

Zellik, 16/09/2016

TEST REPORT

REPORT NR: SDR/sdr/IBC-16.098

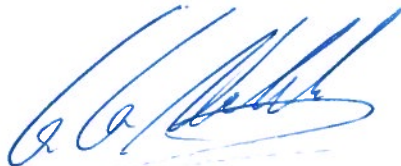
Report IBC-16.098/p1 of 7

OBJECT : Test on Flexible Intermediate Bulk Containers (FIBC) according to **ISO 21898**,
§5.3.1 Cyclic top lift test
Manufacturer reference or trade name: **KVR6 5m³**
S.W.L. = **1600 kg** S.F. = **6/1** Class of FIBC: **Standard duty reusable**
Receiving-date samples: 14/09/2016
Executing date or period of testing: 15/09/2016 ->16/09/2016

BY ORDER OF: **KORALI D.O.O**
KONAREVO BR. 206

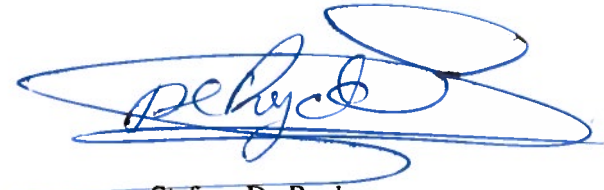
SERBIA-36340 KONAREVO-KRALJEVO

Head of Department
(F)IBC & Dangerous Goods Packaging



Eng. D. De Valck

Analyst-Consultant
(F)IBC & Dangerous Goods Packaging



Stefaan De Ryck

*The results of this report are exclusively related to the submitted samples
This report shall not be reproduced except in full, without written approval of the laboratory
Q : accredited test (ISO 17025)
Accuracy of the test results available on request*

1. Specifications:

Cyclic top lift test : 70 cycles at a test load of 4 x SWL and a final cycle at a test load of 6 x SWL

2. Description samples:

FIBC made of PVC (DIN 60001) 880g/m² intended to be used as stationary underground container for collection of non-dangerous municipal solid waste.

The FIBC is made of 2 walls overlapping each other by 4 cm and glued over the whole length of the bag.

The FIBC has a full open discharge, the bottom is created when the body is folded using a rope fitted around the FIBC into a locking mechanism.

The FIBC has 16 hanging points that fit in a metal octagonal ring, equipped with 2 hanging points.

The Fabric is reinforced at multiple places and has reinforcement strokes of 5cm in the length with alternating spacing of 9 – 20 cm.



See plans in annex.

Dimensions:

Height x Diameter: (410 x Ø143)cm

Filling height: 285cm

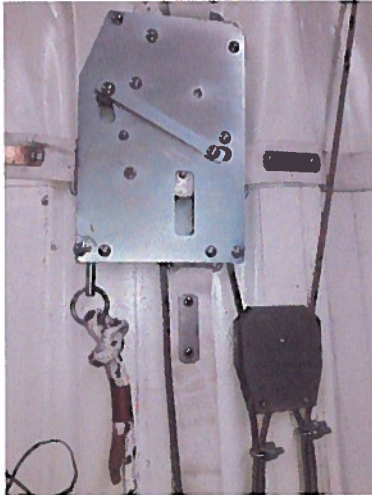
Weight empty bag: 44700 g

(incl. metal hanging points, steel cable and opening/closing mechanism)

Manufacturer:

KORALI D.O.O
Konarevo br. 206
36340 Konarevo-Kraljevo
SERBIA

Closing / Discharge mechanism



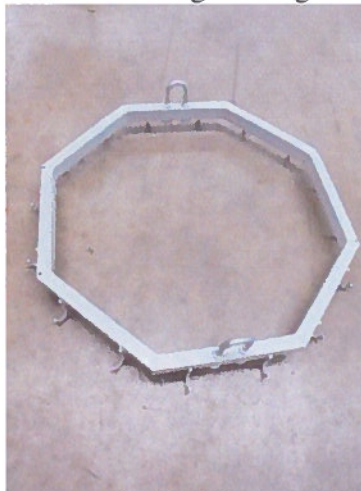
1 of 16 hanging points



Metal fittings to secure rope



Metal octagonal ring



1 of 2 hanging points



3. Test apparatus:

Type : GH-45 with four load cells of 50 kN
Method : ISO 21898
Internal procedures: WP-IBC-001

4. Quality system:

- Annual technical control.
- Annual calibration.

