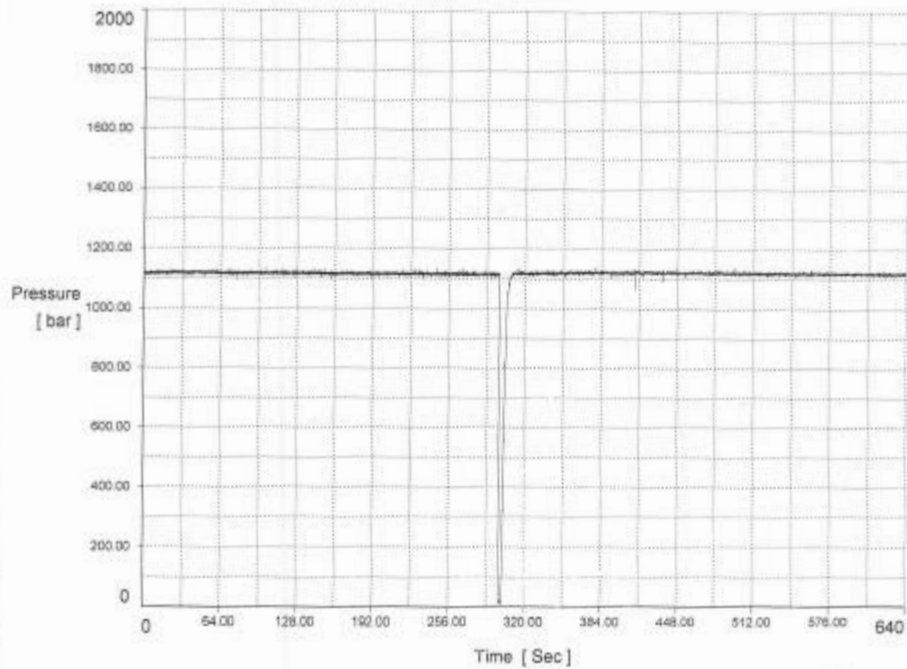
Vitillo



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|  | LEAKAGE TEST REPORT | Date: | Test N° |
| | | 29/ 5/ 2017 | |
| | | Time: | |
| | | 11.32.15 | |

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| Batch N°: | 1Q 17 W04F | Hose Type: | 3/8" R2TK |
| Standard: | EN8572SC | Internal Diameter (mm): | |
| Elongation: | | Reinforcement Diameter (mm): | |
| Test Fluid: | ANDEROL PS46 | Outside Diameter: | |
| Customer: | | Nipple: | FDG0606 |
| Working Pressure (bar): | 400 | Ferrule: | B1SC06 |
| Note 1: | LEAKAGE TEST 1120 bar | Crimping Diameter: | 18.9 |
| Note 2: | KNAPHEIDE R2TK | Standard Burst Pressure (bar): | 1600 |

Maximum Pressure Value = 1139.89 bar

PRESSURE CURVE



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| Operator: |  | Technical Manager: |  |
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3. 1/2" R2TK (2SC-P) KNAPHEIDE : LEAKAGE TEST AT 980 bar

LEAKAGE TEST

ISO 1402 : 2009

HYDROSTATIC PRESSURE TEST - UNI EN ISO 1402

EN8572SC

| Hose Type | Sample number | Ferrule | C.D. (mm) | Fittings/ Adaptors/ plugs | WP (bar/ psi) | Test press. (TP) | Test cycle |
|---------------------------------|---------------|---------|-----------|---------------------------|--|---|---|
| 1/2" R2TK 2SC-P KNAPHEIDE | 1 | B15C08 | 23.2 | FDG0808 ATMG08 | HOSE: 350/5070 FITTINGS: 415/6000 | 980 bar 14213 psi (70% MIN B.P.) | 1ST STEP) 5 minutes at (TP) 2ND STEP) 0 BAR 3RD STEP) 5 minutes at (TP) |



