

CHAPTER 2 EXISTING CONDITION OF KLAIPEDA PORT

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2.1 Location of the Port

Klaipeda Port is located in the eastern part of the Baltic Sea and is the northernmost ice-free port. The Port is a transit centre for Lithuania, connecting the main transportation corridors between the East and West via sea, roads and railways. The Port is linked by inland means to the CIS countries including Russia, Belarus, Ukraine and Kazakhstan. By sea, Klaipeda Port is connected to the ports of the EU countries, America, Asia, and Africa, amongst others.

The Port has good connections to both railway and road networks. The Port is linked with two railway lines extending from Klaipeda, one to the east and one to the south. The line extending to the east is the principal line running from Klaipeda to Vilnius via the northern principal city, Siauliai. At Siauliai, the line has a junction with another principal line running from the north to the south (Riga – Siauliai – Kaunas – Warsaw). From Siauliai, the secondary line extends to Kaliningrad (see Table I.2.1-1). From a junction of the secondary line near the border with Russia and on the right bank side of Nemunas River, another secondary line diverges towards Klaipeda.

With respect to roads, the Port has direct access to the four-lane expressway (No E85) running between Klaipeda and Vilnius. The expressway has junctions with the other principal roads running from north to south (No. E77 (Riga - Siauliai - Kaliningrad), and No. E66 (Tallinn - Riga- Kaunas - Warsaw). From the east end of the expressway, Road No. E28 extends to Minsk.

The land of the Port that belongs to the State and administered by KSSA extends from north to south in a long and narrow band of over 10 km lying mostly adjacent to the urban area of Klaipeda City. The water area of the Port under the control of KSSA is a natural channel connecting Kursiu Lagoon and the Baltic Sea. The left bank of the channel is the coast of Kursiu Spit and is mostly designated as a national park.

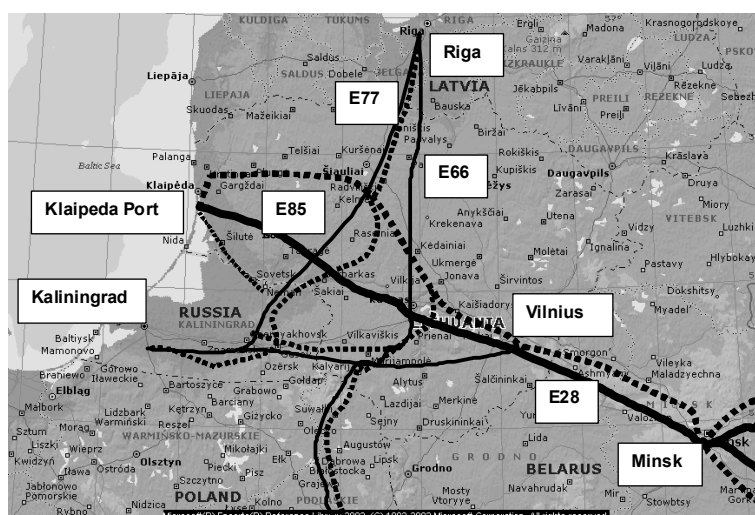


Figure I.2.1-1 Location of Klaipeda Port
(Railway and Road Access to the Port)

2.2 Marine Terminals and Factories

2.2.1 General

KSSA leases the port land on a long-term contract basis to around 60 lessees, including 21 private companies listed in Table I.2.2-1. Their locations are shown in Figure I.2.2-1. They are divided into the two categories, viz. port terminal operator and manufacturer by business type. Port terminal operators provide services mainly of stevedoring and warehousing on their respective territories using berths that are retained by KSSA (not leased out). The manufacturers consist of four shipyards and one paper mill. The activities of the major lessees are outlined below.

Table I.2.2-1 List of Terminal Operators and Factories in Operation within Klaipeda Port

No.	Lessees Granted Lands by KSSA at the Port	Type of Business
1	Klaipėdos NAFTA (Klaipėda Petroleum)	Port terminal operator specialized for handling petroleum
2	Cargo Terminal (UAB Krovinių terminalas)	Port terminal operator (stevedoring and warehousing)
3	Klaipėda Stevedoring Company (KLASCO)	Terminal operator
4	Laivite Ship repair Yard (Laivite)	Ship repair/stevedoring
5	Klaipėda Ship Repair Yard	Ship repair
6	Baltija Ship Building Yard (Baltija)	Shipbuilding and repair
7	Klaipėdos Kartonas	Paper mill
8	Klaipėda Stevedoring Company Bega (BEGA)	Port terminal operator
9	Ferry Smiltynė (AB Smiltynės perkela)	Ferry point for channel crossing
10	Transfosa	Stevedoring, waste oil treatment
11	Klaipėdos Smelte(SMELTE)	Port terminal operator
12	Progresas	Storage, warehousing,
13	AB Senoji Baltia	Fishing company
14	Klaipėdos Hidrotechnika	Marine construction works, cargo-handling (timber)
15	Lithuanian Peat Cargo	Port terminal operator specialized for handling peat
16	Klaipėdos Terminalas (Klaipėda Terminal)	Terminal for handling containers, Ro/Ro and general cargo
17	Western Ship Repair Yard	Shipbuilding and repair/stevedoring
18	KLASCO	Container Terminal
19	Timber handling Terminal	Stevedoring for handling timber
20	Baltic Ferry Terminal	Ferry Terminal for Ro/Ro ships
21	KLASCO	Ferry Terminal for Ro/Ro ships

Source: KSSA

Note: There are 68 lessees entered into contracts with KSSA; the above list shows the major lessees.

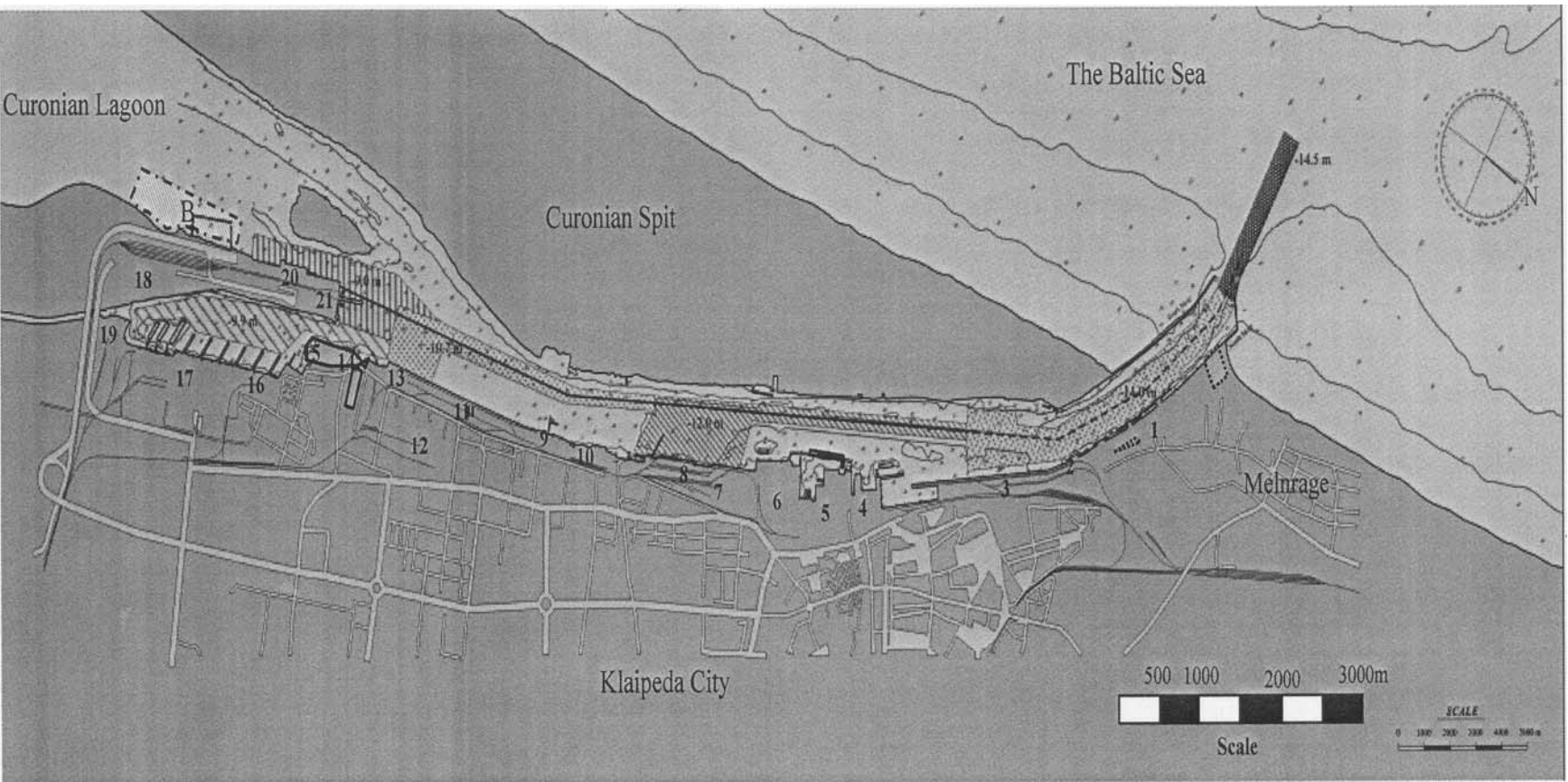


Figure I.2.2-1 Location of Major Lessees in Klaipeda Port

2.2.2 Klaipedos NAFTA (Klaipeda Petroleum)

Klaipedos NAFTA is a joint stock company that was founded with Lithuanian and USA capital in 1994 to provide marine terminal services specializing in petroleum. Their main services are to receive petroleum from railway wagons, store it in tanks at their tank farm and load it onto a petroleum tanker for export/outbound transit and vice versa for import/inbound transit. Currently almost all services are to load product oil (refined oil) comprising mainly of fuel oil, diesel oil, gasoline and jet fuel onto a tanker. At present product oil comes from the refineries of Mazeikiai (Lithuania), Moscow, Ryazan (Russia), Nizhny Novgorod (Russia), Mozyr (Belarus), and Novopolock (Belarus) and is shipped mainly to Western Europe countries and USA.

Two oil jetties, viz. Berths No.1 and No.2, with a water depth of 14 m under the Chart Datum (CD) placed at the port mouth are used to load petroleum (detailed specifications see Table I.2.4-1). In full draft condition, a Panamax Type tanker is receivable. The largest tanker that called at the terminal in the year 2002 was a product tanker of Capesize (112,200 DWT, summer draft of 14.6 m, LOA of 250 m and moulded breadth of 44 m). She left Berth No.2 in a partially loaded condition (departure draft of 12.2 m).

Loading arms installed on the jetties are directly connected to storage tanks at the tank farm through pipelines running within the company's compound. The rated capacities of the loading arms for light and heavy oil products are 2,000 and 4,000 cu. m per hour, respectively.

The present storage capacity of the tank farm is 350,000 cu.m in total, consisting of 14 tanks of 5,000 cu.m capacity each, 4 tanks of 10,000 cu.m capacity each and 12 tanks of 20,000 cu.m capacity each. According to the company plan, the total storage capacity will increase to 570,000 cu.m in the near future. Presently, the fixed roofs of some of the tanks are being converted to floating roofs to enable storage of crude oil.



Photo I.2.2-1 Klaipeda Petroleum (Klaipedos Nafta) Terminal (upper sight)

2.2.3 Klaipeda Stevedoring Company (KLASCO)

Klaipeda Stevedoring Company is the largest terminal operator at Klaipeda Port. The company was privatised from a state-owned company in 1999. At present the

company operates the three terminals of the Port: General Cargo Terminal, Container Terminal and International Ferry Terminal.

(1) General Cargo Terminal

The main services provided at General Cargo Terminal are to receive dry bulk, liquid bulk and break-bulk cargoes from railway wagons/trucks, store them in open storage yards or warehouses, and load them onto a vessel for or outbound transit and vice versa for inbound transit. Cargo is often loaded directly from railway wagons to vessels or from vessels to railway wagons (direct loading or unloading). Currently, the main services are to load vessels with liquid fertilizer (UAN solution), dry fertilizers (DAP, ammonia nitrate), wheat, ferroalloy, and steel products or to unload raw material of fertilizer (apatite), raw sugar and frozen fishes from vessels.

The commodities come partly from Lithuania and partly from the main CIS countries (Russia, Belarus, Ukraine and Kazakhstan) as transit cargo and are shipped throughout the world. The major destinations of those cargoes are Western European countries, the USA and Asian countries.

This terminal has 15 berths (Berths No. 4 – No. 18), with water depths varying from 7 m to 14 m and is located in the northern portion of the port territory. Individual berths are mostly used to handle specific types of cargo, such as liquid fertilizer (UAN solution), wheat, ferroalloy or raw sugar.

Berth No. 4 with a water depth of 14 m is dedicated to handling grains and liquid fertilizer. In the case of loading grain into a bulker, a ship loader with a rated capacity of 900 metric tons per hour is used. It is connected with dome-shaped warehouses of 60,000 metric tons capacity in total, specialized in grain storage through belt conveyors. A facility for receiving from railway with a rated capacity of 460 metric tons is also connected to the warehouse through belt conveyors. On the other hand, in the case of loading liquid fertilizer (UAN solution), a horse joint connected to storage tanks with total capacity of 66,000 cu. m (87,300 metric tons) exists behind the above-mentioned dome-shaped warehouses through pipelines. The rated capacity for loading into vessels is 2,270 cu.m (3,000 metric tons). The facility for receiving from railway has a rated capacity of 758 cu. m (1,000 metric tons) and is also connected to the tanks through pipelines.

The water depth of Berth No. 5 is being deepened to 14 m. After completion of the deepening works, a new loader and storage connected through belt conveyors are planned to be installed.

At the dockside of the remaining berths from Berths No. 5 to No. 18, there are shore cranes with the lifting capacities varying from 6 to 40 metric tons together with ship cranes (see Table I.2.2-2).

In addition to the above-mentioned warehouses and storage tanks, warehouses for various cargoes, such as steel products and fertilizers, are placed within the terminal. Open storage yards just behind the berths are used to store ferroalloys, iron billets, etc. Cold storage of 74,000 sq.m floor space (storage capacity of 15,000 metric tons) is placed behind Berths No. 10 and No. 11, mainly to store frozen fish in cartons mainly brought from Northern Europe. The total floor space is 30,000 sq.m for warehouses and 101,000 sq.m for open storage yards.

Table I.2.2-2 List of Cranes at General Cargo Terminal

No.	Name	Lifting Capacity (t)	Location (Berth No.)	No.	Name	Lifting Capacity (t)	Location (Berth No.)
1	GANZ	6	18	31	GANZ	6	10
2	GANZ	6	18	32	GANZ	6	10
3	GANZ	6	18	33	GANZ	6	10
4	GANZ	6	17	35	GANZ	6	17
5	KONDOR	40	7	36	KONDOR	40	7
7	GANZ	6	12	37	GANZ	16	on sidings
8	GANZ	6	12	38	GANZ	6	12
9	GANZ	6	14	39	SOKOL	20	15
10	GANZ	6	12	41	SOKOL	20	on sidings
12	SOKOL	20	5	42	SOKOL	20	9
13	GANZ	6	14	43	KONDOR	40	on sidings
14	GANZ	6	11	44	KONDOR	40	on sidings
15	SOKOL	20	7	46	KONDOR	40	16
16	KONDOR	40	5	47	KONDOR	40	on sidings
17	SOKOL	20	on sidings	48	SOKOL	20	9
18	ALBATROS	10	16	49	SOKOL	20	9
19	KONDOR	40	4	50	KONDOR	40	on sidings
20	SOKOL	20	on sidings	51	SOKOL	20	8
22	SOKOL	20	8	52	GANZ	6	12
24	KONDOR	40	5	53	SOKOL	20	9
25	ALBATROS	10	11	54	KONDOR	40	on sidings
26	ALBATROS	10	11	55	SOKOL	20	7
27	KONDOR	40	7	56	KONDOR	40	on sidings
28	ALBRECHT	10	on sidings	58	KONDOR	40	8
30	SOKOL	20	15				

Source: KLASCO



Photo I.2.2-2 General Cargo Terminal of KLASCO

(2) Container Terminal

The services at the Container Terminal started in January 1999 by EUROGATE, a [subdivision] of KLASCO. At present, the following shipping lines provide feeder services on the short-sea routes extending from the Baltic Sea to the North Sea. Direct services beyond the ports facing the North Sea have not yet started. In the case of long-sea route transport, containers are transhipped at the international hub ports such as Bremerhaven, Hamburg, Antwerp, and Rotterdam.