5. Specific conditioning:

The bags are not preconditioned.
Ambient temperature during testing: $(26,7 \pm 1)^\circ\text{C}$
Ambient relative humidity during testing: $(34,6 \pm 5)\% \text{R.H.}$

6. Effectuated tests:

A. Top lift test (Q):

The FIBC is filled with plastic granulates (bulk density: 600kg/m³, mesh size: 4mm, angle of repose: 30°), further loaded to 4 times its heaviest load (SWL) (4 x 1600 kg) for 70 cycles and loaded to 6 times its heaviest load (SWL) (6 x 1600 kg) for 1 cycle, during this last cycle the load at rupture is determined.

Used compression plate: Custom Ø110cm

7. Results:

A. Top lift test (Q):

The FIBC didn't show any deterioration after having been loaded with the 71 cycles as mentioned above. The test apparatus was stopped at 10.068 kg.

9. Remarks:

The presented FIBC's have met the performance tests and may be used in connection with the specification mentioned in §1 of this report.

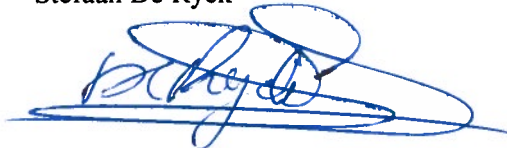
The stacking test was not performed, while these IBC models are not stackable.

- Maximal net weight : 1600 kg
- SF : 6/1
- **Standard duty reusable**

All other conditions of use are not covered by this report.

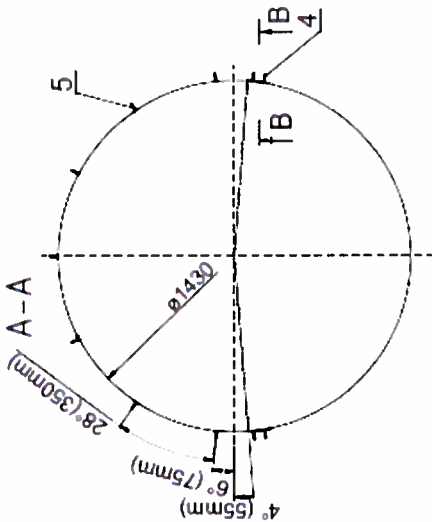
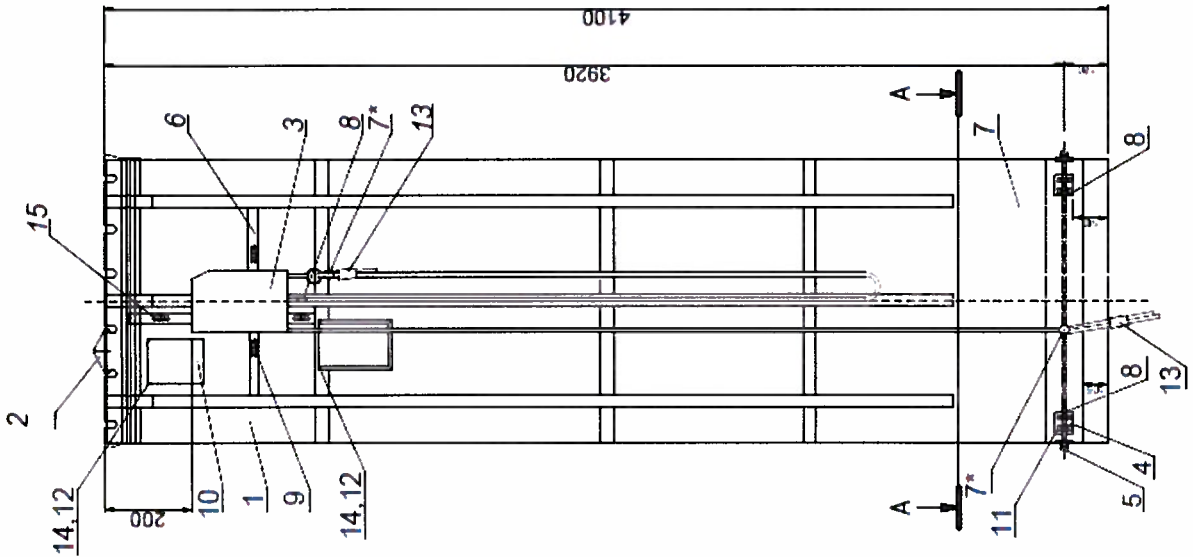
Certificate "IBE-BVI" IBC-16.098/09.16 in attachment