| TEST | RESULTS |
|--------|--|
| TEST 3 | TEST COMPLETED WITHOUT LEAKAGES AT 980 bar |



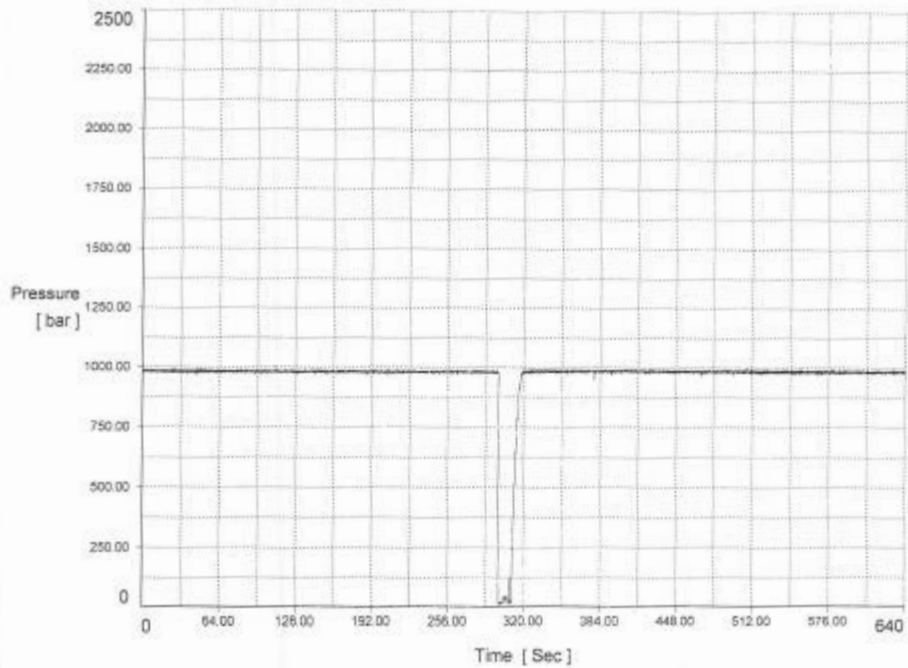
Vitillo

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|  | LEAKAGE TEST REPORT | Date: 29/ 5/ 2017 | Test N° 00000018 |
| | | Time: 09.14.51 | |

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| Batch N°: | 4Q 16 W42F | Hose Type: | 1/2" R2TK |
| Standard: | EN857 2SC | Internal Diameter (mm): | |
| Elongation: | | Reinforcement Diameter (mm): | |
| Test Fluid: | ANDEROL PS46 | Outside Diameter: | |
| Customer: | | Nipple: | FDG0808 |
| Working Pressure (bar): | 350 | Ferrule: | B1SC08 |
| Note 1: | LEAKAGE TEST 980 bar | Crimping Diameter: | 23.2 |
| Note 2: | KNAPHEIDE R2TK | Standard Burst Pressure (bar): | 1400 |

Maximum Pressure Value = 1004.88 bar

PRESSURE CURVE



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| Operator: <i>Bas Ehm</i> | Technical Manager: <i>V. Neumann</i> |
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4. 5/8" R2TK (2SC-P) KNAPHEIDE : LEAKAGE TEST AT 840 bar

LEAKAGE TEST

ISO 1402 : 2009

HYDROSTATIC PRESSURE TEST - UNI EN ISO 1402

EN8572SC


| Hose Type | Sample number | Ferrule | C.D. (mm) | Fittings/ Adaptors/ plugs | WP (bar/ psi) | Test press. (TP) | Test cycle |
|---------------------------------|---------------|---------|-----------|---------------------------|--|---|---|
| 5/8" R2TK 2SC-P KNAPHEIDE | 1 | B1SC10 | 26.9 | FDG1010 ATMG10 | HOSE: 300/4350 FITTINGS: 350/5000 | 840 bar 12183 psi (70% MIN B.P.) | 1ST STEP) 5 minutes at (TP) 2ND STEP) 0 BAR 3RD STEP) 5 minutes at (TP) |