- Baltic Container Lines (Klaipeda - St. Petersburg - Hamburg - Gdynia)
- CMA/CGM (Klaipeda - Hamburg)
- Kursiu Lines (Klaipeda - Kaliningrad - Rotterdam - Ipswich - Immingham - Hamburg - Bremerhaven - Riga))
- MISC (Klaipeda -Gdynia -Antwerp -St. Petersburg -Kotka -Helsinki- Talline)
- Team Lines (Klaipeda - Klaipeda - Aarhus - Bremerhaven - Hamburg - Riga)
- Unifeeder (Klaipeda - Bremerhaven - Hamburg - Riga)

Container stowage capacities of the feeder vessels currently in operations vary from 200 to 1,000 TEUs (see Table I.2.2-3).

Table I.2.2-3 Sample of Container Services at Klaipeda Port and Vessel Sizes in 2002 (July - Dec.)

Sea Route	Ship Size (DWT)	Summer Draft (m)	Service Interval
Bremerhaven - Klaipeda - Aarhus	2,950	4.9	weekly
Gdynia - Klaipeda - Bremerhaven	3,882	6.1	bi-weekly
Hamburg - Klaipeda - Aarhus	4,830	5.9	weekly
Hamburg - Klaipeda - Gdynia	3,177	5.0	weekly
Riga - Klaipeda - Bremerhaven	4,830	5.9	weekly
Riga - Klaipeda - Gdynia	5,850	6.5	bi-weekly
Riga - Klaipeda - Ipswich - Rotterdam	4,107	6.0	every 10 days
St. Petersburg - Klaipeda - Hamburg	8,000	7.3	every 10 days

Source: Processed by the JICA Study Team using data from KSSA

The terminal area is 229,207 sq. m and an area of 78,000 sq. m is reserved for future expansion. The container stacking capacity is said to be 7,500 TEUs. Berth No. 143, which is 450 m long and 10 m deep, is used to receive feeder vessels. Two rail-mounted container gantry cranes are installed on the berth. Container-handling machines used on the marshalling yard are two Rubber-Tyred Gantry Cranes (RTG). In addition, reach-stackers, and forklift trucks with a lifting capacity of 1.5 - 4.5 tons are used.

The estimated annual throughput capacity at the terminal is said to be 150,000 TEUs. If the reserved area is developed, the capacity is expected to increase to 200,000 TEUs.



Photo I.2.2-3 Container Terminal of EUROGATE (KLASCO)

(3) International Ferry Terminal

The services at the International Ferry Terminal are also provided by EUROGATE. At present, the two shipping lines, viz. Lisco Baltic Service and Krantas Shipping provide the following shuttle services within the Baltic Sea.

- Klaipeda – Kiel (Germany): daily
- Klaipeda – Mukran (Germany): 3 times per week
- Klaipeda – Karlshamn (Sweden): daily in summer season, 3 times per week in other season
- Klaipeda – Aarhus (Denmark): twice per week
- Klaipeda – Aabenraa (Denmark): twice per week



Photo I.2.2-4 International Ferry Terminal of EUROGATE (KLASCO)

EUROGATE (KLASCO) provides services of hauling out or in vehicles from or into Ro/Ro decks at Berth No. 146 - No. 151. The sizes of Ro/Ro ships vary from 7,000 to 22,000 Gross Tonnages (see Table I.2.2-4).

**Table I.2.2-4 Ro/Ro Services by Route at International Ferry Terminal in 2002
(July - Dec.)**

Sea Route		Ship Size (GT)		Berth No.	Remarks
Kiel	- Klaipeda -	24,084		147	
Mukran	- Klaipeda -	21,890		146,147	
Karlshamn	- Klaipeda -	6,894	11,630	150,151	
Aarhus	- Aabenra - Klaipeda	12,110		146,151	
Copenhagen	- Klaipeda -	6,894		150	Seasonal

Source: Processed by JICA Study Team based on the data from KSSA

2.2.4 Klaipeda Stevedoring Company Bega (BEGA)

BEGA was the first private terminal operator at Klaipeda Port. It started operations in 1992. At present the main services of the company are to load liquid fertilizer (UAN solution), dry fertilizers (DAP, potash, urea), wheat, rapeseeds, cement and timber or to unload raw material of fertilizer (apatite) and raw sugar into or from a vessel.

Those cargoes come partly from Lithuania and partly from CIS countries (Russia, Belarus, etc.) and are shipped to various countries including Western European countries, the USA, and Asian countries.

This terminal consists of 7 berths (Berths No. 66 – No. 72) with water depths varying from 6.1 m to 12 m and is located in the middle portion of the port territory.

Berth Nos 69 – 72 have a water depth of 12 m and are specialized in handling dry and liquid fertilizers. When loading dry fertilizers into a bulker, a ship loader with the capacity of 14,000 metric tons per 24 hours is used. The loader is connected with two mechanized warehouses of 60,000 and 40,000 metric tons capacities respectively through belt conveyors. A receiving facility from the railway is also connected to the warehouses through belt conveyors. In the case of loading liquid fertilizer (UAN solution), a horse joint connected to 4 storage tanks of 40,000 metric tons total capacity are placed behind the Berth No. 70 through pipelines. The loading capacity to vessels is 24,000 metric tons per 24 hours. A receiving facility from railway is also connected to the tanks through pipelines.

Dry fertilizers in large bags are loaded into vessels using shore cranes with a loading capacity of 5,000 metric tons per 24 hours. Before loading, they are stored in an open storage area (10,000 sq. m) or multi-purpose warehouses (7,000 sq. m of floor space in total.

Cement is loaded into a cement carrier mostly directly from railway wagons by using mobile compressors with a loading capacity of over 2,000 metric tons per 24 hours mainly at Berth No. 69.

Dry fertilizer (apatite) is unloaded directly into railway wagons from a bulker by the combination of shore cranes with grab buckets and hoppers mainly at Berth No. 68.

At the same berth, Berth No. 68, pulp logs, sawn timber and other forest products are loaded into vessels using rail-mounted shore cranes with loading capacity of 2,000 cubic metres per 24 hours. Before loading, they are stored in an open storage area of 30,000 sq. m or the above-mentioned multi-purpose warehouses of 7,000 sq. m floor space. A rail-mounted yard gantry crane is used at the open storage to lift off or switch to forest products from railway cars or the shore cranes.

Agro-products mainly of rapeseeds and wheat are loaded into a vessel by using two ship loaders with a loading capacity of 5,000 metric tons per 24 hours each, mainly at Berth No. 67. Before loading, they are stored in the warehouse of 20,000 cubic metres where four different kinds of products can be stored simultaneously.



Photo I.2.2-5 Facility Layout of BEGA Terminal

2.2.5 Klaipėdos Smelė (SMELTE)

Klaipėdos Smelė is a private joint stock company that was founded as a part of the Industry and Finance Cooperation in West Lithuania capital in 1998 to provide marine terminal services specialized in handling diverse types and forms of cargo. At present the main services of the company are to load dry fertilizers (potash, urea, ammonium sulphate), grains (wheat, rye), rapeseeds, forest products (pulp logs, sawn timber), and scrap and steel products onto vessels or to unload foodstuffs such as frozen fish, meat, fruit and soybeans from vessels.

The terminal has 25 berths (Berths No. 82 – No. 106) in the southern part of the port territory. Of the total 2,144 m length of berths, a 480-m long section (Berths No. 101 – No. 104) consists of 4 deepwater berths of 12.5 m deep. The water depth of the remaining berths varies from 4.5 m to 8 m. It is planned to deepen the existing shallow water berths (Berths No. 81 – No. 100) to 12.5 m deep and to widen the apron through reconstructing the existing quay structures

The use of the deepwater berths, viz. Berths No. 101 – No. 104, is specialized for loading dry fertilizers (potash). Dry fertilizers are loaded into vessels by using a ship loader connected to the two warehouses (a total storage capacity of 36,000 metric tons) behind the berths through belt conveyors. The actual capacity of the loaders is 750 metric tons per hour (rated capacity is 10,000 metric tons per hour). At present an additional two warehouses with the same capacity as the existing ones are under construction. One more ship loader will be installed corresponding to the additional warehouses to double the fertilizer handling capacity.

Berth No. 100 is mainly used to unload frozen foodstuffs (frozen fish, meat), which are then hauled into the cold storage of 6,500 sq. m floor space (4,500 metric tons storage capacity) located just behind the berth. Rail-mounted shore cranes of 3.5 – 6 tons lifting capacity are used alongside.

Berths No. 97 – No. 98 are mainly used to load bulk agro-products such as wheat and rapeseed by using the above-mentioned ship loaders specialized for direct loading from railway wagons.

Berths No. 94 – No. 96 are mainly used to load scrap and forest products and to unload agro-products by using the shore cranes mentioned above.



Photo I.2.2-6 Facility Layout of Smelte Terminal

The remaining shallow-water berths of 6.5 m or less, viz. Berths No. 82 – No. 93 are used to handle mainly agro-products and forest products. Sizes of vessels using these berths are less than 5,000 DWT.

In addition to the cold storage floor space of 6,500 sq.m mentioned above, there are two warehouses of 19,400 sq.m and 14 open storage yards with a total space of 67,069 sq.m as listed Table I.2.2-5.

Table I.2.2-5 Storages of Smelte Terminal

Storage	Area (sq. m)
Cold Storage	6,500
No.1 Warehouse	10,000
No.2 Warehouse	9,400
Total in Warehouses	25,900
No1 Open Storage	1,600
No2 Open Storage	10,000
No3 Warehouse	4,000
No.4 Warehouse	5,000
No5 Open Storage	4,400
No6 Open Storage	10,800
No7 Open Storage	1,694
No8 Open Storage	7,629
No9 Warehouse	9,900
No.10 Warehouse	5,486
No11 Open Storage	800
No12 Open Storage	1,712
No13 Open Storage	1,648
No14 Open Storage	2,000
Total in Open Storage	67,069

2.2.6 Klaipėdos Terminalas (Klaipėda Terminal)

Klaipėdos Terminalas is a private company that was founded in 1994 and is located in the southern part of the port territory. At present the main services of the company are to load or unload containers, Ro/Ro and conventional cargoes onto or from vessels, to store them in open storage yards or warehouses and to provide ancillary services such as stuffing/unstuffing of container cargoes, sorting, packing and weighing.

Container handling services are provided at Berth No. 128 and Berth No. 130. At present, the following shipping lines provide the feeder services at the terminal.

- Baltic Container Lines (Klaipėda - St. Petersburg - Hamburg - Gdynia)
- CMA/CGM (Klaipėda - Hamburg)
- Team Lines (Klaipėda - Klaipėda - Aarhus - Bremerhaven - Hamburg - Riga)

A rubber-tyred mobile tower crane with a 64-ton lifting capacity is used for handling containers. The net container-handling productivity of the tower crane is 25 units per hour. At the container yard, reach stackers are used

Services for Ro/Ro ships are provided at Berth No. 128. At present DFDS TOR Line provides a shuttle service between Klaipėda and Fredericia at a frequency of 3 times per week. The services are connected to Harwich (UK) via Esbjerg (Denmark) through the land connection between Fredericia and Esbjerg. The sizes of Ro/Ro ships are around 7,000 and 12,000 gross tonnages.

Berth No. 127 and Berth No. 128 are used to handle cargoes of diverse type, characteristics and form such as forest products, scrap metal and foodstuffs.



Photo I.2.2-7 Facility Layout of Klaipėdos Terminals

2.2.7 Baltic Ferry Terminal

The company “Baltic Ferry Terminal” belongs to “Krantas Shipping Group” that provides mainly cargo transportation services. The company provides stevedoring services at Berth No. 151 for Ro/Ro ships. The company runs toplifters with a lifting capacity of 45 tons used for container-handling on both the dock and Ro/Ro ship decks. There is a warehouse with a floor space of 1,050 sq.m.

2.2.8 Transfosa

Transfosa was founded as an affiliated company of LIFOSA, one of the two fertilizer manufacturers in Lithuania. The principal strategies of the company’s activity are to provide services for handling bulk cargo including fertilizers, ship bunkering and receiving/treating waste oil from vessels.

The company’s territory is behind Berth No. 80. The company runs 3 floating cranes of a lifting capacity of 16 tons. Currently, the main cargo handled by the company is bulk molasses loaded into a molasses tanker through pipelines connected to tanks located on its territory. The molasses is brought in by railway.

2.2.9 Timber Handling Terminal

The company “Timber handling Terminal” specializes in timber export. Its territory of 12 ha is behind Berth No. 141. The storage capacity of its open yard is 200,000 cu.m of timber. The terminal handling capacity is said to be 400,000 tons of timber per annum. Timber is mainly exported to Sweden and Finland by crossing the Baltic Sea. At the yard, hydraulic-driven forklift trucks are used.

2.2.10 Lithuanian Peat Cargo

The company mainly provides stevedoring services for peat in bulk or packages and wood chips at Berth No. 119 – No. 120. An open yard of 12,000 sq.m is used for cargo storage. The cargo-handling productivity for peat loading is said to be up to 1,000 cu.m per hour.

2.2.11 Laivite Ship Repair Yard (Laivite)

The main activity of the company “Laivite” is ship repair. The shipyard is placed behind Berth Nos 19 – 25.

2.2.12 Klaipeda Ship Repair Yard

The main activity of the company “Klaipeda Ship Repair Yard” is the repair of small and medium size ships. The shipyard is placed behind Berth Nos 26 – 60.

2.2.13 Baltija Ship Building Yard (Baltija)

The company “Ship Building Yard Baltija” belongs to the Danish Odense Lindo Group of Companies. The company provides a wide range of shipbuilding services, from complete ships to assembly components. The assembly components are shipped to the group company’s shipyard by barges. The shipyard with a total area of 29 ha is placed behind Berths No. 61 – No. 65.

2.2.14 Klaipedos Kartonas

The main activity of the company “Klaipedos Kartonas” is manufacturing paperboard from waste papers. The company’s territory of approximately 4 ha is behind BEGA without waterfront. Its products are exported via the Port.

2.2.15 Progresas

The company “Progresas” was founded for fish-canning. Currently, the manufacturing of canned products is not in operation, and instead its territory is used for the storage of scraps and for other miscellaneous uses, mainly on a sublease basis (the company territory land is leased from KSSA).

2.2.16 Western Ship Repair Yard

The company “Western Ship Repair Yard” belongs to the Estonian “Group of BLRT”. Its sister company “Tallinn Shipyard” operates in Estonia. Western Ship Repair Yard provides services for building and repairing vessels. The company runs floating docks moored along finger-type jetties.

In addition to shipbuilding/repairing, the company provides stevedoring services at Berth No.140. Currently, the main cargoes handled there are forest products, such as pulp logs and sawn timber, and scrap.



