



Strategic Supply of Bulk Commodities and Chemicals; Maximization of Bulk Handling Capacity, Efficiency and Flexibility





1. Environmental and Ecological Compliance:

- ✓ **Sustainability:** Support ports in meeting environmental mandates by minimizing dusting, plastic waste and implementing eco-friendly practices.
- ✓ **Impact:** Enhance client's and port's reputation and compliance with international environmental standards.

2. Capital Savings on Warehousing:

- ✓ **Cost Efficiency:** Reduce the need for extensive warehousing infrastructure by optimizing storage and handling processes.
- ✓ **Benefit:** Free up investment capital, allowing ports to allocate resources to other critical areas.

3. Optimized Asset Utilization:

- ✓ **Efficiency Gains:** Improve the use of handling equipment such as cranes, jetties, and railways, ensuring they are utilized to their maximum potential.
- ✓ **Benefit:** Increase operational efficiency, reduce downtime, and extend the life of port assets.

Our Value Proposition

4. Faster Vessel Loading and Unloading:

- ✓ **Efficiency Advantage:** Implement advanced loading solutions that significantly reduce the time required to load vessels compared to traditional methods.
- ✓ **Impact:** Minimize vessel idle time, leading / Unloading to faster turnaround and increased port capacity.

5. Flexibility in Maritime Transport :

- ✓ **Options:** The possibility of marine to transport in general cargo vessels Instead of bulk vessels.
- ✓ **Impact:**.. greater flexibility in finding vessels, simple and fast loading and unloading. **Cost Efficiency for demurrage.**

6. Saving Capital on Depreciation, Zero Waste of Product:

- ✓ **Cost Efficiency:** Reduce the **waste of material** by optimizing storage and handling processes.
- ✓ **Benefit:** Free up investment capital, and better **inventory management**.

7. Maintaining The Quality of the Product:

- ✓ **Options :** there is no need to wet the sulfur because of the opacity or waterproof of the FBC.
- ✓ **Benefit :** savings in liquid transport costs. mismatched weight and unnecessary delivery extra kg.. And less cleaning processes all this its **Cost Efficiency**

We Have Been Serving Our Clients in Ports for 25 years

Pory (Finland): Nickel concentrate

Antwerp (Belgium): Cement concentrate

Dominican Republic: Raw Sugar

Taiwan: Cement concentrate

Dudinka:

Nickel concentrate

Arkhangelsk:

Nickel concentrate, wood pellets

St. Petersburg:

Potash, anthracite

Tolyatti:

Urea

N. Novgorod / Kazan / Novocheboksarsk:

Cement

Vanino:

Alumina

Rostov-on-Don

Alumina

Nikolaev:

Sunflower meal
Alumina

Astrakhan

Sulfur

Makhachkala:

Wheat

Amursk:

Gold flotation
concentrate

Novorossiysk:

Alumina, ammophos, wheat

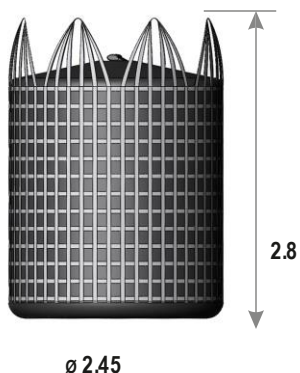
Poti:

Ammonium nitrate

We Serve the Critical Needs of Various Industries

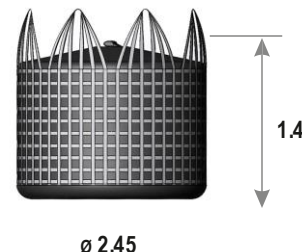
Industrial and chemical
bulk materials, grains, sugar

FBC-14-10



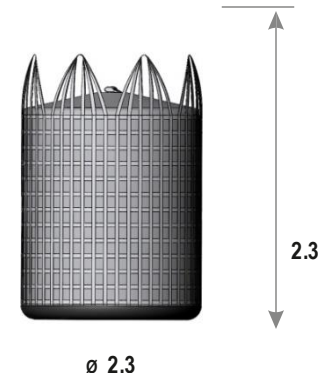
Industrial and chemical
materials with high density