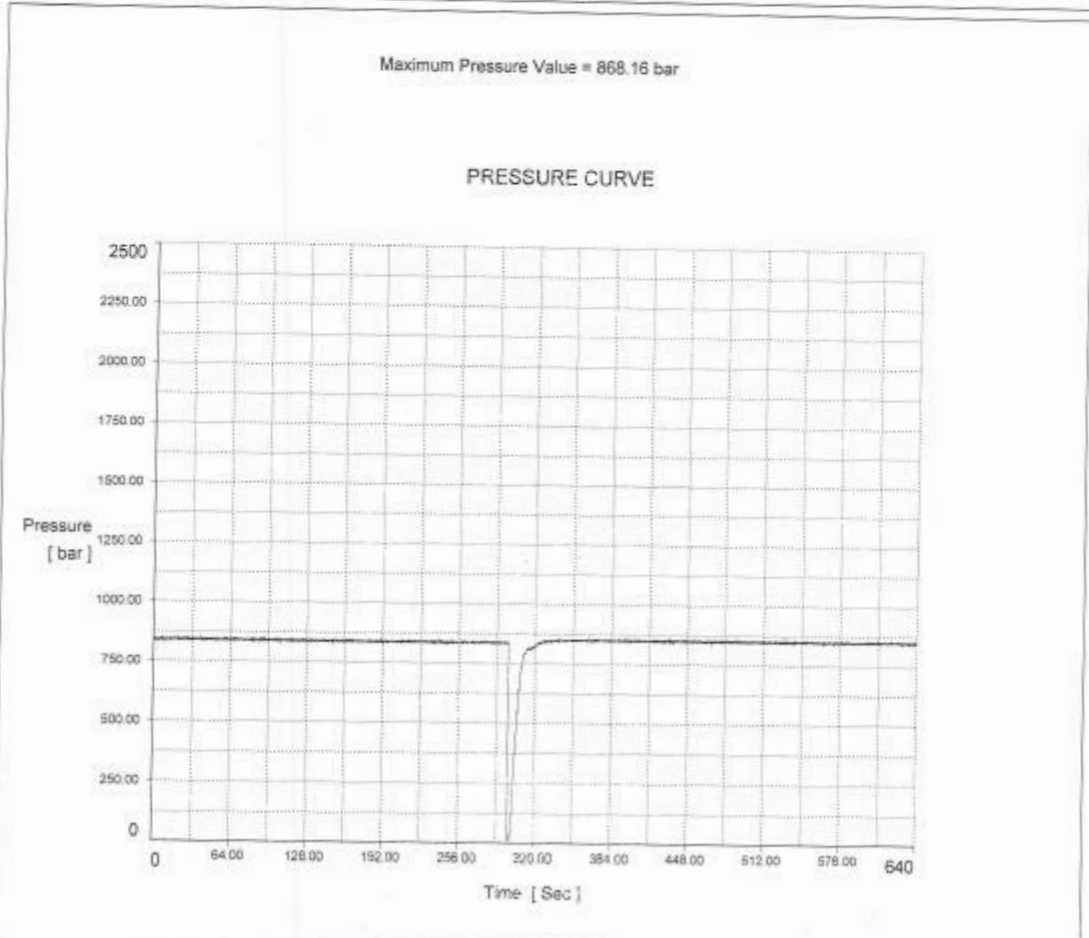
| TEST | RESULTS |
|--------|--|
| TEST 4 | TEST COMPLETED WITHOUT LEAKAGES AT 980 bar |



Vitillo

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|  Vitillo | LEAKAGE TEST REPORT | Date: 29/ 5/ 2017 | Test N° 00000023 |
| | | Time: 12.53.15 | |