Photo I.2.2-8 Western Ship Repair Yard

2.2.17 Klaipėdos Hidrotechnika

The main activity of the company “Klaipėdos Hidrotechnika” is marine and river construction, including constructing port infrastructures. The company operates Berth No. 118 for mooring its working ships.

In addition to construction, the company provides stevedoring services at Berth No. 118, specializing in handling forest products.



Photo I.2.2-9 View of Berth No.118

2.3 Port Traffic

According to the information from KSSA, the cargo handling volume at the Port increased with an annual growth rate of 14% and exceeded 19 million tons in 2002, of which oil products were 6.7 millions tons, equal to 34% in cargo share, the largest in the Port.

Table I.2.3-1 shows the volumes of oil products and other cargo from 1994 to 2002 and Table I.2.3-2 shows the cargo handling volumes broken down into major commodities, including container cargoes and Ro/Ro cargoes.

Table I.2.3-1 Total and Oil Products Cargo Handling Volumes

(Unit: 1,000 tons)

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002
Oil products	4,915	2,729	4,195	3,591	2,233	3,915	5,197	5,121	6,681
Without oil products	9,594	9,980	10,634	12,527	12,770	11,056	14,199	12,115	13,058
Total	14,509	12,709	14,829	16,118	15,003	14,971	19,396	17,236	19,739

Source: KSSA

Table I.2.3-2 Cargo Handling Volumes of Major Commodities Including Container Cargoes and Ro/Ro Cargoes

(Unit: 1,000 tons)

Year	1994	1995	1996	1997	1998	1999	2000	2001
Metals and ferro-alloy	2,805	3,233	3,496	4,304	5,187	3,059	4,348	1,563
Scrap metal	425	538	342	372	389	211	388	511
Fertilizer	1,078	1,162	1,651	1,885	2,317	2,823	2,904	2,840
Timber	534	729	536	698	562	686	681	714
Grain and combined fodder	556	310	440	517	379	159	707	289
Sugar	39	55	404	403	367	726	475	561
Frozen cargo	327	568	842	940	578	445	376	326
Cement	226	210	293	340	303	339	235	145
Peat	64	93	94	93	116	115	90	90
Container	86	276	385	289	279	268	395	505
Ro/Ro	3,279	2,791	2,901	3,325	2,387	2,156	2,549	2,998
Oil products	4,915	2,689	3,956	3,535	2,301	3,958	5,198	5,135
Total	14,334	12,654	15,340	16,701	15,165	14,945	18,346	15,677

Source: KSSA

Among all the commodities, oil products cover the largest share, followed by Ro/Ro cargoes and fertilizer.

In the last five years, grain and combined fodder have recorded the highest annual growth rate followed by scrap metal and sugar.

Table I.2.3-3 shows the number of passengers for international travel from 1998 to 2002.

Table I.2.3-3 Number of Passengers for International Travel

(Unit: persons)					
Year	1998	1999	2000	2001	2002
Departed	36,593	38,339	51,559	48,244	52,178
Arrived	39,524	40,766	54,170	52,933	55,024
Total	76,117	79,105	105,729	101,177	107,202

Source: KSSA

The number of passengers for international travel increased until 2000, and topped the 100,000 level.

Figure I.2.3-1 shows the number of calling vessels in a year from 1997 to 2002.

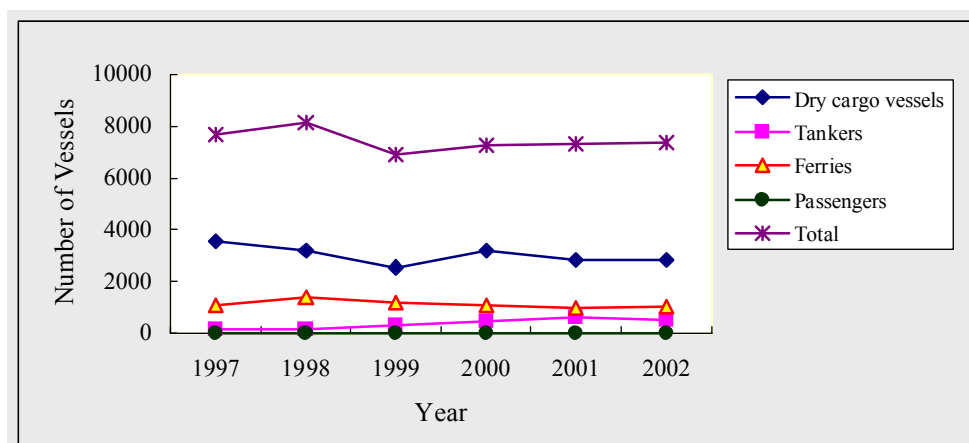


Figure I.2.3-1 Number of Calling Vessels

The number of calling vessels at the Port showed a slight downward trend in 1999, but has since increased year by year. The largest number of calling vessels in a year by ship type is dry cargo vessels. The biggest ship type in size is tankers, whose average size exceeded 18,000 GT in 2002; the second was ferries, followed by passenger ships.

Table I.2.3-4 shows the average size of calling vessels from 1997 to 2002 by the vessel type.

Table I.2.3-4 Average Calling Vessel Size from 1997 to 2002

(Unit: GT)						
Ship type	1997	1998	1999	2000	2001	2002
Dry cargo vessels	3,395	3,480	3,545	3,636	3,176	3,605
Tankers	18,025	12,898	13,117	13,682	12,758	18,653
Ferries	17,317	15,545	15,707	17,091	16,326	17,002
Passengers	13,382	10,267	14,273	10,247	9,455	7,810
Other vessels	188	207	180	182	232	228

Source: KSSA

2.4 Navigation

2.4.1 Fairways and Basins

The access fairway extends west from the port mouth in the Baltic Sea. An entering vessel approaches the first buoy (lighted buoy) watching the two lights, viz. the buoy and the leading light erected on a land site behind Berth No.1, so that a straight line is followed. The direction of the straight line is 92.5° N (when leaving 272.5° N). When the vessel arrives at the first buoy a pilot goes on board.

The first buoy is the starting point of the State Pilot Service. The vessel passes through the port entrance formed by the tips of the two breakwaters, viz. the north and south breakwaters, under the control of the pilot on board. The distance from the first buoy to the port entrance is approximately 3 miles. The controlled water depth of the access fairway is 14.5 m under CD.

The vessel enters the inner channel and moves to an allocated berth. The distance from the entrance to the basins at the bottom of the Port around the Ro/Ro terminal is approximately 7 miles. From the port entrance to the turning basin placed in front of Berth No. 10, a water depth is maintained up to 14 m. Channel width (bottom) varies from place to place and the narrowest part is the port entrance with 125 m. The inner channel is not straight having several bends. For navigational safety, in addition to lighted buoys installed at intervals, 4 leading lights are placed on land: 2 lights at the port entrance and the remaining 2 on the Ro/Ro terminal site.

From the turning basin placed in front of Berth No.10 to the bottom basins, current water depths vary from 12m to 9m. This part of the inner channel will be deepened up to 12.5 m by the end of the year (2004) with a width (bottom) of 125 m.

2.4.2 Navigation Control

Vessel navigation is controlled by the subdivision of the Harbour Master's Office of KSSA in compliance with "the Klaipeda State Seaport Regulations". These are valid within the port waters and within the territory of the port where the port aid to navigation is installed, as well as, within its visibility zone.

The VTS manages vessel navigation from the first buoy to the inner channel throughout the entire territory of the port waters. The VTS operators are on a twenty-four-hour watch. To ensure the safety of all vessels and the port itself, every vessel, with a pilot on board, or without one, is additionally guided by radar.

The VTS:

- Regulates/controls vessel navigation within the port waters
- Controls vessel navigation by use of radar
- Controls a vessel's position by use of radar, when the vessels are lying at anchor
- Provides the vessels with relevant port introductions as well as navigational and other information
- Guides vessels by use of radar

Throughout the channel, night navigation is allowed. In principle, vessel traffic is controlled as one-way traffic other than at passing places containing the basins

mentioned above (see Figure I.2.4-1). It is stipulated by the Klaipeda State Seaport Regulations that the speed of vessels in the port waters be under 6 knots. It is also stipulated that a vessel proceed at a dead slow speed at passing places where waves generated by the vessel would be dangerous.

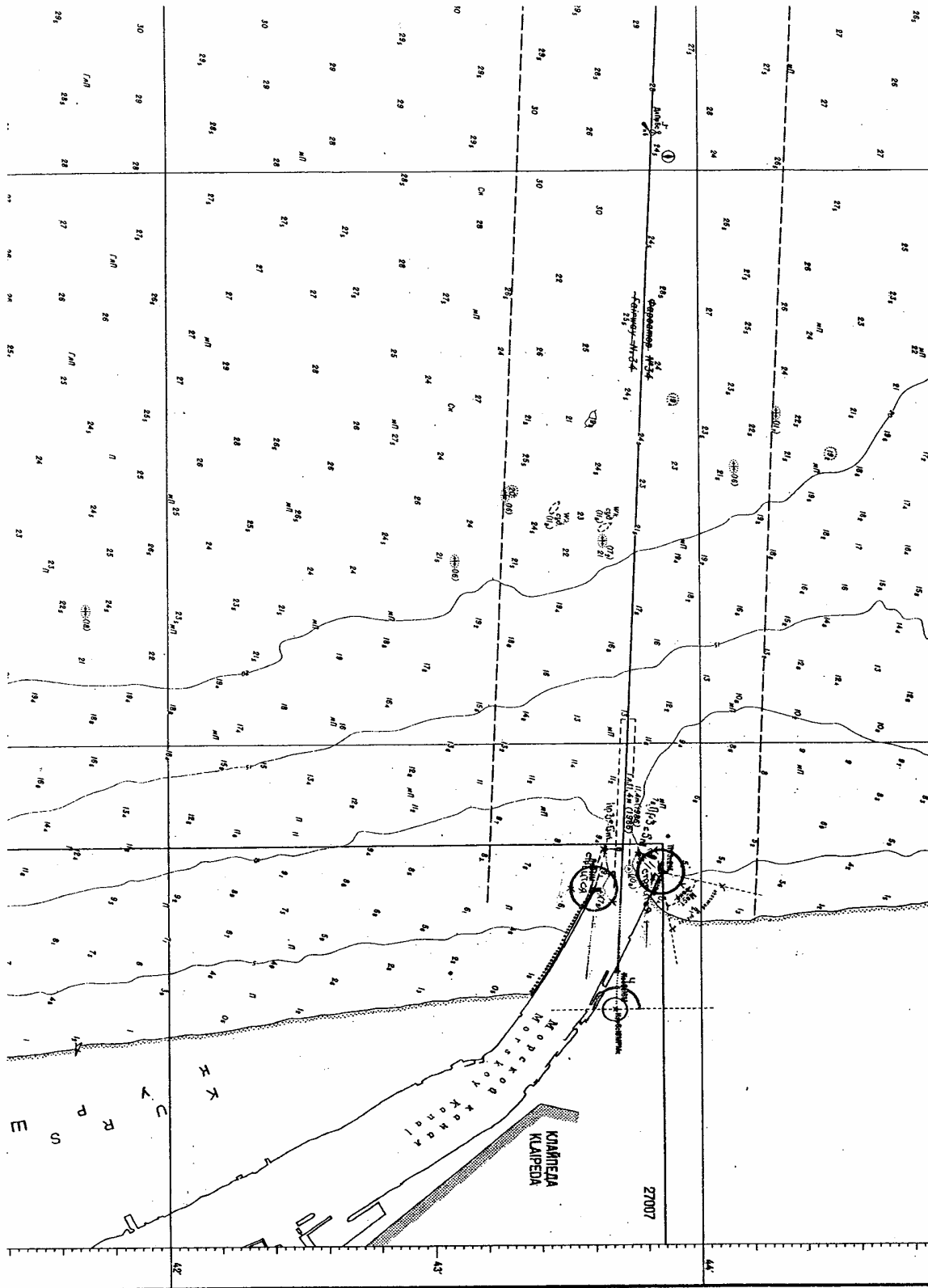


Figure I.2.4-1 Navigation Channel at the Port

2.5 Railway

2.5.1 Development of Lithuanian Railways

(1) History and Role of Lithuanian Railways

The first railway line in Lithuania was constructed in 1858 from Daugpilis in Latvia through Vilnius, Kaunas and Kybartai to Virbalis in Russia. The first train arrived in Vilnius in September, 1860. At that time Lithuania was still a part of the Russian Empire. Since 1990, Lithuanian Railways were part of the Baltic Railways belonging to the USSR. In January, 1992 Lithuanian Railways was reorganized as a state enterprise. Lithuanian Railways joined the Organization for Railway Cooperation (OSJD)¹ and became a member of the International Union of Railways (UIC) in June, 1992.

As at 2001 the Lithuanian Railways network consisted of 1,695.8 km of operating track, of which 1,679 km were 1520-mm gauge, 21.8 km were 1435-mm gauge and 122 km were electrified. It had 114 stations. There are four Trans-European Network (TEN) corridors crossing the territory of Lithuania:

- Corridor I is the Helsinki (Finland) – Tallinn (Estonia) – Riga (Latvia) – Kaunas (Lithuania) – Warsaw (Poland) route;
- Corridor I A is the Radviliskis (Lithuania) – Pagegiai – Kaliningrad (Russia) – Gdansk (Poland);
- Corridor IX B is the Kiev (Ukraine) – Minsk (Belarus) – Kena – Vilnius – Klaipeda route; and
- Corridor IX D is the Kaisiadorys – Kaunas – Kybartai – Kaliningrad (Russia) route.

Sestokai station is one of the border stations on Corridor I in Lithuania where two different gauge tracks meet: the European (1435 mm) and the Russian (1520 mm) gauge. This station is quite important for transit to and from Western Europe and all the Baltic States.

¹ Established in 1956, OSJD aims to develop international railway traffic and exchange information between member countries. The organization has 27 members at present.

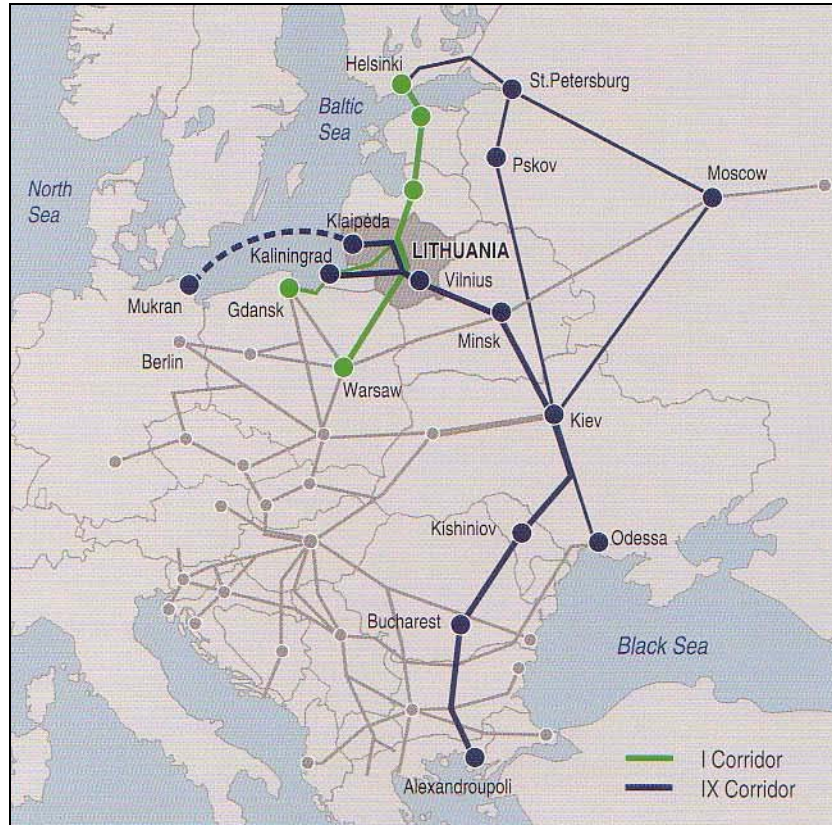


Figure I.2.5-1 TENs Corridors Interfacing with Lithuania



Figure I.2.5-2 TENs Corridors in Lithuania

(2) Traffic Trends of Lituanian Railways

1) Freight

According to statistical data for 2002 for Lithuania, 83.0 million tons of goods were transported, of which the rail sector carried about 44% and 14% were carried by road. By comparison, on a tonne-kilometres basis, railway accounted for 57% and road 43%. Thus, railway freight transport is an important means of goods transportation in Lithuania.