FBC-14-10Y



TEU version

FBC-14-10TEU



Design	Reusable Multipurpose Flexible Container for Bulk Materials and Aggregates		
Cargo load	14 metric tons		
Safety factor	8:1		
Weight per unit	75 kg	55 kg	60 kg
Loading capacity	13 m ³	6.5 m ³	9.5 m ³
Inner liner	Rubberized PES	Rubberized PES	Rubberized PES
Water resistant	Yes	Yes	Yes
Dangerous goods	UN certified	UN certified	UN certified
Stackable (levels)	Up to 4 rows	Up to 4 rows	Up to 4 rows

We Provide Our Clients with the Opportunity to Transport, Store and Handle a Diverse Range of Goods

Flexible
Container for
Bulk Materials



Raw materials



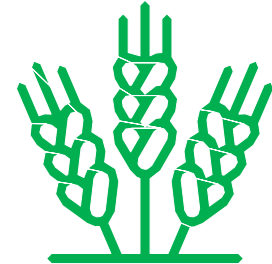
- ✓ Potash;
- ✓ Phosphate fertilizers;
- ✓ Apatite;
- ✓ Metal ores and concentrates;
- ✓ Quartz sand, limestone, etc.

Industrial cargo



- ✓ Cement
- ✓ Sulfur;
- ✓ Urea / AN;
- ✓ Sodium carbonate and bicarbonate;
- ✓ Plastic granules;
- ✓ Industrial salts;
- ✓ Complex fertilizers;
- ✓ Aluminum oxide.

Agricultural products



- ✓ Grains;
- ✓ Raw sugar;
- ✓ Biofuel (pellets, briquettes);
- ✓ Feed additives;
- ✓ Flour, starch;
- ✓ Gravel, peat;
- ✓ Charcoal.

We Solve Complex Logistic Problems and Provide an Opportunity to Reach New Markets



Cargo: Sulphur

Origin: Turkmenistan (Caspian Sea; Persian gulf)

Destination: Black Sea and East Africa

Our solution: Sulphur is a problematic material for ports and logistics companies. We provide effective environmental solutions to deliver sulphur from Turkmenistan in FBCs, unlocking new trade routes previously unavailable.



Cargo: Potash

Origin: Belorussia

Destination: LatAm / Africa

Our solution: FBCs are used as an intermediate solution to deliver potash from a plant and unload it into a bulk vessel destined for global markets, and as a temporary storage solution close to the end users of this fertilizer in Africa.



Cargo: Cement

Origin: Belgium / Indonesia / CIS

Destination: Scotland / Taiwan / CIS

Our solution: FBCs are used either as an intermediate solution to deliver cement from a cement plant and unload it into a bulk vessel, or as a turnkey A-to-Z solution to deliver material to the end market.



Cargo: Urea / Ammonium Nitrate

Origin: Russia / Azerbaijan / Central Asia

Destination: Global markets

Our solution: FBCs are used as an intermediate solution to deliver urea from a plant to a port, accumulate consignments, and unload them into a bulk vessel destined for global markets.



Cargo: Raw Sugar

Origin: Brazil / Dominicana

Destination: Uzbekistan / Caribbean

Our solution: FBCs are used either as an intermediate solution to deliver sugar from a plant and unload it into a bulk vessel, or as a turnkey A-to-Z solution to deliver material to the end market in containers (TEU version of FBCs).



Cargo: Calcium Carbonate

Origin: Jordan

Destination: Israel / Gulf States

Our solution: FBCs are used either as a turnkey A-to-Z solution to deliver calcium carbonate from Jordan to the end market, addressing the lack of storage capacities and the deficit caused by the recent embargo from Turkey.

We Address Unique Challenges of Our Clients and Helped Some of Them to Reduce Costs by up to 50%



Client: Belarusian Potash Company

Our solution: Transportation of potash fertilizers in 14-ton FBCs by railroad. A new logistics framework was developed due to limitations of the previous one. The FBCs with potash are shipped to a port and then potash is unloaded into ships. Client chose us because FBC total cost of ownership proved to be 50% less than jumbo bags.



Client: SIKA/BASF (end users are offshore oil projects)

Our solution: We have been assisting SIKA/BASF in the transportation of a specialized cement concentrate (MBS) using FBCs, carefully preserving this expensive formula. Our service contract encompasses on-shore loading of cement at client's premises, followed by the safe transportation of MBS in our FBCs and the precise unloading of cement at offshore oil projects.