Stefaan De Ryck



Analyst-Consultant
(F)IBC & Dangerous goods packaging

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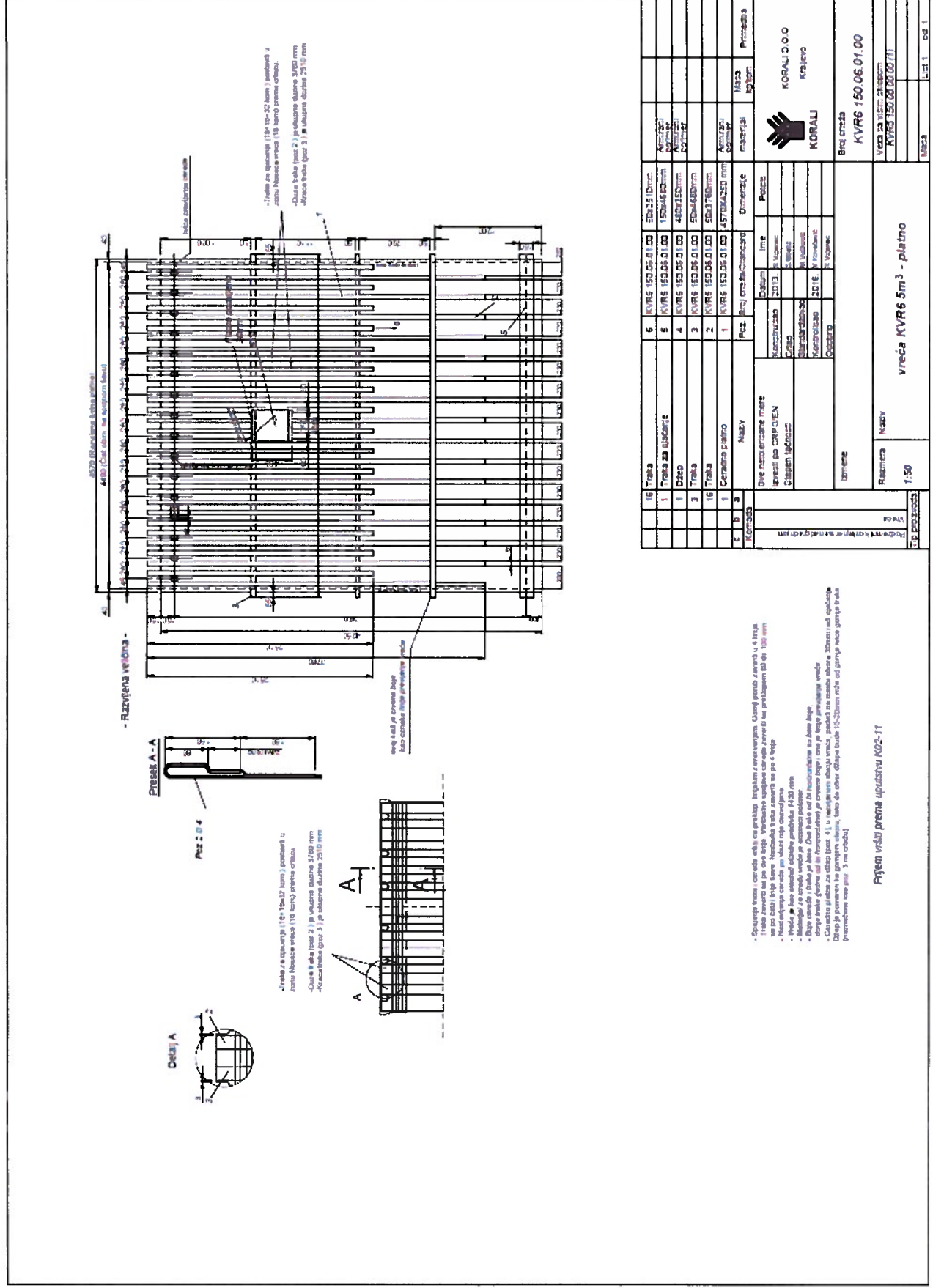
PRESEN B-B
R1110