The total freight volume hauled by rail in 2002 was 36.6 million tons, of which 82% was international cargo, and of which 56.7% was transit cargo. The major commodities are oil and oil products, accounting for about 43% of the total volume. Klaipeda Port is the most important point for this transport mode for railway freight service. Table I.2.5-1 indicates the development of freight haulage up to 2002 and Table I.2.5-2 shows freight haulage by categories in 2001.

Table I.2.5-1 Freight Haulage

Year	1995	1996	1997	1998	1999	2000	2001	2002
Total freight, (1.000 tons)	26,003	29,138	30,498	30,912	28,347	30,712	29,173	36,650
Local haulage	3,875	4,092	4,720	5,977	4,595	4,664	6,340	6,481
International haulage	22,128	25,046	25,778	24,935	23,752	26,048	22,833	30,169
Import	4,796	4,734	4,581	4,977	4,317	3,961	3,410	4,898
Export	5,033	5,290	5,495	6,210	4,359	4,099	4,273	4,476
Transit	12,299	15,022	15,702	13,748	15,076	17,988	15,150	20,795
Freight turnover (million t-km)	7,220	8,103	8,622	8,265	7,849	8,918	7,741	9,767
Average Carriage Distance per t-km	278	278	283	267	277	290	265	266

Source: LG Figures and Facts

Table I.2.5-2 Freight Haulage by Categories in 2001

(Unit: 1.000 tons)

Freight Haulage	Haulage					
	Local	International				Total
		Import	Export	Transit	Total Int'l	
Oil and oil products	3,201	413	2,496	4,949	7,858	11,059
Coal	1	108	-	1,649	1,757	1,758
Ferrous metals, incl. scrap iron	168	277	157	2,544	2,978	3,146
Non-ferrous metals	1	3	1	1	5	6
Chemical and mineral fertilizer	1,287	621	111	2,472	3,204	4,491
Chemicals and soda	87	336	74	218	628	715
Construction materials	354	755	134	179	1,068	1,422
Raw materials	341	45	169	17	231	572
Timber	215	187	326	761	1,274	1,489
Perishable products	-	-	10	390	400	400
Food products	32	204	81	824	1,109	1,141
Grain and flour	243	118	412	232	762	1,005
Paper	2	46	37	207	290	292
Other freight	408	297	265	707	1,269	1,677
Total	6,340	3,410	4,273	15,150	22,833	29,173

Source: LG Figures and Facts

2) Passengers

In 2002 Lithuanian Railways carried 7.2 million passengers. In comparison to 2001 total passenger transportation reduced by 7%. On the other hand, there was a 4.1% increase in passengers carried on international routes over 2001. Totally in 2002 the company carried more than 1,460,000 passengers on international routes. The most popular routes were Vilnius – Moscow – Vilnius and Vilnius – St. Petersburg – Vilnius. Table I.2.5-3 indicates the development of passenger transportation up to 2002.

Table I.2.5-3 Passenger Transportation

Year	1995	1996	1997	1998	1999	2000	2001	2002
Total Number of Passengers Transported (million)	15.2	14.2	12.6	12.2	11.5	8.9	7.7	7.2
Local	13.1	12.2	10.6	10.5	10.0	7.4	6.3	5.7
International	2.1	2.0	1.9	1.7	1.5	1.4	1.4	1.4
Passenger Turnover (million passenger-km)	1,130.1	953.5	841.9	800.2	745.3	611.2	532.8	498.1
Local	746.1	613.3	521.0	532.9	500.7	335.1	263.2	228.7
International	384.0	340.2	320.9	267.3	244.6	276.1	269.6	269.4
Average Passenger Journey (km)	74.0	67.2	67.0	65.6	64.7	69.0	69.0	69.2

Source: LG Figures and Facts

(3) Rolling Stock

As at 2002 Lithuanian Railways had 306 units of traction rolling stock, 214 units of passenger carriages and 9,492 units of freight wagons. There are 154 units of diesel-electric locomotive for freight and passenger transport, of which nearly 60% have been in operation for 20 to 30 years and 10% are over 30 years old. Table I.2.5-4 indicates the numbers of locomotives and wagons from 1995 to 2002.

Table I.2.5-4 Locomotives and Wagons

Year	1995	1996	1997	1998	1999	2000	2001	2002
Locomotives	329	313	298	298	286	278	265	254
Electric, Diesel Trains, Railcars	70	72	69	69	65	63	63	61
Wagons	14,066	14,045	10,473	10,434	10,465	10,117	9,362	9,396
Covered	2,976	2,968	2,418	2,480	2,462	2,409	2,174	2,083
Flat	1,820	1,807	1,389	1,348	1,346	1,173	942	799
Open	2,898	2,898	2,103	1,979	1,961	1,963	1,834	1,834
Tanks	2,685	2,685	1,996	1,967	1,971	1,971	1,888	1,889
Other	3,687	3,687	2,567	2,660	2,725	2,601	2,524	2,791
Passenger Carriages	696	626	595	589	572	563	537	509
Electric traction	111	111	111	111	111	111	111	111
Diesel traction	237	232	220	220	203	194	194	184

Source: LG Figures and Facts

(4) Investment of Lithuanian Railways

Since its independence in 1992 Lithuania has paid major attention to improvement and development of its infrastructure, especially for the two international railway corridors to integrate the transport services into the Trans-European Transport Network and the European market. The European Union Commission has been providing support and assistance for candidate countries to ready themselves for EU membership. Under these circumstances, LG has conducted infrastructure development mainly for the overhaul and renewal of main tracks, modernization of signalling, power supply and telecommunication systems, and purchase of rolling stock. In the period 2000 - 2002, 421.4 million Litas (€ 122 million) was invested in Lithuanian railway facilities. More than half of this amount, 241.5 million Litas (€ 70 million), was spent in 2002. The investment is showing a tendency to increase every year. The major investments for the year 2002 were:

- Renovation of 300 km of main line tracks.
- Modernisation of signalling systems on the section Kaisiadorys – Radviliskis, (126 km).
- Modernisation of telecommunication facilities on the section Vilnius – Klaipeda, financed from ISPA funds.
- Reconstruction of Pauoscio railway network.
- Reconstruction of Vilnius railway station.

Lithuanian Railways was planning to invest 300 million Litas (€ 87 million) in 2003. The major investments planned were:

- Renovation of 320 km of main line tracks.
- Completion of signalling system modernisation on the section Kaisiadorys – Radviliskis.
- Completion of telecommunication facilities on the section Vilnius – Klaipeda, financed from ISPA funds.
- Commencement of modernisation of power supply facilities on the section Kaisiadorys – Radviliskis, financed from ISPA funds.
- Commencement of reconstruction of bridges and viaducts of Corridor IX, financed from ISPA funds.
- Commencement of renewal and purchase of locomotives (29 2M62 type locomotives will be modernised and 34 new modern locomotives will be purchased during 2003 – 2005).
- Creation of EDI network in the company.
- Installation of electronic cargo movement tracking systems in major stations.
- Installation of automated passenger transportation management and electronic booking system for Express-3 during 2003 – 2004.
- Equipping 2000 computerized work stations by the end of 2004.

(5) Organization of Lithuanian Railways

JSC Lithuanian Railways (LG) is a joint stock company with all shares belonging to the State. The ownership right is exercised through the Ministry of Transport, Supervisory Board and Managing Board of LG. LG is composed of four sections as shown in Figure I.2.5-3.

Klaipeda district has an office for each section except the Rolling Stock Department. There is a locomotive depot for light maintenance and repair work in Klaipeda Station. The Klaipeda railway network is mainly managed by the branch office Klaipeda Railway Infrastructure.

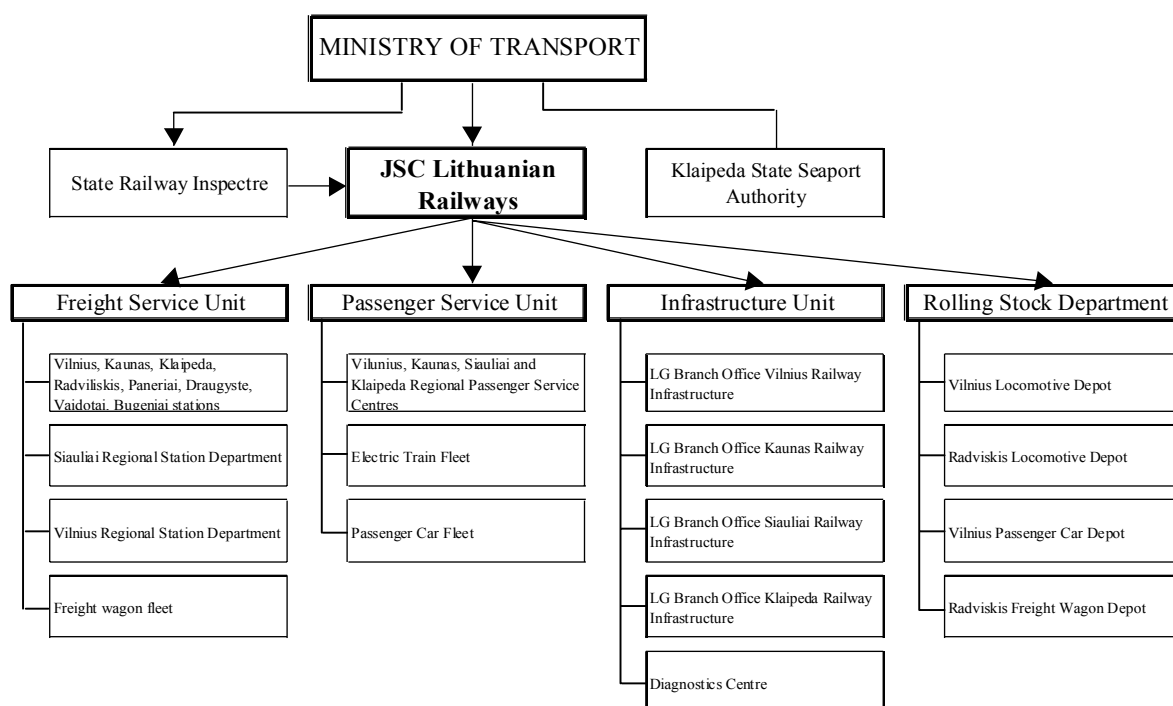


Figure I.2.5-3 Organisation of Lithuanian Railways

2.5.2 Existing Condition of Railway in Klaipeda

(1) General

The Klaipeda railway network is mainly divided into a Northern part and a Southern part, which are separated by the Dane River. The Northern part consists of Klaipeda Station with Pauosio, Angline and Uosto Yards. The latter two yards are inside the Port within the territory of the stevedoring company KLASCO, which is connected by an access line to Klaipeda Station. The Southern part consists of Draugyste Station, Rimku Station and Perkelos Yard. Perkelos Yard is in the International Ferry Terminal area. In the Southern part, the Port is connected by an access line from Draugyste Station, and each company in this part has its own yard or tracks. The Northern and Southern parts of the Klaipeda railway network are connected by a single track that starts from Klaipeda Station, crosses Rimku Station and runs to Draugyste Station. The distance between Klaipeda Station and Draugyste Station is approximately 11 km.

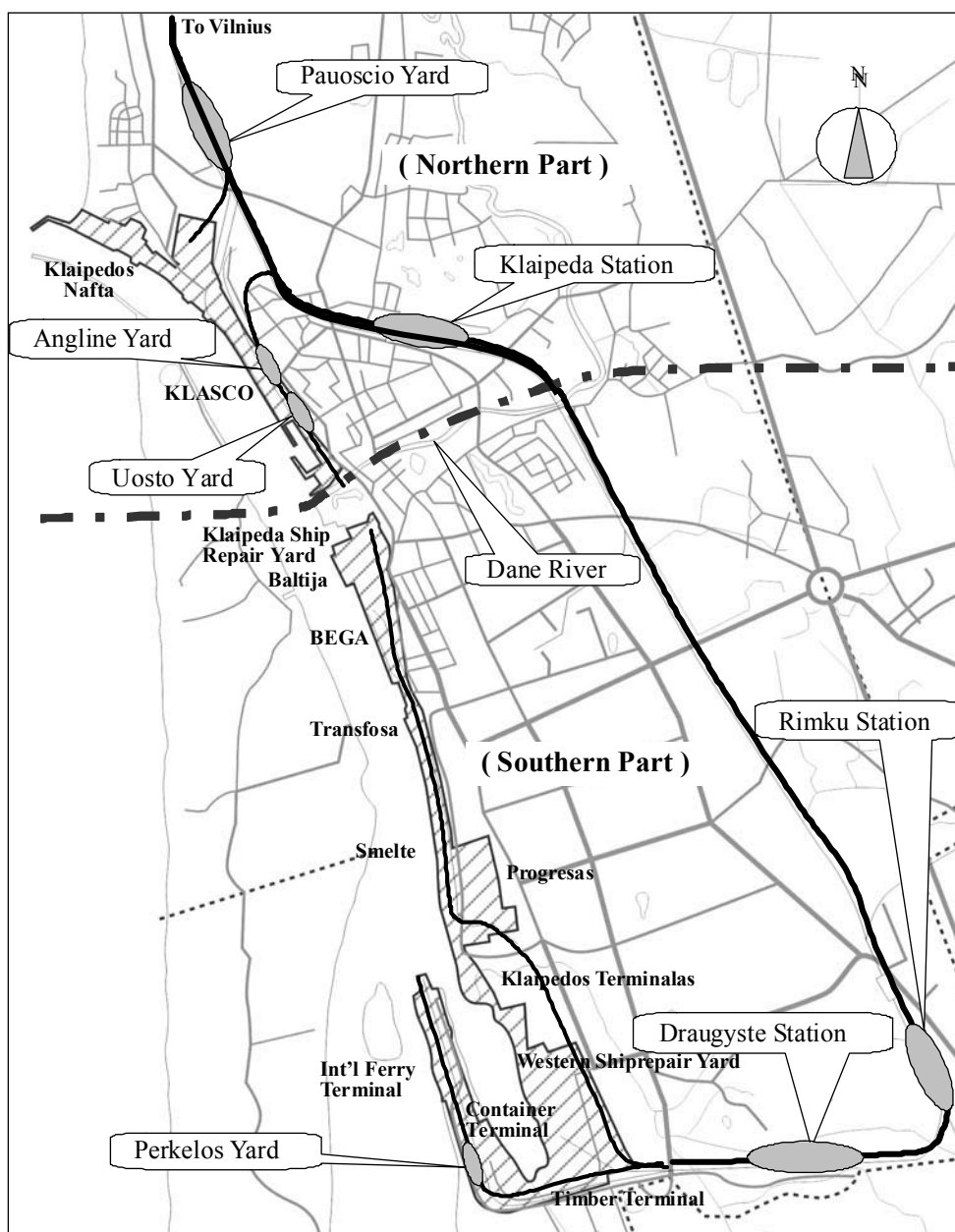


Figure I.2.5-4 Railway Network in Klaipeda

In the yards, stations, and railway facilities in the Klaipeda area there is general evidence of a regular and diligent maintenance regime. Track repair and maintenance workers can be observed lubricating points mechanisms, tightening or renewing track fastening components and removing vegetation from the trackside.