Client: RUSAL

Our solution: We are grateful to RUSAL for entrusting us with the transportation of alumina for the past 20 years. This trust has allowed us to deliver a reliable and efficient service tailored to meet RUSAL's specific needs. RUSAL has recognized the reliability of our FBCs and made them part of the company's ESG framework.



Client: Polymetal

Our solution: Polymetal has adopted our FBC for the transportation of flotation concentrate. Our solution involves multimodal transportation, with different modes utilized during winter and summer. Importantly, our loading, accumulation, and unloading methods remain consistent throughout the year.



Client: CemRoss (former EuroCement group)

Our solution: We addressed the client's need for river vessel transportation by developing special moisture-protected FBCs.

Our solution helped the client to enter into four new regions, and also optimized its cost structure. This optimization allowed the client to adjust cement prices, resulting in increased sales volume. As a result, the client has achieved a significant increase sales volume.



Client: STG (international conglomerate)

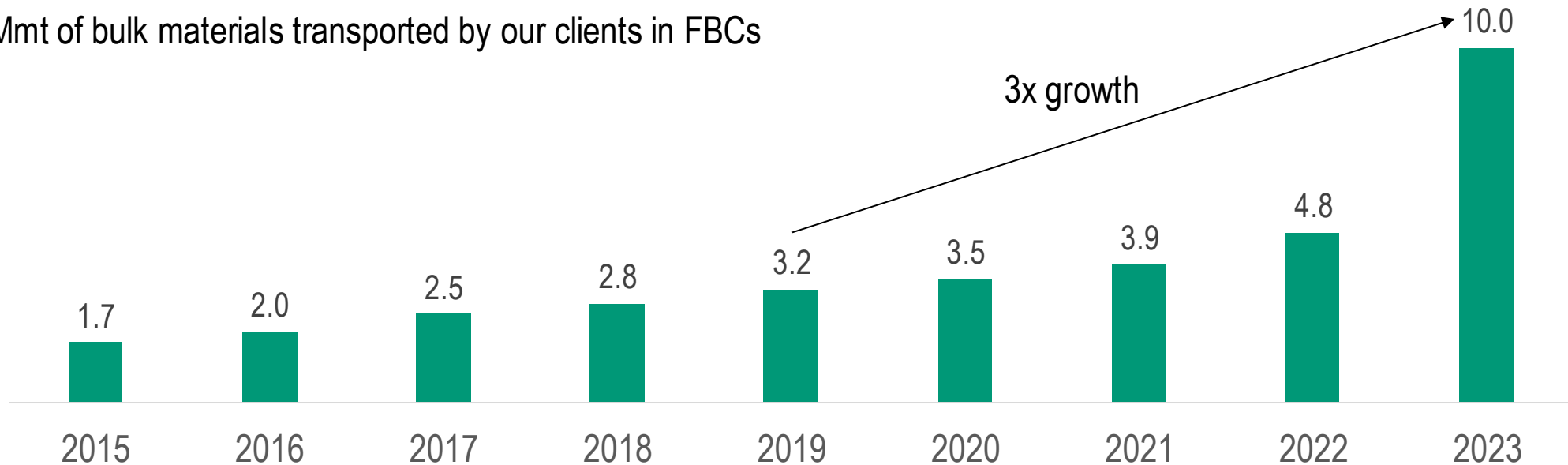
Our solution: We have delivered a turn-key solution for the transportation of mineral fertilizers to this client. This project posed unique challenges, including the complete absence of infrastructure at both the desert mining site and the shipping port. To overcome these challenges, we designed a logistics chain centered around the use of FBCs and successfully implemented it.