- Iznika u skladu sa čl. 9. st. 5. ovog zakona, izdati su svi dokumenti potrebni za izradu projekta.
- Osim izdatih dokumenata, izdati su i svi dokumenti potrebni za izradu projekta.
- Projekat je izdat u skladu sa čl. 9. st. 5. ovog zakona, izdati su svi dokumenti potrebni za izradu projekta.
- Projekat je izdat u skladu sa čl. 9. st. 5. ovog zakona, izdati su svi dokumenti potrebni za izradu projekta.

Prijem vrši prema uputstvu IBC-11

Redni broj	Opis	Ukupna količina	Ukupna vrednost	Ukupna cena
1	1. Iznika u skladu sa čl. 9. st. 5. ovog zakona, izdati su svi dokumenti potrebni za izradu projekta.	1	1000000	1000000
2	2. Osim izdatih dokumenata, izdati su i svi dokumenti potrebni za izradu projekta.	1	1000000	1000000
3	3. Projekat je izdat u skladu sa čl. 9. st. 5. ovog zakona, izdati su svi dokumenti potrebni za izradu projekta.	1	1000000	1000000
4	4. Projekat je izdat u skladu sa čl. 9. st. 5. ovog zakona, izdati su svi dokumenti potrebni za izradu projekta.	1	1000000	1000000
5	5. Projekat je izdat u skladu sa čl. 9. st. 5. ovog zakona, izdati su svi dokumenti potrebni za izradu projekta.	1	1000000	1000000
6	6. Projekat je izdat u skladu sa čl. 9. st. 5. ovog zakona, izdati su svi dokumenti potrebni za izradu projekta.	1	1000000	1000000
7	7. Projekat je izdat u skladu sa čl. 9. st. 5. ovog zakona, izdati su svi dokumenti potrebni za izradu projekta.	1	1000000	1000000
8	8. Projekat je izdat u skladu sa čl. 9. st. 5. ovog zakona, izdati su svi dokumenti potrebni za izradu projekta.	1	1000000	1000000
9	9. Projekat je izdat u skladu sa čl. 9. st. 5. ovog zakona, izdati su svi dokumenti potrebni za izradu projekta.	1	1000000	1000000
10	10. Projekat je izdat u skladu sa čl. 9. st. 5. ovog zakona, izdati su svi dokumenti potrebni za izradu projekta.	1	1000000	1000000
11	11. Projekat je izdat u skladu sa čl. 9. st. 5. ovog zakona, izdati su svi dokumenti potrebni za izradu projekta.	1	1000000	1000000
12	12. Projekat je izdat u skladu sa čl. 9. st. 5. ovog zakona, izdati su svi dokumenti potrebni za izradu projekta.	1	1000000	1000000
13	13. Projekat je izdat u skladu sa čl. 9. st. 5. ovog zakona, izdati su svi dokumenti potrebni za izradu projekta.	1	1000000	1000000
14	14. Projekat je izdat u skladu sa čl. 9. st. 5. ovog zakona, izdati su svi dokumenti potrebni za izradu projekta.	1	1000000	1000000
15	15. Projekat je izdat u skladu sa čl. 9. st. 5. ovog zakona, izdati su svi dokumenti potrebni za izradu projekta.	1	1000000	1000000
UKUPNO				
		15	15000000	15000000