There are various standards of track and track appurtenances in use in the area. Most of the principal tracks are laid on crushed rock ballast, but some tracks of lower standard of line and level are laid on sand ballast. There is a mixture of concrete and wooden sleepers in use. Where track has been renewed or overhauled, concrete sleepers have been used, except at turnouts and crossings, which are all laid on wooden sleepers. New UIC turnouts are made to an Austrian design and specification but are manufactured in Lithuania.

There are four principle track sections in use in the area; in older and less frequently used tracks there is some of the old Soviet R 75 high web rail, in most other tracks there is the newer Russian R 50 and R 65 rail, which features geometrical designs much closer to the UIC standard rail sections, and in the newest sections LG uses UIC 60 rails and track components.

In the forthcoming three years LG plansto spend 75 million Litas (€ 22 million) on track overhaul in the Klaipeda area. Approximately 70% of LG's track overhaul work is bid out to contract with some 4 to 5 firms tendering.

(2) Klaipeda Station

1) Existing Condition

Klaipeda Station is divided into five principal operational areas which are the main line, arrival/departure tracks, storage tracks, goods yard and locomotive depot.

The main line has two tracks passing through the station with three island platforms for passenger services. The main line is only a double track within the confines of the station and to the north of the station, going into single line just to the south of Pauoscio Yard. There are 6 arrival/departure tracks which have the capacity to hold 300 wagons leaving one run around track for locomotives. There are 12 storage tracks which have the capacity to hold 460 wagons. The Lithuanian Railway branch office in Klaipeda advised that the manually operated gravity hump in operation has the capacity to marshal approximately 2000 wagons per day. Currently there are on average 600 wagons being marshalled over the hump each day. The goods yard is mainly for handling containers and for loading other cargo. The locomotive depot is for light maintenance and small repairs. The locomotives that require major repair work and engine repairs are sent to Vilnius. Those requiring attention to wheel sets are sent to Radviliskis.

The condition of the track in Klaipeda Station varies depending upon its operational importance. The main line track has been recently overhauled and is currently being tamped using electrically powered hand held tamping machines. It has UIC 60 rail, concrete sleepers, and is laid on crushed rock ballast. The line and level of the main line tracks are good and some of this track has had its fishplates removed and been welded to create longer sections of rail. There are a high proportion of Russian R 50 and R 65 rails in use in the yards and there are also a number of tracks with the old Soviet R 75 rail. Most of the sleepers in the yard are wooden and are generally in good condition, but the line and level of a number of these tracks is sub-standard. Some of these problems are due to the use of sand as ballast material. There are also some tracks which are laid on crushed rock ballast that are in need of tamping.

signalling and interlocking equipment on the second and ground levels along with maintenance staff. The basement houses standby generators for emergency power supply to the facility in event of a power supply failure. The control tower has a mimic board and control desk for the control of signals and remote operation of turnouts in the station and yards. A second control desk is provided for an operator to control the flow of wagons coming from the gravity hump. The control tower operators, train crew and ground staff all have radio communication with each other for reporting and passing of movement orders.

The signalling equipment is colour light signalling with semi-automatic block and standard relay interlocking. The relay equipment operates at 24 volts with the circuits for motorised turnouts being at 100 volts. The equipment is approximately 18 years old of Soviet manufacture, but is robust and quite reliable and the maintenance and repair procedures are well organised under a planned preventative maintenance system. All relay equipment is dated for its next removal for testing, overhaul, and calibration at the signal equipment repair headquarters and, therefore, equipment is replaced with the objective of removing it before failure occurs. Electric signalling, interlocking, and motorised turnouts cover the whole station with the exception of the tracks inside the locomotive repair facility, which are operated from manual ground levers by the train crew.

(3) Draugyste Station

1) Existing Condition

Draugyste Station serves the rail connected companies in the Southern area of the Port south of the Dane River. The station has 6 arrival/departure tracks with the capacity to hold 310 wagons leaving one run around track for locomotives. There are 14 storage/sorting tracks which have the capacity to hold 610 wagons. The sorting tracks are fed by a hump having one primary retarder and two secondary retarders. The hump and retarder system has the capacity to process approximately 2600 wagons per day. Currently there are on average 200 wagons being marshalled over the hump each day.

The condition of tracks inside Draugyste Station are predominantly using Russian R 50 rail, wooden sleepers and are laid on sand ballast. The general condition of line and level in this station is quite reasonable. There are four tracks coming out of the east of the yard. The one going towards BEGA is using UIC 60 rail and concrete sleepers and is laid on crushed rock ballast. Its line and level condition is quite good. The next track going to the timber terminal is laid with Russian R 50 rail using wooden sleepers and is ballasted on crushed rock. Its line and level condition is reasonable. The remaining two tracks serving the International Ferry Terminal area are both using Russian R 50 rail and wooden sleepers and are laid on sand ballast. The level of these two tracks is not too bad but the line condition is poor.

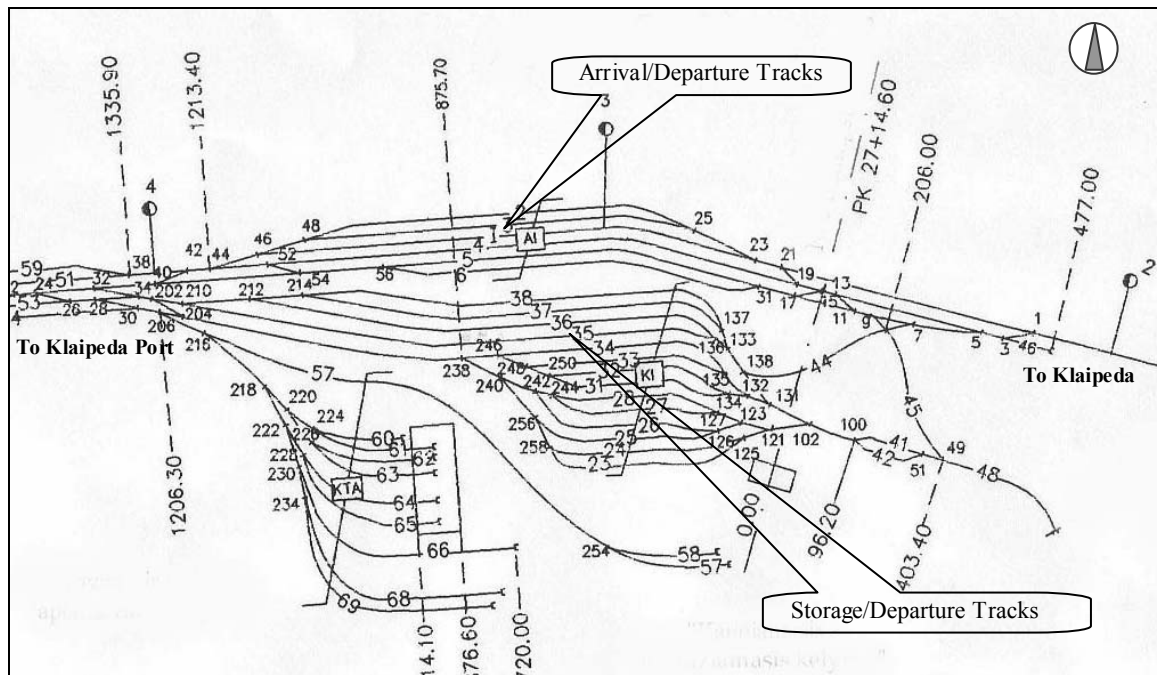


Figure I.2.5-6 Layout of Draugyste Station

2) Operation

Control of the station and its associated tracks and yards is achieved from a signalling control tower overlooking the facility. The control tower is staffed 24 hours per day and houses the control tower and offices on the third level. The second and ground levels house the signalling and interlocking equipment and maintenance staff. The basement houses standby generator sets for emergency power supply to the facility in the event of power supply failure. The control tower has a mimic board and control desk for the control of signals and remote operation of turnouts in the yards. A second control desk is provided for an operator to control the flow of wagons coming from the hump. The same control desk contains the actuators for the retarders, which are directly in front of the tower and in clear sight of the operator. The control tower operators, train crew and ground staff all have radio communication with each other for reporting and passing of movement orders.



Photo I.2.5-2 Draugyste Station



Photo I.2.5-3 Draugyste Station Control Center

The signalling equipment is colour light signalling with semi-automatic block and standard relay interlocking. The relay equipment operates at 24 volts with the circuits for motorised turnouts being at 100 volts. The equipment is approximately 18 years old of Soviet manufacture, being identical to that found at Klaipeda Station. Electric signalling, interlocking and motorised turnouts cover the whole station. The equipment is clearly well maintained as explained for Klaipeda Station.

A separate building close by the control tower provides the supply of compressed air at 6 bars to power the retarders. It has 5 compressor units installed although only one is run at any one time. The additional air supply was originally used to allow track staff to keep turnouts clear of snow during winter, but this practice no longer goes on as track staff simply sweep the turnouts clear of snow at regular intervals and freezing of turnouts is reported not to be a problem.

(4) Pauoscio Yard

Pauoscio Yard serves the Klaipėdos Nafta oil terminal, there are no passenger facilities at this location which is oriented roughly North – South. It is fully lit for night working and has recently been overhauled with UIC 60 track on crushed rock ballast. A single track main line to the North passes the yard to the east. The condition of line and level in the yard is good. The approach tracks to Pauoscio Yard from Klaipėda Station are controlled from Klaipėda signal control centre with the control of the turnouts in the yard itself being done locally within Pauoscio Yard. Trains coming and going from Klaipėda Station arrival/departure tracks have to cross both main line tracks in order to reach Pauoscio Yard. It has 9 arrival/departure tracks with a combined capacity of 435 tank wagons.

Klaipėdos Nafta are very satisfied with the service provided by LG in delivering, collecting and despatching wagons between their terminal and the Pauoscio Yard and are not experiencing any problems with rail services or facilities. Wagons coming from Pauoscio Yard have to be propelled as there is no facility for the running round of locomotives inside Klaipėdos Nafta.

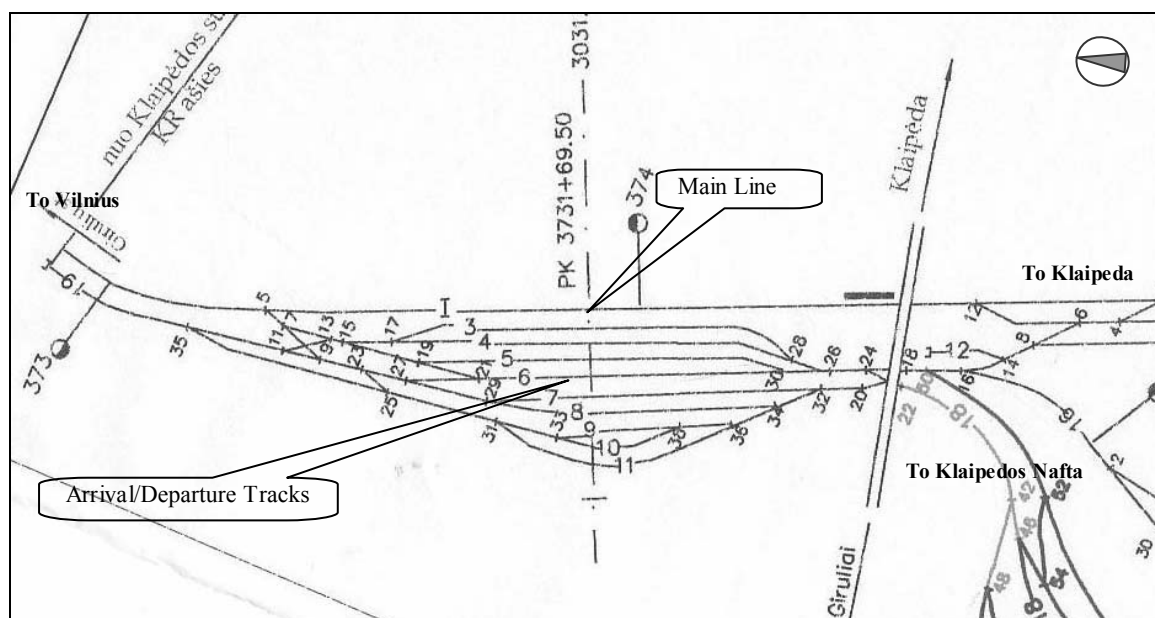


Figure I.2.5-7 Layout of Pauoscio Yard



Photo I.2.5-4 Pauoscio Yard

(5) Angline Yard

Angline Yard is located inside the KLASCO facility, to which wagons are taken from Klaipeda Station by a Klaipeda Station locomotive. There is a restriction of train make up at the access line to Klaipeda Station. The principal use of this yard is as an arrivals yard for all wagons coming to KLASCO territory and for their subsequent distribution to the various terminal facilities for offloading/loading.

There are 4 arrival/departure tracks and 4 storage tracks with a high proportion of Russian R50 and R65 rails using concrete sleepers laid mainly on sand ballast. There are also a number of tracks with the old Soviet R 75 rail. The length of arrival/departure tracks varies between 440 m and 520 m and they have the capacity to hold between 29 and 34 wagons each. The length of storage tracks varies between 320 m and 520 m and these have the capacity to hold between 20 and 37 wagons each.

The total length of track in this yard is approximately 3.4 km providing accommodation for 305 wagons and leaving one run around track for locomotives. There are motorised turnouts with a signalling control system which is operated from the control centre in this yard. The tracks in the yard are owned and maintained by LG. The conditions of track facilities are good enough but the line and level of a number of tracks is sub-standard.

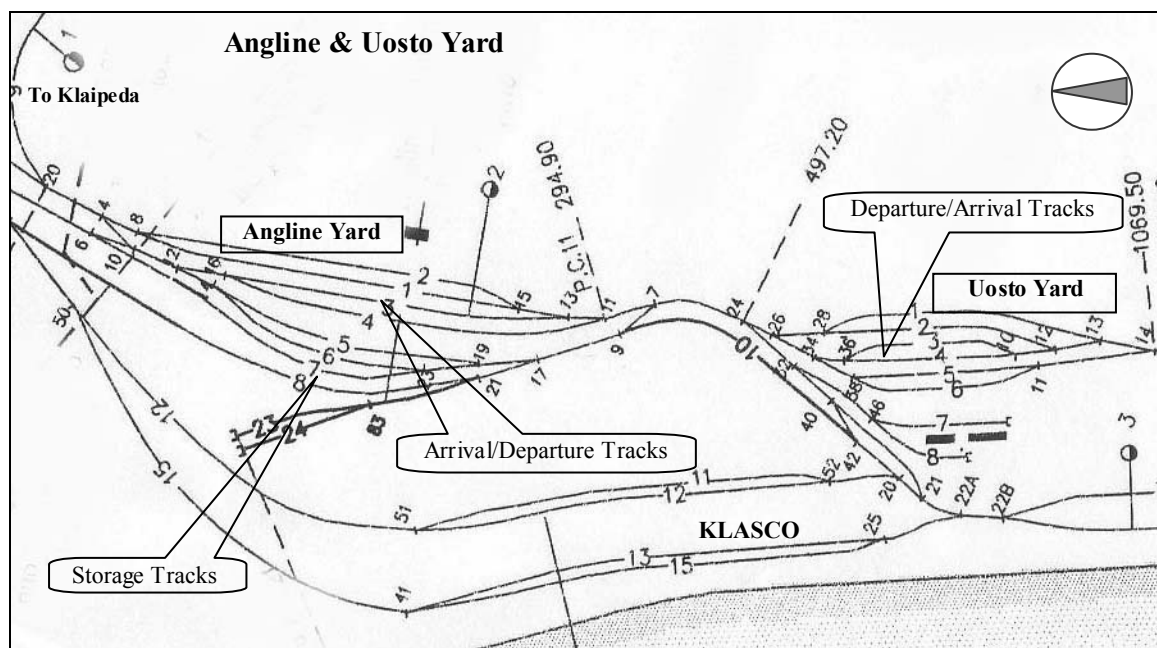


Figure I.2.5-8 Layout of Angline and Uosto Yard

(6) Uosto Yard

Uosto Yard is located in the southern portion of KLASCO's area. It is connected to Angline Yard by two tracks. The main purpose of this yard is to act as a departures yard from KLASCO territory. Wagons are collected from the various terminal facilities and stored before subsequently being brought out to Klaipeda Station by an LG Klaipeda Station locomotive. There are 6 departure/arrival tracks with mainly Russian R65 rail using concrete sleeper laid on sand ballast. The longest track, which has a length of 340 m, has the capacity to hold 24 wagons; the other tracks can hold between 18 and 22 wagons. The total length of track is approximately 1.8 km and 106 wagons can be accommodated leaving one run around track for locomotives. There are motorised turnouts with an interlocked signalling control system at the entrances to the yard. The remainder of the turnouts in the yard are manually controlled and are not interlocked. The tracks in the yard are owned and maintained by LG. The conditions of track facilities are good enough but the line and level of a number of tracks is sub-standard.