Our Clients Have tripled Their Demand for Our Product in the Past Five Years

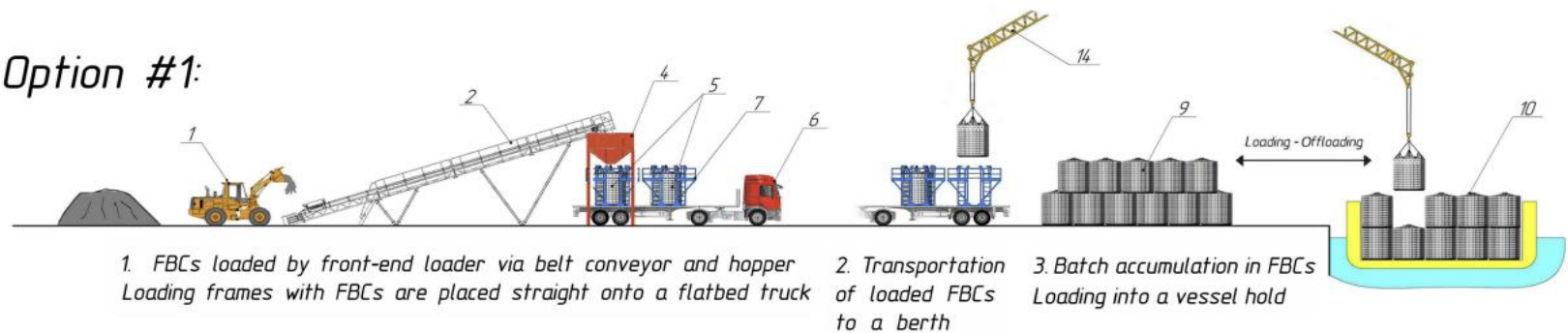


- ✓ Our clients are from the EU, the MENA region and the CIS, they are bulk materials producers, traders of bulk materials, and logistics companies who benefit from a substantial reduction in transport, handling, and storage costs.
- ✓ Over the last 5 years, our flexible, reusable containers for bulk goods have facilitated the transport of over 30 million tons of cargo across various transportation modes and countries.

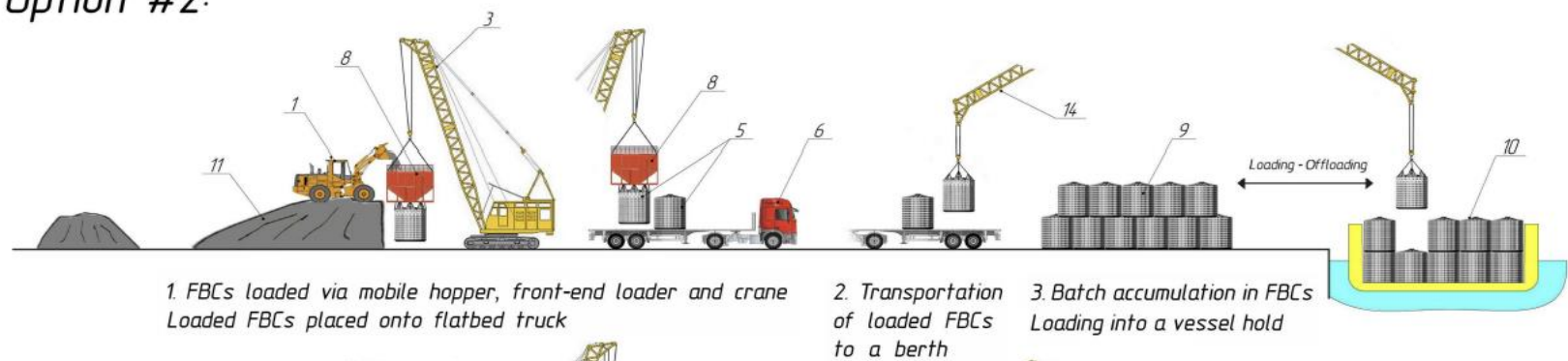
Mmt of bulk materials transported by our clients in FBCs



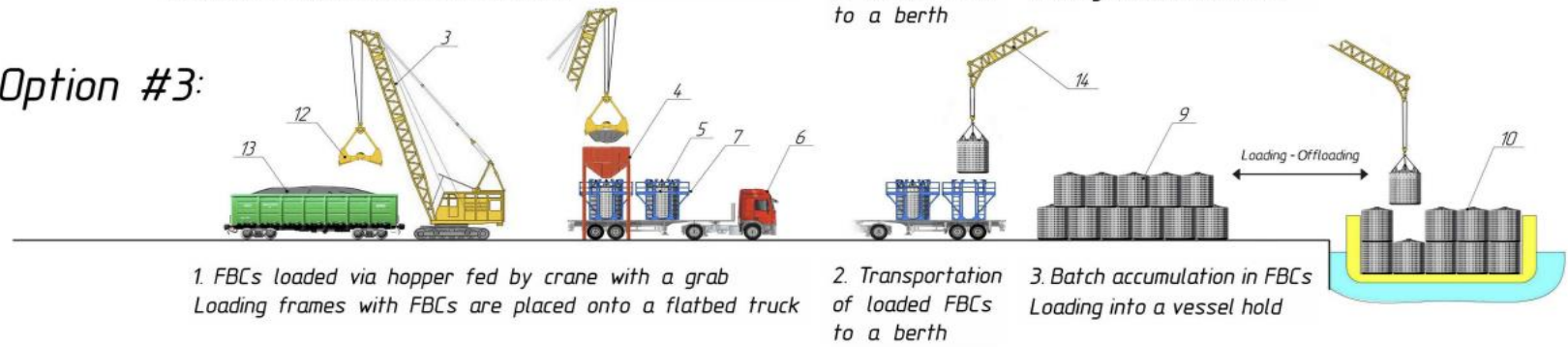
Option #1:



Option #2:



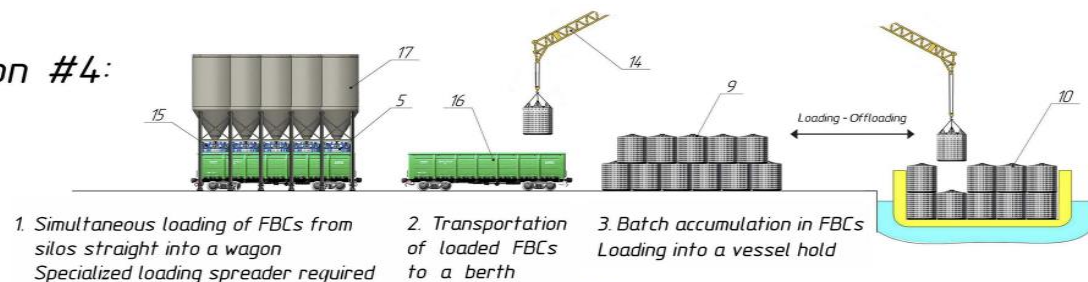
Option #3:



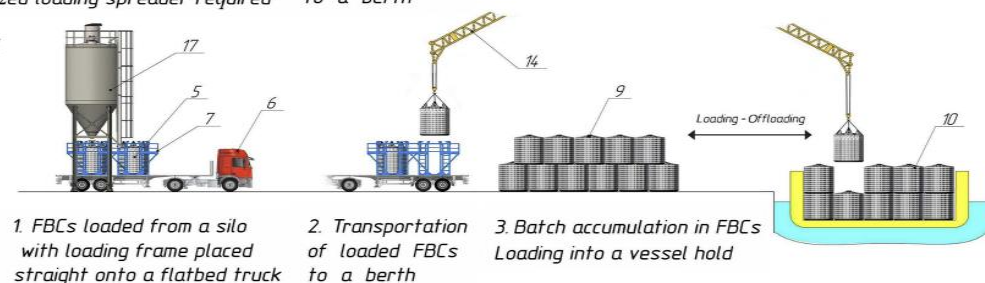


FBC
Flexible Bulk Container

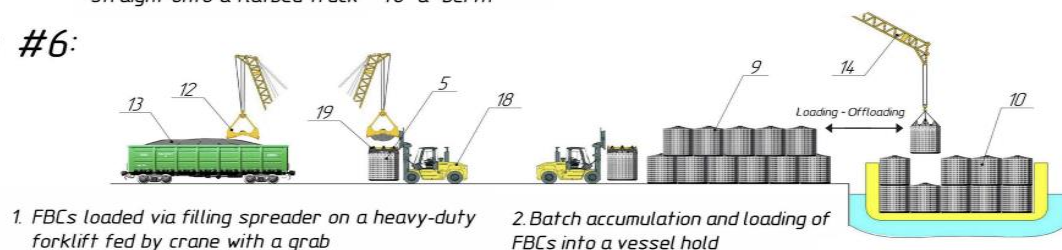
Option #4:



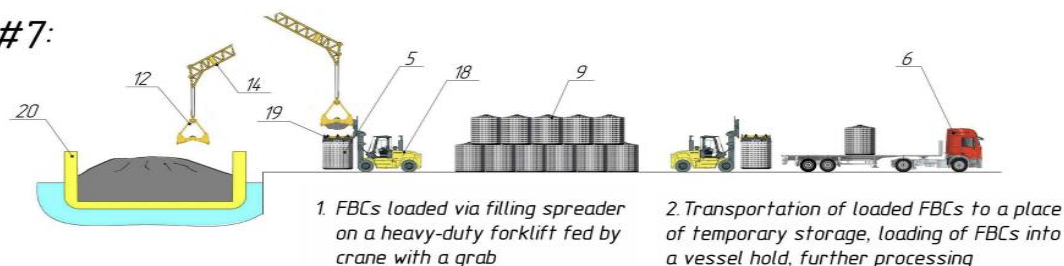
Option #5:



Option #6:










Option #7:



1. Front-end loader
2. Belt conveyor
3. Crane 32 tons lifting capacity
4. Loading hopper 20m3 capacity bic meters
5. FBC
6. Flatbed truck
7. Loading frame
8. Mobile hopper with spreader
9. Stack of FBCs
10. Vessel hold
11. Front-end loader ramp
12. Crane grab
13. Wagon with cargo
14. Portal crane
15. Specialized loading spreader
16. Wagon for transportation of FBCs
17. Silos
18. Heavy-duty forklift or reach stacker
19. Loading spreader
20. Bulk / break bulk vessel

FBCs Provide Distinctive Excellence in Handling of Bulk Materials

Loading cargo into FBC		up to 3 000 tons/working shift*
Unloading cargo from FBC		up to 6 000 tons/working shift
Loading/unloading 1xFBC on a railcar/auto platform (2xFBCs or ~27 tons per a truck trailer)		3-5 minutes
Transshipment of cargo to specialized transport (e.g. cement truck)		7-15 minutes
Loading FBC onto the vessel		up to 5 000 tons/working shift
Unloading bulk cargo from the vessel into the FBC		up to 3 000 tons/working shift
Loading and unloading 1 railcar with filled FBC (5xFBCs or 68 tons per railcar)		15-20 minutes

**These operational metrics are derived from real-time client cases, wherein flexible bulk containers sometimes operated under 8-11-hour working shifts as per clients' requests with 2 loading stations*

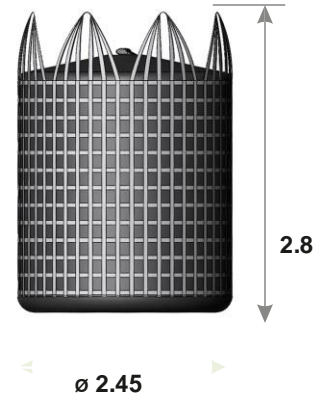


Annex: 25 years of successful and efficient bulk commodity handling

FBC vs 1-ton big bag



14-tons FBC



1-ton big bag



✓ Storage efficiency (up to 4 level stacking)	✓ 6.5 tons/ sq.m.	✓ 3 tons/sq.m. <small>4x level stacking is not recommended</small>
✓ Loading of bulk cargo (one load of 14-tons)	✓ 5 minutes	✓ 35 minutes
✓ Unloading of bulk cargo (one unload of 14-tons)*	✓ 8-10 minutes* (3-5 minutes)	✓ 40 minutes
✓ Labor productivity (unloading of bulk materials), tons per employee / per working shift	✓ 216 tons	✓ 53 tons

*when unloading into a cement truck; when in a silo, or a dry bulk vessel unloading of FBC can take 3-5 minutes per FBC. Multiple FBCs can be unloaded simultaneously.

FBC: A Versatile Multimodal Logistics Solution for a Port



- ✓ Our clients overcome bottlenecks in the logistics chain by enabling the transportation of their goods shipped within FBC on various platforms, including flat auto- and rail platforms, river and sea vessels adhering to the principles of logistical multi modality

Storing in a port



Unloading into a dry bulk vessel



Transporting as a general cargo



Transporting by trucks...



...and by railroad



Handling of bulk commodities



FBCs Serves as a Primary or Auxiliary Solution for Warehousing and Storage of Bulk Commodities under Open Air