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| Batch N°: | 2Q 16 W15F | Hose Type: | 5/8" R2TK |
| Standard: | EN 857 2SC | Internal Diameter (mm): | |
| Elongation: | | Reinforcement Diameter (mm): | |
| Test Fluid: | ANDEROL PS46 | Outside Diameter: | |
| Customer: | | Nipple: | FDG1010 |
| Working Pressure (bar): | 300 | Ferrule: | B1SC10 |
| Note 1: | LEAKAGE TEST 840 bar | Crimping Diameter: | 26.9 |
| Note 2: | KNAPHEIDE R2TK | Standard Burst Pressure (bar): | 1200 |



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| Operator: <i>Boris Sedon</i> | Technical Manager: <i>V. ...</i> |
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5. 3/4" R2TK (2SC-P) KNAPHEIDE : LEAKAGE TEST AT 784 bar

LEAKAGE TEST

ISO 1402 : 2009

HYDROSTATIC PRESSURE TEST - UNI EN ISO 1402

EN8572SC

| Hose Type | Sample number | Ferrule | C.D. (mm) | Fittings/ Adaptors/ plugs | WP (bar/ psi) | Test press. (TP) | Test cycle |
|---------------------------------|---------------|---------|-----------|---------------------------|--|---|---|
| 3/4" R2TK 2SC-P KNAPHEIDE | 1 | B1SC12 | 30.5 | FDG1212 ATMG12 | HOSE: 280/4061 FITTINGS: 350/5000 | 784 bar 11371 psi (70% MIN B.P.) | 1ST STEP) 5 minutes at (TP) 2ND STEP) 0 BAR 3RD STEP) 5 minutes at (TP) |



| TEST | RESULTS |
|--------|--|
| TEST 5 | TEST COMPLETED WITHOUT LEAKAGES AT 784 bar |



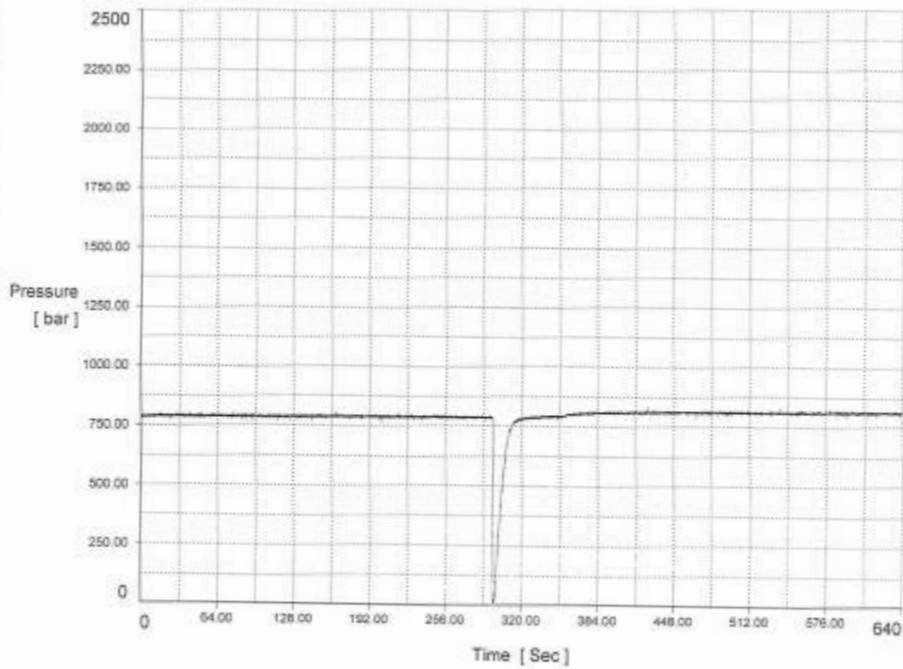
Vitillo

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|--|----------------------------|-------------|----------|
|  Vitillo | LEAKAGE TEST REPORT | Date: | Test N° |
| | | 29/ 5/ 2017 | 00000021 |
| | | Time: | |
| | | 17.57.05 | |