Photo I.2.5-5 Angline Yard



Photo I.2.5-6 Uosto Yard

(7) Perkelos Yard

This yard is located 3.5 km from the Draugyste Station and about 1 km from the ship berth. The yard has 10 arrival/departure tracks and 5 storage tracks. The arrival/departure tracks have the capacity to hold 320 wagons and the storage tracks can accommodate 170 wagons. These tracks are used for stand-by before loading into Ro/Ro ferry or following offloading. The tracks are predominantly Russian R50 rails with wooden sleepers and are laid on sand ballast. There are motorised turnouts with a signalling control system which is operated at a control centre inside the International Ferry Terminal building. According to data for the year 2000, there were 1,968,000 tons, corresponding to 98 wagons per day, handled. LG locomotives bring wagons into the yard from the Draugyste Station. The condition of track and facilities are good enough at present. The track is owned and maintained by LG.

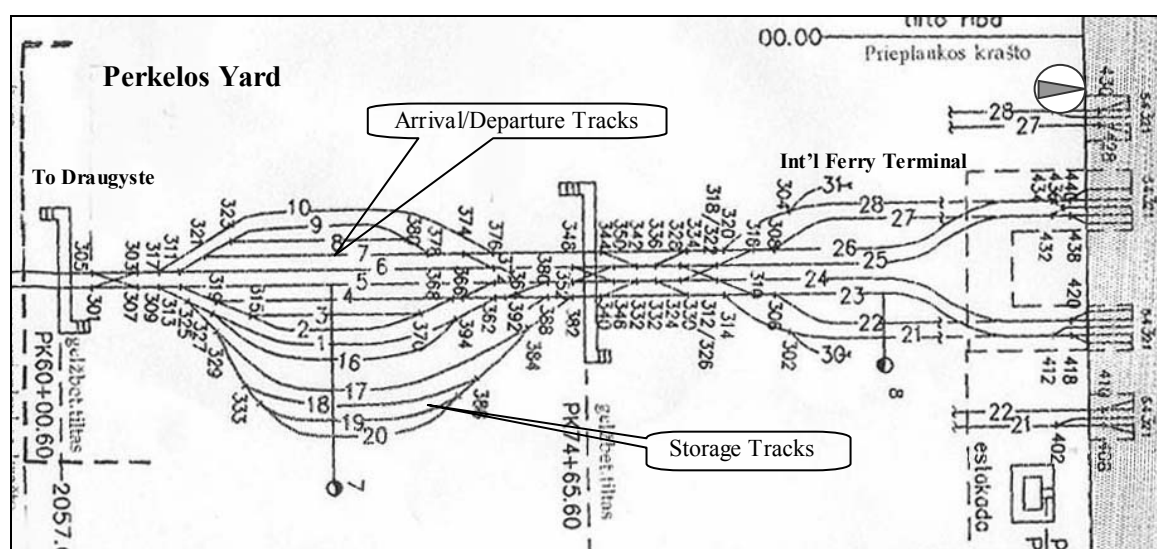


Figure I.2.5-9 Layout of Perkelos Yard

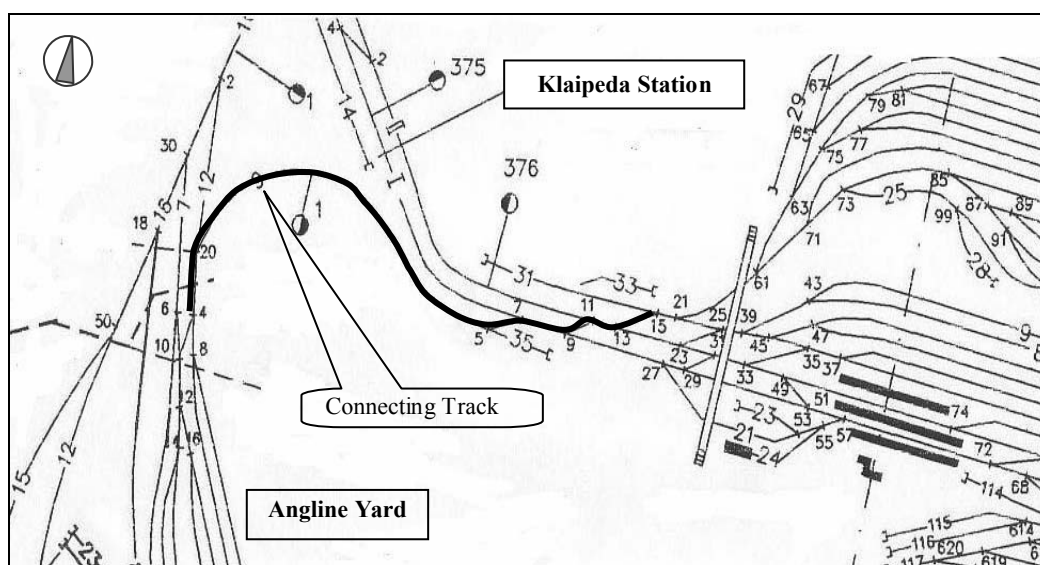
(8) Access Lines to Klaipeda Port

The Port has rail access from the north and the south. There is no through line because of the existence of the Dane River which divides the port into northern and southern sections. Access to the Northern Port facilities is by Pauoscio Yard to Klaipedos Nafta as described above and also between Klaipeda Station and Angline Yard. The Southern Port facilities are accessed from Draugyste Station, which has three principal lines into the port: one serving rail connecting operations as far as BEGA; one which serves the Timber Handling Terminal and the Western Ship Repair Yard; and the other is a double track connection to the International Ferry Terminal area.

1) Between Klaipeda Station and Angline Yard

Loaded and empty wagons requiring access to the Northern Port facilities run from the arrival/departure tracks of Klaipeda Station to Angline Yard inside the Port. In order to reach the connecting track for the Angline Yard, trains coming from Klaipeda Station must cross the main line before reaching the access line on the opposite side. The access line is built on a tight 200 metre radius curve, having a down gradient from Klaipeda Station of approximately 1.1%. The rails are Russian R 65 section and are laid on concrete sleepers and are ballasted with crushed rock. The track is in very poor condition and there is evidence of a

number of derailments having occurred along this section. In an attempt to stabilise the track, LG have laid a number of wooden sleepers to supplement the concrete ones and have roughly doubled the number of sleepers per kilometre but despite these efforts the track condition remains extremely poor.



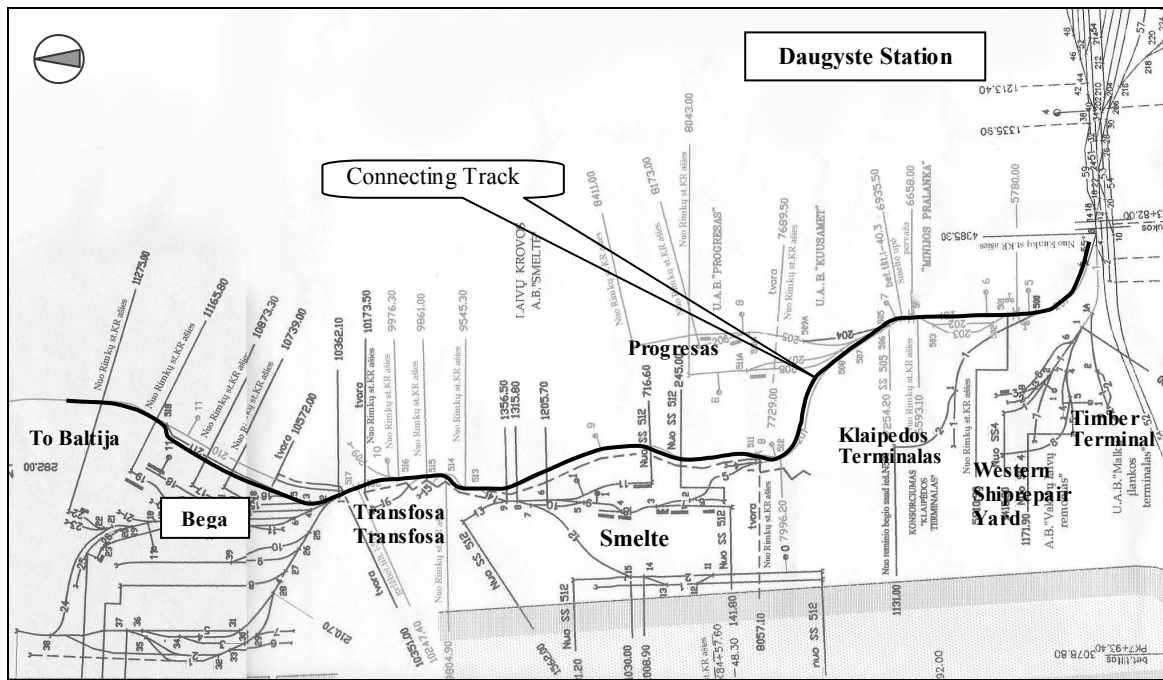


Figure I.2.5-11 Layout of Connection to BEGA

There are a number of level crossings along the route which are fitted with various types of warning systems for approaching road traffic. At the crossing of Perkėlos road, which is an access road to the Westan Shiprepair Yard, the warning system features advanced and localised road signs, a warning bell, an all clear green light signal, and two red alternating flashing lights. At the next two road crossings the system is similar but does not have the all clear green light signal. These warning systems are actuated and cancelled by the track circuits. It should be noted that these track circuit ends are within a few metres only of the crossings and unless changed to give more advanced warning of approaching trains this will be a severe constraint to achieving increased running speed of trains, which is currently only at some 5–10 km/h. At the more minor road crossings there are only the advanced and localised road signs because these tracks are beyond the coverage of the track circuits and interlocking system. None of the road crossings feature any kind of barrier protection.

The signalling of the line and control of motorised turnouts is effected from the control tower in the Draugyste Station. The limit of coverage of the track circuits and interlockings from Draugyste control tower ends at the Southern entrance of the Smelte facility (now no longer used) where the interlocked tracks are protected from accidental movements from the non-interlocked tracks by a set of catch points.

In front of the BEGA facility there is a 600 metre long section of double track. The track immediately adjacent to BEGA's facility is in good condition but the track next to the roadway is in a seriously dilapidated condition. The line and level of this track is very erratic and is dangerous to use, even for the running around of locomotives.



Photo I.2.5-7 Double Track in front of BEGA

According to the report titled “Development of Klaipeda Railway Network” prepared by Plam Projectas in 2002, the round trip for delivery/removal of trains by LG takes on average 4 ½ hours and between 3 and 4 trips are being made each day with up to 46 wagons. In its current condition the maximum number of trips that can be made each day are between 5 and 6 trips which will allow for delivery and removal of 270 wagons in each direction.

3) Between Draugyste Station and Perkelos Yard

Perkelos Yard serves the International Ferry Terminal and Container Terminal and is connected to Draugyste Station by two tracks. At the present time, due to low utilisation, only one of the two tracks is being used. This track has been overhauled and has Russian R 65 rail, concrete sleepers, and is laid on crushed rock ballast. Its line and level condition is quite good. The track which is not being used has R 50 rail, wooden sleepers, and is ballasted on sand. Its line and level condition is not so bad and services could be resumed on this track without any major work being necessary. Perkelos Yard is connected by four tracks to the Ro/Ro Ferry Terminal Facility.

Control of turnouts and signals for trains coming from Draugyste Station is made from the Draugyste Station control tower. The limit of the control from Draugyste is as far as the entrance of Perkelos Yard. Perkelos Yard and the International Ferry Terminal are controlled from the Ferry Terminal control tower by LG staff using a control panel facility. The control panel and associated equipment is identical to that seen elsewhere in the area and described earlier. The facility is approximately 14 years old and used to be operated on a 24 hour per day basis; as current utilisation is low this has been revised to only operate between 7 am and 7 pm, although currently additional operators are being trained by LG with a view to restoring 24 hour operations in the future. The general condition of line is quite reasonable.

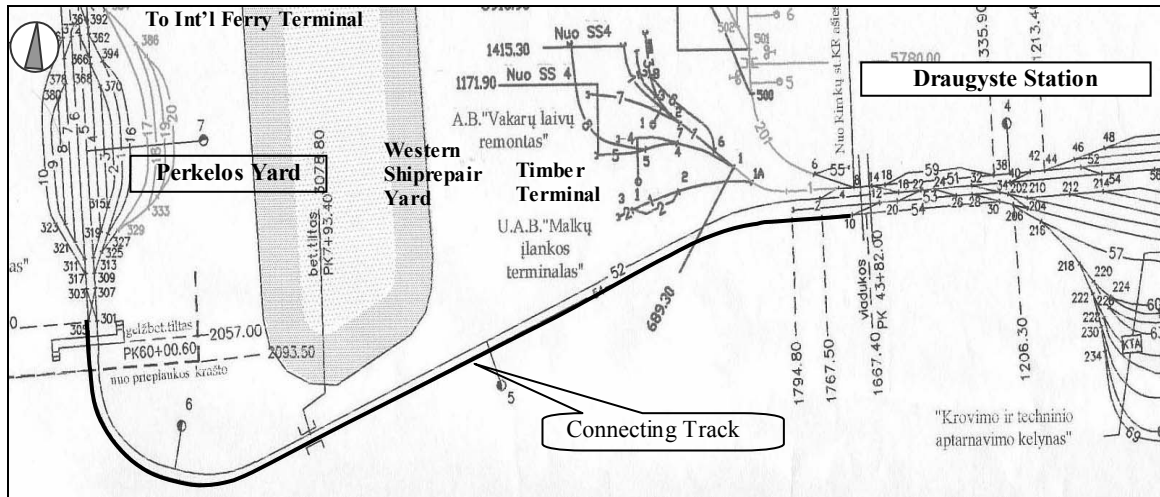


Figure I.2.5-12 Layout of Connection to Perkėlos Yard



**Photo I.2.5-8 Access Lines to Perkėlos Yard, Timber Terminal and BEGA
(view from Draugystė Station)**

2.5.3 Railway Operations in Port Terminals

(1) Klaipėdos Nafta

There are 4 main tracks and a small spur line located in Klaipėdos Nafta, which is connected with Pauocio Yard by two tracks and wagons moved by Klaipėda Station locomotives. Heavy oil products are handled on 2 tracks and the other 2 tracks are for light oil products. The capacity is 32 wagons for Heavy Oil products and 30 wagons for light oil products per track. We are told that the discharging time for heavy oil products is 2 to 3 hours in summer and 6 to 8 hours in the winter due to the increased viscosity and need to heat it. The equipment for discharging light oil products, heavy oil products, heating facilities, and pipelines are well maintained. There are offloading stations for 124 wagons to be discharged simultaneously. Approximately 10,000 tank wagons, which equates to 570,000 tons, are being discharged per month. The track is owned by KSSA and maintained by Klaipėdos Nafta.