Flexible
Container for
Bulk Materials



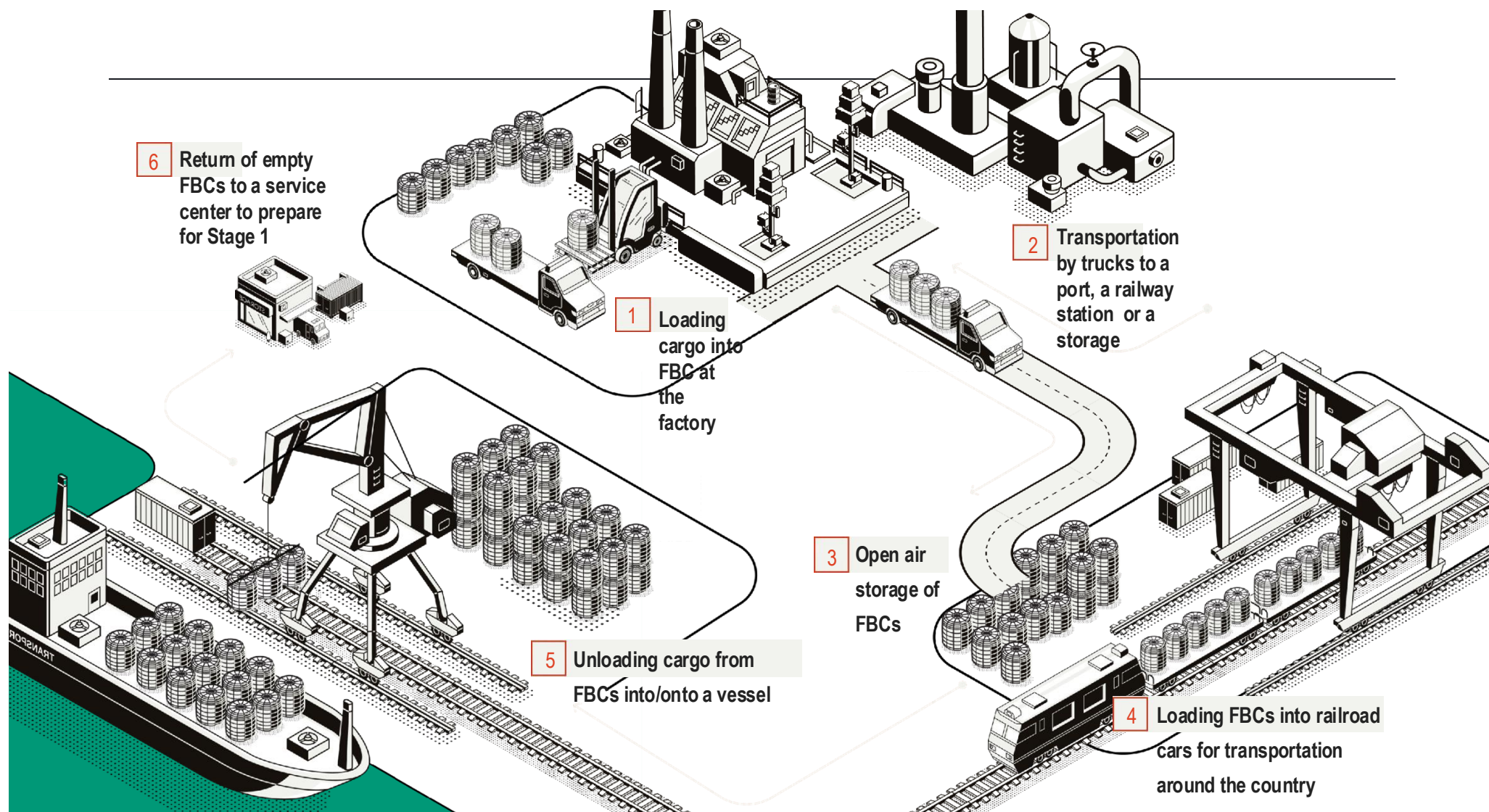
- ✓ *We empower our clients to make a conscious choice between investing in a silo for bulk product storage or opting for FBC as a substitute solution, the latter typically saving up to 50% of clients' investment capital as compared to investment in a silo or a warehouse*

As a storage solution, FBC stands out for the following advantages:

- ✓ Quick setup;
- ✓ Stackable up to 4 rows;
- ✓ Eligible for the storage of bulk goods for up to 90 days;
- ✓ Streamlines loading operations from an FBC storage into freight transport;
- ✓ Can be organized in the area beyond the port's territory, offering a cost-effective solution.