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|-------------------------|----------------------|--------------------------------|-----------|
| Batch N°: | 3Q 15 W36F | Hose Type: | 3/4" R2TK |
| Standard: | EN 857 2SC | Internal Diameter (mm): | |
| Elongation: | | Reinforcement Diameter (mm): | |
| Test Fluid: | ANDEROL PS46 | Outside Diameter: | |
| Customer: | | Nipple: | FDG1212 |
| Working Pressure (bar): | 280 | Ferrule: | B1SC12 |
| Note 1: | LEAKAGE TEST 784 bar | Crimping Diameter: | 30.5 |
| Note 2: | KNAPHEIDE R2TK | Standard Burst Pressure (bar): | 1120 |

Maximum Pressure Value = 830.57 bar

PRESSURE CURVE



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| Operator: <i>Boris Fekko</i> | Technical Manager: <i>Vincent Gaudin</i> |
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6. 1" R2TK (2SC-P) KNAPHEIDE : LEAKAGE TEST AT 630 bar

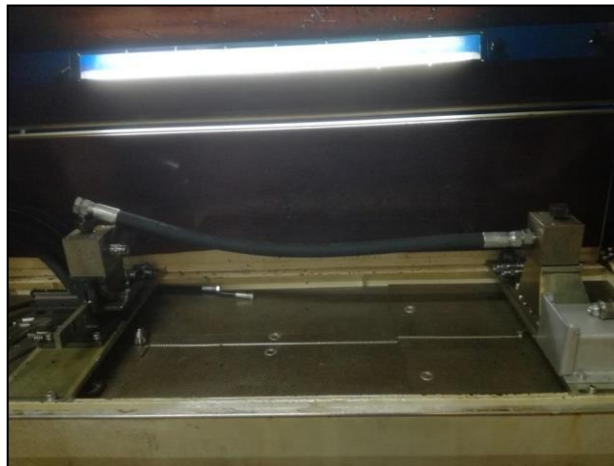
LEAKAGE TEST

ISO 1402 : 2009

HYDROSTATIC PRESSURE TEST - UNI EN ISO 1402

EN8572SC

| Hose Type | Sample number | Ferrule | C.D. (mm) | Fittings/ Adaptors/ plugs | WP (bar/ psi) | Test press. (TP) | Test cycle |
|-------------------------|---------------|---------|-----------|---------------------------|--|--|---|
| 1" R2TK 2SC-P KNAPHEIDE | 1 | B1SC16 | 37.8 | FDG1616 ATMG16 | HOSE: 225/3263 FITTINGS: 280/4000 | 630 bar 9137 psi (70% MIN B.P.) | 1ST STEP) 5 minutes at (TP) 2ND STEP) 0 BAR 3RD STEP) 5 minutes at (TP) |