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- Rozměry v mm, tolerance ±0,1, na přelomu. Inženýr zkontroluje. Účastí stavba závazků u 6. řádu.
- Inženýr zkontroluje a potvrzí na předpisu 10.01.10.100 mm.
- Inženýrské certifikáty a vizuální kontrola závazků na pag 4, řádu.
- Inženýrské certifikáty a vizuální kontrola závazků na pag 4, řádu.
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- Číslo řádu a číslo na předpisu 10.01.10.100 mm.
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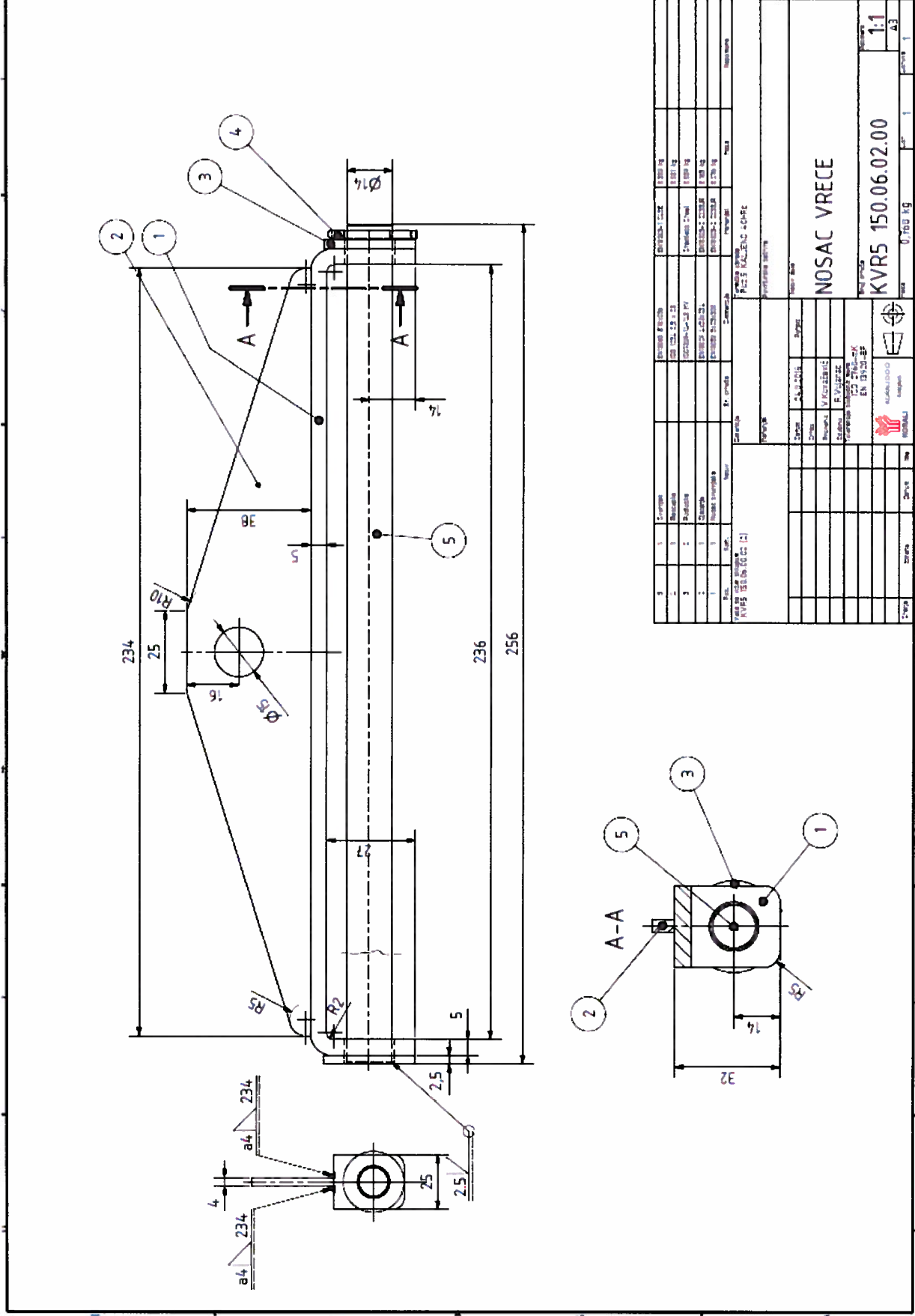
Príjem vrstvy podľa upustivku KO2-11