(2) KLASCO

From Angline and Uosto Yard, wagons are distributed to 17 loading/unloading tracks, on which 520 wagons can be held at the same time. Forklifts fitted with a modified faceplate are used to shunt the wagons on the loading/unloading tracks, which are embedded in concrete slab.

Six loading/unloading tracks parallel to the berth are mainly used for unloading ferro-alloys, steel products and loading fertilizers and raw material for fertilizers. Cranes and forklifts are used to load and unload to and from the warehouse or open storage areas. The tracks located next to the berth are mainly for trans-shipping commodities to and from vessels. The tracks located in the southern area are used for handling some frozen products from a cold storage facility next to the track. The other loading/unloading tracks located in the southern area are used for handling fertilizer and its raw material which are being loaded and unloaded using cranes. Two tracks next to the Uosto Yard are for loading foodstuffs from the warehouse. There are two new tracks for hopper wagons to unload grain via a bottom discharge facility with a system of belt conveyers into a silo. One of the storage tracks has facilities for discharging liquid fertilizer from tank wagons to the dome warehouse. Discharging at this facility can be done from 14 wagons at one time. The tracks in their territory are owned and maintained by LG, with the exception of 6 tracks that have been added by KLASCO themselves.

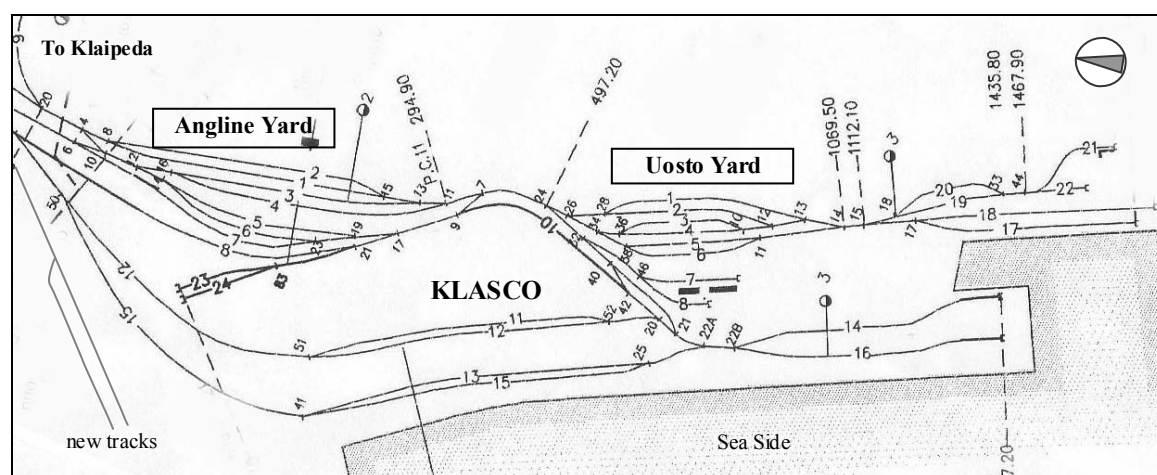


Figure I.2.5-13 Track Layout of KLASCO

(3) Klaipeda Ship Repair Yard

The company is located 9.1 km from the Draugyste Station, to the south of the River Dane. The total length of track is 1.1 km. Mainly metal, metal products, and paint products are brought to the company. LG locomotives bring wagons into BEGA territory and from there BEGA locomotives bring wagons into this yard. These movements have to take place by passing through the Baltija Territory. It is possible to place 7 wagons for unloading commodities for one service and it takes approximately one hour for each wagon to be offloaded using one portal crane. The condition of track and facilities are not well maintained. The tracks in the yard are owned and maintained by KSSA.

(4) Baltija Shipbuilding Yard

The company is located 8.4 km from Draugyste Station next to the Klaipeda Ship Repair Yard. The total length of this track is 2.6 km. Mainly metal and metal products are brought to the company. LG locomotives bring wagons into BEGA territory and from there BEGA locomotives bring wagons into this yard. They can reload the metal and metal products to the warehouse at the approximate rate of 400 tons per day, i.e., 6 wagons can be handled. The condition of the track and facilities are good enough at present. The track is owned and maintained by KSSA.

(5) BEGA

The company is located 7.0 km from the Draugyste Station and its territory from south to north is 1.1 km long. The company owns 7 locomotives and the total length of track is 13 km; up to 400 wagons can be accommodated and handled simultaneously. There are 4 storage tracks and the rest of them are loading/unloading tracks. Wagons are brought by Draugyste Station locomotives to BEGA's territory and 46 wagons can be brought at one time. Wagons are distributed to their loading or unloading position by BEGA's own locomotives. Liquid and bulk fertilizer, grain, seed, cement, and timber are the main export commodities and phosphate and raw sugar are the main import commodities.

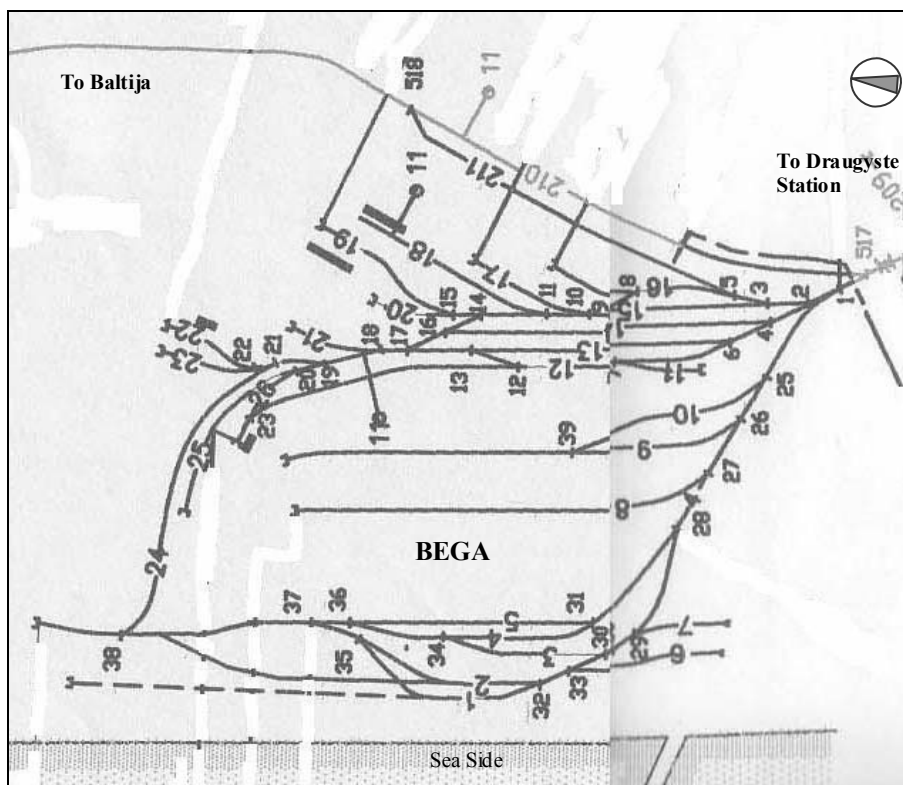


Figure I.2.5-14 Layout of BEGA

The track located in the middle of their territory having 4 hopper wagons to unload grain with a bottom discharge facility. It has a sophisticated system of belt conveyers which can be directed to deliver from wagons directly to vessels or into storage and also can transfer between one storage facility and another. It takes about 20 minutes to discharge four loaded hopper wagons simultaneously. There is also a discharging facility for 10 tank wagons equipped with heating equipment for this track. It was originally built to handle molasses tankers but has recently only been used for heating liquid fertilizer tanks which, after heating, are removed and discharged at the liquid fertilizer offloading terminal. The heating time for molasses is 5 hours with a further 2–3 hours required for discharge.



Photo I.2.5-9 Bottom Discharge Facility at Track No. 12

The track located near the storage tracks has a loading/unloading facility for 1 wagon, mainly for grain, where it takes 30 minutes to unload and 45 minutes to load.

The tracks located at the northern end parallel to the berth have another hopper wagon unloading facility for grain with a bottom discharging facility. It takes about 15 minutes to discharge one wagon and this can be loaded directly to vessels. There is a liquid fertilizer discharging facility at the southern end of this track equipped to handle 5 tank wagons at the same time and taking 1 hour to discharge. The other track has a facility for simultaneous unloading of fertilizer from 2 hopper wagons with a bottom discharge facility. It takes 20 minutes to discharge 2 wagons of fertilizer here.

There is one loading facility for 2 hopper wagons from storage or vessel directly by using grab crane on tracks parallel to the berth, mainly used for loading phosphate. It takes 20 minutes to load each wagon and 2 wagons can be loaded at the same time. This hopper has a built in weighing mechanism but it is not sufficiently accurate for control purposes and loaded wagons still must pass over the weighbridge to be checked. In this loading operation approximately 75% of cargo is loaded directly from the vessel to wagons and 25% goes to storage.

There is another bottom discharge unloading station for fertilizer to small vessels where wagons have to be unloaded from each of the bottom doors separately, requiring about 1.5 hours per wagon. This facility is not used very much. The condition of track and facilities are good enough for the present time. The tracks in their territory are owned and maintained by KSSA, with the exception of 3 km of track which has been added by BEGA themselves.

(6) Transfosa

The company is located in territory that is bordered by Varnenai Street to the north and Smelte Company to the south. There is only one track with a length of 60 m. It has discharging facilities for 2 wagons for molasses and 2 wagons for diesel oil at one time. The total volume handled is only 1,500 tons per month. LG locomotives bring wagons into this territory. The track is owned and maintained by KSSA.



Photo I.2.5-10 Discharge Facility at Transfosa

(7) Smelte

The company is located about 6.2 km from the Draugyste Station. The total length of track in this territory is 7.2 km where up to 150 wagons can be accommodated and handled simultaneously. There are two entrances from the access line, but at present, they are using the North entrance only. The company owns 4 locomotives for distributing of wagons inside which are brought to their territory by Draugyste Station Locomotives.

The territory is divided into 2 parts. The lower part consists of 2 tracks with portal cranes and a warehouse for fertilizer and its raw materials, grain, scrap and timber. There is a facility for unloading grain with a capacity of 3,000 tons per 24 hours. It takes 20 minutes for unloading one hopper wagon. At the south area of this part there is a similar facility with the capacity of 750 tons per hour for unloading hopper wagons. The upper part consists of approach and loading/unloading tracks for cold storage, warehousing and some trans-shipping work for scrap metals are performed. There is a facility for unloading grains with a capacity of 4,000 tons per 24 hours. The condition of track and facilities are good enough for the moment. The tracks in their territory are owned and maintained by KSSA.

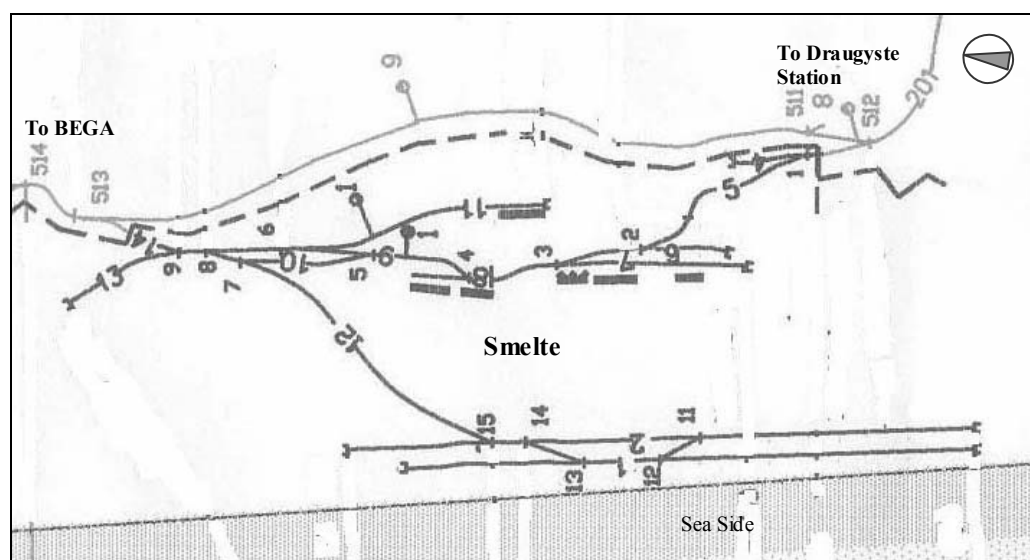


Figure I.2.5-15 Layout of Smelte

(8) Progresas

The Progressas have five tracks but do not use any of these themselves. Wagons come to one of the Progressas tenants for sawn wood and to Smelte tenants for offloading scrap metal. None of the other tracks are being used at present and overall rail usage for this facility disrupts rail traffic on the access line and road traffic on Senoji Smilteles street due to the requirement to shunt in and out of the facility several times, taking place across the road junction each time.

(9) Klaipedos Terminalas

This terminal is located 2.5 km from the Draugyste Station. LG locomotives bring wagons into the territory from the Draugyste Station at night. Inside the territory, Klaipedos Terminalas moves wagons by truck and rope. There are 2 tracks with a total length of 405 m. It is possible to place 27 wagons inside the territory. If wagons extend beyond the entrance gate, a maximum of 35 wagons can be brought, but the method of handling inside the territory limits the practicable maximum size of trains to around 20 wagons.

There is a roughly equal split between import and export involving railway transportation but this is highly variable. The normal average is reported to be in the order of 300 – 330 per month, the record achieved was 470 wagons in one month. The condition of track and facilities are good enough at present. The track is owned by KSSA and maintained by Klaipeda Terminalas.

(10) Western Ship Repair Yard

This yard is located 2.5 km from the Draugyste Station. The complex has 2 approach tracks with a northern gate servicing the main complex and a southern gate serving to offload scrap. There are 8 tracks with a total length of 4 km. There are plans by KSSA to extend the tracks by 1 km in order to serve a new metal treatment facility. It is possible to place and unload 83 wagons within the territory at various offloading points. LG locomotives bring wagons into this territory from the Draugyste Station.

Rail traffic fluctuates significantly, ranging from nothing for a whole week to 2 – 3 trains per day. The overall average is for 150 wagons per month. Rails are Russian R50 with concrete sleepers and are ballasted on sand. The condition of tracks and facilities are satisfactory for current traffic volumes. The track is owned by KSSA and maintained by Western Ship Repair Yard.