| TEST | RESULTS |
|--------|--|
| TEST 6 | TEST COMPLETED WITHOUT LEAKAGES AT 630 bar |

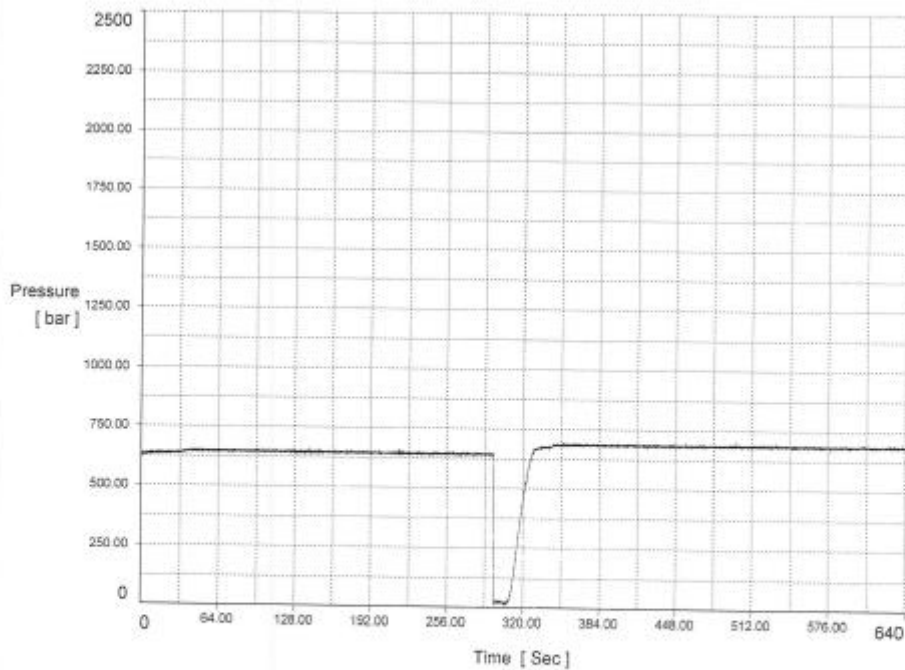


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|  | LEAKAGE TEST REPORT | Date: | Test N° |
| | | 29/ 5/ 2017 | 00000022 |
| | | Time: | |
| | | 10.23.42 | |

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| Batch N°: | 3Q 16 W39F | Hose Type: | 1" R2TK |
| Standard: | EN 857 2SC | Internal Diameter (mm): | |
| Elongation: | | Reinforcement Diameter (mm): | |
| Test Fluid: | ANDEROL PS46 | Outside Diameter: | |
| Customer: | | Nipple: | FDG1616 |
| Working Pressure (bar): | 225 | Ferrule: | B1SC16 |
| Note 1: | LEAKAGE TEST 630 bar | Crimping Diameter: | 37.8 |
| Note 2: | KNAPHEIDE R2TK | Standard Burst Pressure (bar): | 900 |

Maximum Pressure Value = 707.52 bar

PRESSURE CURVE



Operator: *[Signature]* Technical Manager: *[Signature]*

SUMMARY

| LEAKAGE TEST | | | | | | |
|---|------------------------------|---------|---------|--------------------|-----------------------|---|
| ISO 1402 : 2009 | | | | | | |
| 1 ST STEP) 5 minutes at (TP) | | | | | | |
| 2 ND STEP) 0 bar | | | | | | |
| 3 RD STEP) 5 minutes at (TP) | | | | | | |
| TEST | Hose Type | Nipple | Ferrule | Adaptors/ Plugs | Test pressure (TP) | Results |
| 1 | 1/4" R2TK 2SC-P KNAPHEIDE | FDG0404 | B1SC04 | ATMG04 | 1344 bar 19493 psi | POSITIVE TEST COMPLETED WITHOUT LEAKAGE |
| 2 | 3/8" R2TK 2SC-P KNAPHEIDE | FDG0606 | B1SC06 | ATMG06 | 1120 bar 16244 psi | POSITIVE TEST COMPLETED WITHOUT LEAKAGE |
| 3 | 1/2" R2TK 2SC-P KNAPHEIDE | FDG0808 | B1SC08 | ATMG08 | 980 bar 14213 psi | POSITIVE TEST COMPLETED WITHOUT LEAKAGE |
| 4 | 5/8" R2TK 2SC-P KNAPHEIDE | FDG1010 | B1SC10 | ATMG10 | 840 bar 12183 psi | POSITIVE TEST COMPLETED WITHOUT LEAKAGE |
| 5 | 3/4" R2TK 2SC-P KNAPHEIDE | FDG1212 | B1SC12 | ATMG12 | 784 bar 11371 psi | POSITIVE TEST COMPLETED WITHOUT LEAKAGE |
| 6 | 1" R2TK 2SC-P KNAPHEIDE | FDG1616 | B1SC16 | ATMG16 | 630 bar 9137 psi | POSITIVE TEST COMPLETED WITHOUT LEAKAGE |