FBC's Framework of Operations



FBC is tailored for transportation of hazardous hydrophobic goods and enhancing ESG compliance

Flexible
Container for
Bulk Materials



- ✓ Provides IP-65 protection
- ✓ Ensures environmental safety during loading and unloading
- ✓ Reusable for up to 750 cycles
- ✓ Included in UN recommendations for the transport of dangerous goods
- ✓ Carries no environmental penalties
- ✓ Produces no dust
- ✓ No cleaning costs for transport or storage areas





Lloyd's Register

Type Approval Certificate Extension

This is to certify that Certificate No. 07/ 00005(E2) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER	New Technology in Transportation 10 Building 3 Tverskaya St. 125009 Moscow Russia
PLACE OF PRODUCTION	New Technology in Transportation Bld. 3G, Dzerzhinsky St Kizhach Russia
DESCRIPTION	Flexible Bulk Container
TYPE	MK-14-10
APPLICATION	Flexible Bulk container for the transportation and storage of dry cargoes
STANDARD	TU 2297-001-565/9756-06 – Special flexible containers for loose products. NTT Operation Guide No. 26469-01
RATINGS	Diameter / m 2.4 Nominal Capacity / m ³ 15 Lifting Capacity / Te 14 Maximum stacking height / m 4
OTHER CONDITIONS	The flexible containers must be operated and inspected in accordance with NTT Operation Guide 26469-01

Certificate No.	07/ 00005(E2)
Issue Date	9 July 2018
Expiry Date	8 May 2023
Sheet	1 of 2
	JJ Baghurst Bsc (Hons) Specialist Marine Technology & Engineering Services, London or Southampton Lloyd's Register EMEA

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25 апреля 2014 г., № ЗР-107-11.4 от 30 апреля 2014 г.

The Certificate has been issued based on the results of tests carried out by the FSUE "Krylov State Research Center", Saint Petersburg. Tests Reports No. ЗР-107-11.4 of 14 March 2014, No. ЗР-107-11.3 of 25 April 2014, No. ЗР-107-11.4 of 30 April 2014.

Сертификат действителен до 28 мая 2017 г.

The Certificate is valid till 28 May 2017.

Сертификат термит силу ранее указанного срока при каждом изменении конструкции, материала или способа изготовления контейнера. Маркировка ООН действительна в течение всего гарантийного срока хранения контейнера.

The Certificate shall cease to be valid before indicated date in case of modification which alters the design, material or mode of manufacturing of the container. The UN marking is valid within the whole warranty shelf life of the container.

Дата выдачи: 28 мая 2014 г.

Date of issue: 28 May 2014

Заместитель генерального директора
Deputy Director

Ю.М. Иванов
Y.M. Ivanov

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Transport of Dangerous Goods in Soft C for Bulk Cargo

The main stage of work of experts in the Sub-Committees of the UN Economic Commission for Europe (UNECE) was carried out under the guidance and direct participation of experts of the Inter Goods and Containers Association (IGCA) that has the consultative status in of the UNECOSOC. Mr. E.A. AKHUNDOV, doctor of technical science, Techno "New Technologies in Transportation" (NTT), describes some results of that work.

As a result of work carried out on transport of dangerous goods under the Sub-Committee of the UNECOSOC, a new type of container that is a soft container for bulk cargo was included in the Model Regulations of the UN Recommendations-2011 on the Transport of dangerous Goods. Its definition and scope of application was specified. Requirements were established for the structure of the BK 3 container, for its manufacture and quality control. Requirements were also developed for testing the BK 3 containers, for registering tests and their marking. A list of dangerous goods was also compiled, which are allowed for the transport in BK 3 soft container, and certain operational requirements were elaborated for its transportation.

The International Maritime Organization included the BK 3 soft containers in the IMDG Code in 2013 and developed special requirements for their carriage by sea. The profile Sub-Committees of the UNECE developed special requirements for road, railway and inland

International Carriage by R the BK 3 containers for incation concerning the later Dangerous Goods by Rail II Below is the table show promotion of the BK 3 soft cargo to the International r of dangerous goods. Therefore, a new techn of bulk cargo has been international practice, which reusable container that corr of BK 3 container.

CJSC "New Technologie (NTT) has long-term experi and operation of soft high-α type MK-14-10 that corre BK 3 container. Using such applying combined transport nificant increase in effectiv bulk cargo, therefore increa and competitiveness of inte freight traffic.

Best regards
By order

Dipl.-Ing. (FH) J. Werner
Technischer Regierungsamtman

Safety and reliability in chemical and materials technologies



Soft containers for the carriage of bulk dangerous goods



Bundesanstalt für
Materialforschung
und -prüfung

Your Sign

Your letter to:

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