The future of long-distance container rail transportation

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• Why a container is needed as a tool of intermodal land transportation?
• Which is better, road or rail delivery from port to client’s warehouse?
• Optimal and competitive performance.
• Special features of container rail logistics.
• Innovative products.
Container as a tool of intermodal transportation

Organisation of export deliveries

Responsibilities

- TransContainer
- RZD
- Agents and associate contractors

Consignor's warehouse

Road transport

Terminal

Rail carriage

Port

Sea carriage

Port

Road transport

Consignor's warehouse
Advantages of rail container transportation in Russia

- Intermodality
- Comparatively low transportation costs (long distances)
- Freight safety
- Possibility to transport large freight shipments
- Possibility of long-distance transportation
- Condition of automobile roads
Breakdown of container transportation in Russia by distance

- Long distance transportation is common in Russia
- Container rail carriage is competitive for long distances
Transportation costs per TEU/km

- Rail transportation rate per TEU/km exceeds road transportation rate for short distances due to terminal operations.
Rail container logistics

Container logistics $K_{\text{Cont empty}} = 37\%$

Wagon logistics $K_{\text{Wag empty}} = 4\%$

Network business $K_{\text{empty}} \approx 30 - 40\%$

Route business $K_{\text{empty}} = 50\%$
Innovative products

Innovative logistics

- Transsib in 7 Days
- Block trains

Innovative equipment

- Flat cars
  - 120-feet
  - Equipped with racks
- Containers
  - Open top
  - Flexi tank
  - Dry liner
  - Thermos containers
  - Tank containers
Innovative logistics: Transsib in 7 Days

Key parameters of moving to target condition (2008 → 2012)
Total waiting time: 26.2 hrs → 11.7 hrs, including:
• at crew change points: 11 hrs → 7 hrs
• at engine change points: 3.5 hrs → 1.7 hrs
• at maintenance check points: 11.7 hrs → 3 hrs
Total running time: 233.5 hrs → 156.3 hrs
Total delivery time: 259.7 hrs → 168 hrs, or 7 days
Innovative logistics: block train technology

Advantages of using block trains regularly operating between railway terminals

- Opportunity to consolidate container traffic
- Reducing delivery times
- Reducing empty running
Innovative equipment: flat cars

Fitting platforms equipped with movable accessories are used to transport pipes for the North Stream project.

Development by Company of a new articulated platform type to transport 3x40 feet containers:

- acceptance testing held in 2009
- defects revealed have been fixed
- project is being certified
Innovative equipment: containers

- Refrigerated containers
- Dry liners
- New container types
- Tank containers
- Thermos containers
- Flexi tanks
Innovative equipment: open top

Specialised containers for bulk freight

- Company-owned fleet – 70 units
- Carriage services provided since February 2010
- Cargos include: gluten, oil cake, industrial salt, fertilisers, other bulk cargos.

Open top containers

- Manufacturing on the basis of Shakhunya specialised depot (branch of TransContainer JSC)
- Pilot sample produced in June 2010
- Cargos include: out of gauge cargo, heavy cargo, equipment, pipes
Innovative equipment: flexi tanks

• Universal 20-feet containers equipped with multi-layer polyethylene container and accessories

• In April 2010, the Company performed its first pilot carriage of lignvosulphonate in flexi tanks from the Nizovka station to the Chemikovka station

• Currently, the Company is developing local technical conditions for the most demanded cargos that can be transported in flexi tanks

• Freight weight – up to 24 tonnes

• Significant reduction in transportation costs per weight unit of cargo thanks to using the entire volume of container

• Equipping flexi tanks with heat jackets is possible.
Innovative equipment: dry liners

• The Company has successfully tested the schemes of placement and fixing its dry liners for the transportation of grain in universal containers

• Currently, Company is developing a number of local technical conditions for the transportation of the most demanded cargo

• Using universal containers helps to build multimodal logistics chains for the transportation of bulk cargo to end consumers without transshipment

• The first container train with grain-loaded special containers was dispatched on June 17, 2010 from Novosibirsk to Nakhodka in the Far East, and further to South East Asia: Taiwan, Thailand and Vietnam (2,500 tonnes of grain in 110 20-feet containers)

• The Russian Grain Union plans to deliver 3-4 million tonnes of grain to South East Asia in 2010-2011
Innovative equipment: tank containers

- Tank containers are intended for the transportation of food, chemical, hazardous and non-hazardous freight.
- Volume: from 18 to 36 cubic meters, weight: up to 36 tonnes.
- In cooperation with Europe’s leading tank container forwarder DB Schenker BTT, the Company transports chemical cargo from Europe to Russia and vice versa. It also plans to launch domestic tank container services in 2010-2011.
- In September 2009, the Company’s drivers were trained and certified by ISOPA (the European Diisocyanate & Polyol Producers Associations).
- Kuntsevo-2 terminal was equipped with a system to connect and heat tank containers.
The future of rail container transportation in Russia

- Long distances
- Intermodality
- Delivery speeds
- Freight safety
- Timely delivery
- High volumes
- Innovative technology

Будущее – есть!
The future exists!