Priloha	Číslo	Popis	Podpis
16	1	Trilina za 150.05.01.00	
16	2	Čelo 150.05.01.00	
16	3	Trilina 150.05.01.00	
16	4	Čelo 150.05.01.00	
16	5	Trilina 150.05.01.00	
16	6	Čelo 150.05.01.00	
16	7	Trilina 150.05.01.00	
16	8	Čelo 150.05.01.00	
16	9	Trilina 150.05.01.00	
16	10	Čelo 150.05.01.00	
16	11	Trilina 150.05.01.00	
16	12	Čelo 150.05.01.00	
16	13	Trilina 150.05.01.00	
16	14	Čelo 150.05.01.00	
16	15	Trilina 150.05.01.00	
16	16	Čelo 150.05.01.00	

Priloha	Číslo	Popis	Podpis
16	1	Trilina 150.05.01.00	
16	2	Čelo 150.05.01.00	
16	3	Trilina 150.05.01.00	
16	4	Čelo 150.05.01.00	
16	5	Trilina 150.05.01.00	
16	6	Čelo 150.05.01.00	
16	7	Trilina 150.05.01.00	
16	8	Čelo 150.05.01.00	
16	9	Trilina 150.05.01.00	
16	10	Čelo 150.05.01.00	
16	11	Trilina 150.05.01.00	
16	12	Čelo 150.05.01.00	
16	13	Trilina 150.05.01.00	
16	14	Čelo 150.05.01.00	
16	15	Trilina 150.05.01.00	
16	16	Čelo 150.05.01.00	

Priloha	Číslo	Popis	Podpis
16	1	Trilina 150.05.01.00	
16	2	Čelo 150.05.01.00	
16	3	Trilina 150.05.01.00	
16	4	Čelo 150.05.01.00	
16	5	Trilina 150.05.01.00	
16	6	Čelo 150.05.01.00	
16	7	Trilina 150.05.01.00	
16	8	Čelo 150.05.01.00	
16	9	Trilina 150.05.01.00	
16	10	Čelo 150.05.01.00	
16	11	Trilina 150.05.01.00	
16	12	Čelo 150.05.01.00	
16	13	Trilina 150.05.01.00	
16	14	Čelo 150.05.01.00	
16	15	Trilina 150.05.01.00	
16	16	Čelo 150.05.01.00	

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CERTIFICATE OF TEST

Test certificate n°:

"IBE-BVI"

IBC-16.098/09.16

Date of certificate: 16/09/2016

Test sample: Flexible Intermediate Bulk Container - FIBC S.W.L. = 1600 kg S.F. = 6/1
Manufacturer reference: KVR6 5m³
Dimensions (410 x Ø1430) cm
Suspension 16 point / 4

Manufacturer: KORALI D.O.O **Supplier :**
Konarevo br. 206
36340 Konarevo-Kraljevo
SERBIA

Test: According to ISO 21898 Internal procedures : WP-IBC-001
§5.3.1 Cyclic top lift test

Test Procedure: *Cyclic load + load until failure*
70 cycles at a test load of 4 x SWL and a final cycle at a test load of 6 x SWL

Class of FIBC: Standard duty reusable

Test result: After 70 cycles of load application 4 x SWL and a final cycle at a test load of 6 x SWL the FIBC didn't show any deterioration.
The complete description of the presented material, the results and findings of the tests are given in report **SDR/sdr/IBC-16.098** of 16/09/2016 which is inextricable to this test certificate.

The Belgian Packaging Institute Ltd., Z.I. Researchpark 280, 1731 ZELLIK, certifies the here above mentioned statements. Any change of the presented material involves a new series of conformity tests on the modified packages to be performed by the Belgian Packaging Institute.

The **certificate and report are valid** for a period of **three years** from the date of this certificate till **16/09/2019** as far as the processing parameters remain identical with those for the presented samples.

Head of Department (F)IBC
& Dangerous Goods Packaging



Eng. D. De Valck

Analyst -Consultant (F)IBC
& Dangerous Goods Packaging



Stefaan De Ryck

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CERTIFICATE OF TEST

Test certificate n°:

"IBE-BVI"

IBC-16.098/09.16

Pictograms of the recommended handling methods

Special treatments

- stabilization
- electrostatic conductivity treatment
- insect repellent treatment
- flame retardant treatment

Description of the specific product ⁽¹⁾ :

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(1) Only if the IBC is in relation with a specific product