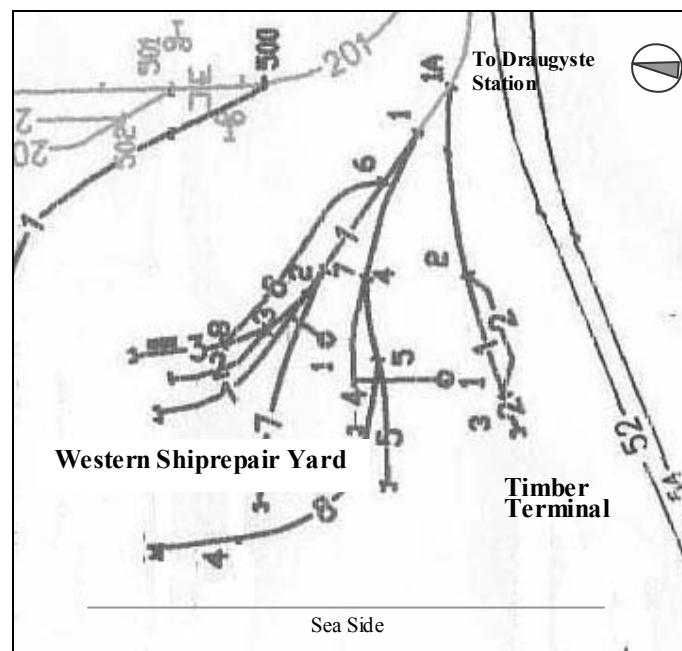


Figure I.2.5-16 Layout of Western Ship Repair Yard

(11) Timber Handling Terminal

This terminal is located 2.0 km from the Draugyste Station and is the only terminal operator specialising in a single commodity. There are 2 tracks with a total length of approximately 200 m inside the present boundary gate but the territory extends well beyond this. It is possible to place and unload 10 wagons at one time, but using the territory beyond the gates 44 wagons can be received. LG locomotives bring wagons into the Timber Terminal from the Draugyste Station. The terminal is handling 50,000 cubic metres of pulpwood per month, 20% of which is coming by rail from Byelorussia and the rest by road. It takes 20 minutes to offload each wagon using a mobile grab. Wood is offloaded directly to storage. About a further 20 minutes is required for cleaning the wagons after offloading before they can be released to LG. Rails are Russian R50 on concrete sleepers with Vossloh type fasteners and are ballasted on sand. The condition of the track and facilities are good enough at present. The track is owned and maintained by KSSA.

(12) KLASCO Container Terminal

This terminal is located in the east side of the Perkelos Yard, 3.5km from the Draugyste Station. There are 4 tracks in the loading area but only two of these can be reached by the loading equipment. It is possible to place 88 wagons on these tracks but only 40 wagons can be offloaded. It takes 20 minutes per wagon to offload pulpwood, which is being processed at a rate of 150 wagons per month. General cargo takes approximately 1 hour per wagon to offload. This terminal trans-shipped 800,000 tons, equating to 40 wagons per day, in the year 2000. LG locomotives bring wagons into their tracks from the Draugyste Station. The condition of tracks and facilities are good enough at present. The track is owned and maintained by LG.



Photo I.2.5-11 Container Terminal Yard

(13) KLASCO International Ferry Terminal

This terminal is located on the north side of the Perkela Yard, 4.0 km from the Draugyste Station. There are 4 railway lines from the Perkela Yard to the terminal, which has four specialized berths for simultaneous multiple track loading and unloading of wagons.



Photo I.2.5-12 International Ferry Terminal

Two berths are located on the upper level and the rest are on the lower level and each berth has 5 tracks to enter the Ro/Ro ferry. It is only possible to load either the main deck or the upper deck of vessels at any one time; it is not possible to load or offload both levels together. Vessels have the capability to accept 104 wagons when fully loaded. From January to the end of June 2003, there have been a total of 2201 wagons representing 87,312 tons handled, and in June itself there were 257 wagons and 10,371 tons respectively. The peak season is the 3 months from May to July. Currently only one vessel is deployed making 3 – 5 trips each week as Ro/Ro traffic volumes are very low at present. The condition of track and facilities are good enough at present. The track is owned and maintained by LG.

2.5.4 Assessment of Existing Rail Capacity

The rail freight transport in the Klaipeda area is handled at the Klaipeda Station in north zone and the Draugyste Station in the south zone. The freight is transported using the respective access lines of each terminal. Therefore, for calculation of traffic volume and capacity we refer to the number of wagons based on the circumstances of the access line and handling commodities of each terminal (see Figure I.2.5-17).

(1) Main Conditions and Calculation Method

- Facilities and equipment for loading or unloading capability are based on present condition.
- The main freight commodities and volume handled annually for each terminal are based on the data collected at the port and the results of demand forecast.
- Conversion the annual handling volume into the number of wagons is based on the average tonnage of that commodity carried in each wagon.
- Calculation of the number of wagons handled per day for each loading or unloading track is based on the working and transfer time.
- Calculate and check whether freight handling is possible for the whole network considering the number and length of tracks in the yard and transfer capacity of the access line.

(2) Capacity of North Zone

Klaipeda Nafta

Approximately 5.9 million tonnes are being handled annually, which is about 350 wagons per day. If there is no modification to the equipment or scale of the present conditions, the maximum capacity of the terminal is estimated to be 10 million tonnes, which equates to about 630 wagons per day. The connecting track capacity between Klaipeda Nafta and Pauoscio Yard is 970 wagons per day. This is enough to handle the maximum volume at Klaipeda Nafta. The present handling volume is about 56% of the maximum capacity.

KLASCO

Approximately 4.8 million tonnes are being handled annually, which is about 300 wagons per day. The maximum handling volume at KLASCO is limited by the condition of the access line and holding wagon capacity with effective length of track in the Angline and Uosto Yard. In their present condition, the capacity of the terminal would be 8.2 million tonnes, which is about 490 wagons per day. Lithuanian Railways have planned the rehabilitation of the access line, and if this is completed, it could handle 9.3 million tonnes, or about 550 wagons per day. The present handling volume is about 52% of the maximum capacity.

(3) Capacity of South Zone

BEGA

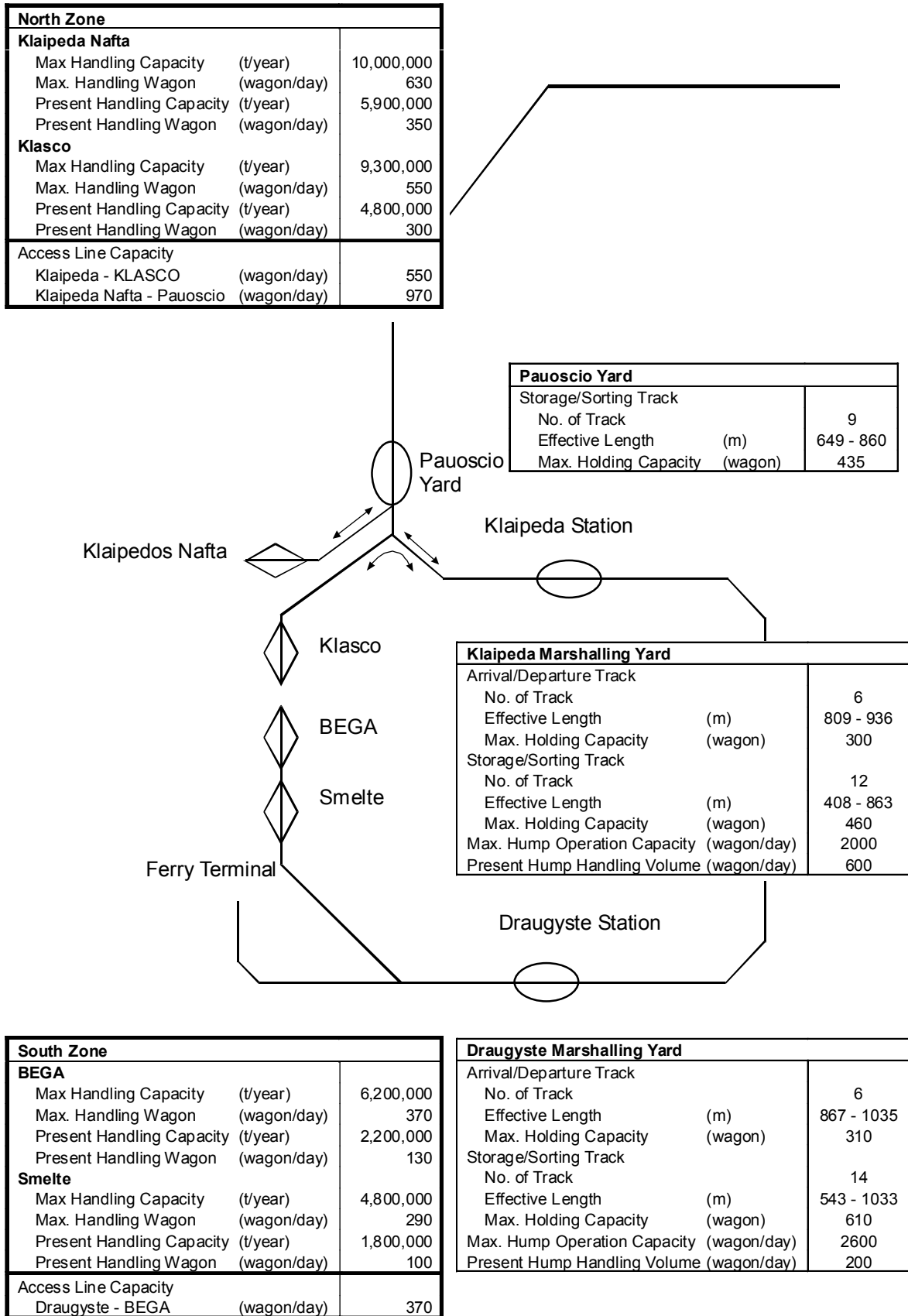
Approximately 2.2 million tonnes are being handled annually, which is about 130 wagons per day. The maximum capacity of the terminal is 6.2 million tonnes which is about 370 wagons per day. Track layout and handling facility in the terminal are currently under reconstruction. When completed, it is expected that the maximum handling volume will increase. The maximum handling volume and number of freight wagons is influenced greatly by the type of commodity and handling time. Thus, the capacity will depend on the development of the terminal and the growth rate of each commodity in future. The present handling volume is about 36% of the maximum capacity.

Smelte

Approximately 1.8 million tonnes are being handled annually, which is about 100 wagons per day. The capacity of the terminal is 4.8 million tonnes, or about 290 wagons per day. Smelte plans to reconstruct the track layout and handling facility, and the maximum handling volume is expected to increase. The present handling volume is about 38% of maximum capacity.

Access Line

The maximum transport capacity of the access line between Draugyste Station and BEGA via Smelte is 370 wagons per day. The present rate of use is very high i.e., 62% of maximum capacity.



Source: Estimate by the JICA Study Team

Figure I.2.5-17 Existing and Maximum Rail Capacity

2.6 Road Access to Klaipeda Port

2.6.1 General

There are three major roads connecting to Klaipeda, one each from the north, south and east. The most important road is the highway called route E85 (A1), which extends to the Vilnius region as dual carriageway. The other two roads called route E272 (A13) from Palanga and route 141 from Silute are also main roads to Klaipeda.

The main access route to the Port is from Vilniaus Street to Minijos Street via Baltijos Street or Silutes Plentas Street. Lorries are not permitted to pass along Taikos Street or into the urban area of Klaipeda City. One traffic regulation, as advised to us by an inspector at the Traffic Police Office, is that it is necessary to get permission from the Transport Inspectorate if the trailer length exceeds 18.75 m or weight exceeds 40 t. There is no time zone restriction for lorries to access the Port in the Klaipeda area. The location Map is shown in Figure I.2.6-1.



Photo I.2.6-1 Highway Route E 85 (A1)

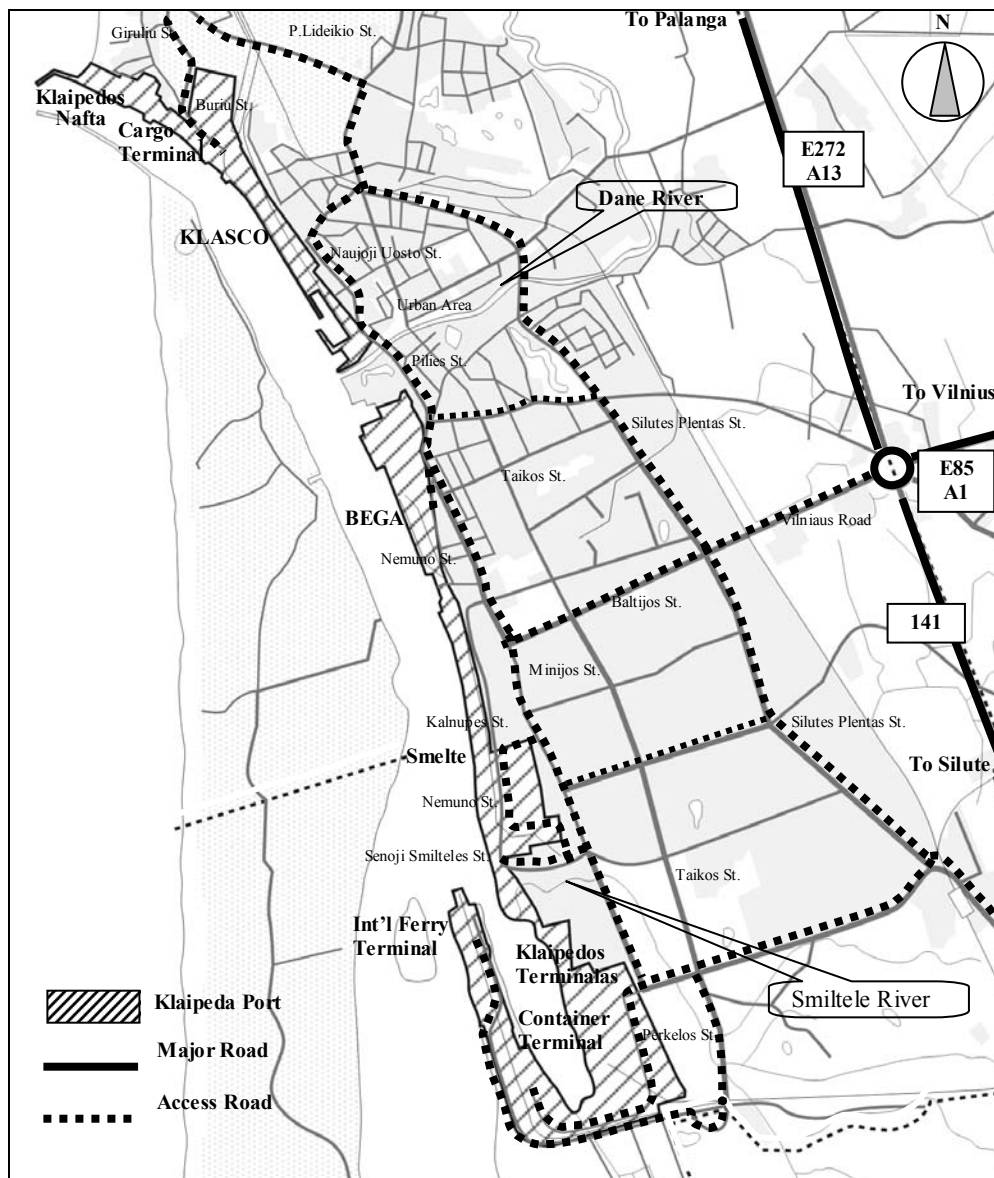


Figure I.2.6-1 Road Network in Klaipeda

2.6.2 Present Access Road to the Terminals

(1) Entrance Gate of Terminals

The terminals located in the area north of the Dane River, such as Klasco and Laivite, have entrances directly from Naujoji Uosto Street. Klaipeda Nafta and Cargo Terminal have access roads from the north part of Klaipeda. The terminals located between the Dane River and the Smeltale River, such as Klaipeda Ship Repair Yard and Baltija have their entrances directly from Pilies Street and Minijos Street respectively. BEGA and Smelte have an access road to the Port from Minijos Street named Nemuno Street. Terminals located at the southern area of the Smeltale River have an access road named Perkeros Street. Locations of each company's entrance for lorries are shown in Figure I.2.6-2 and Table I.2.6-1.

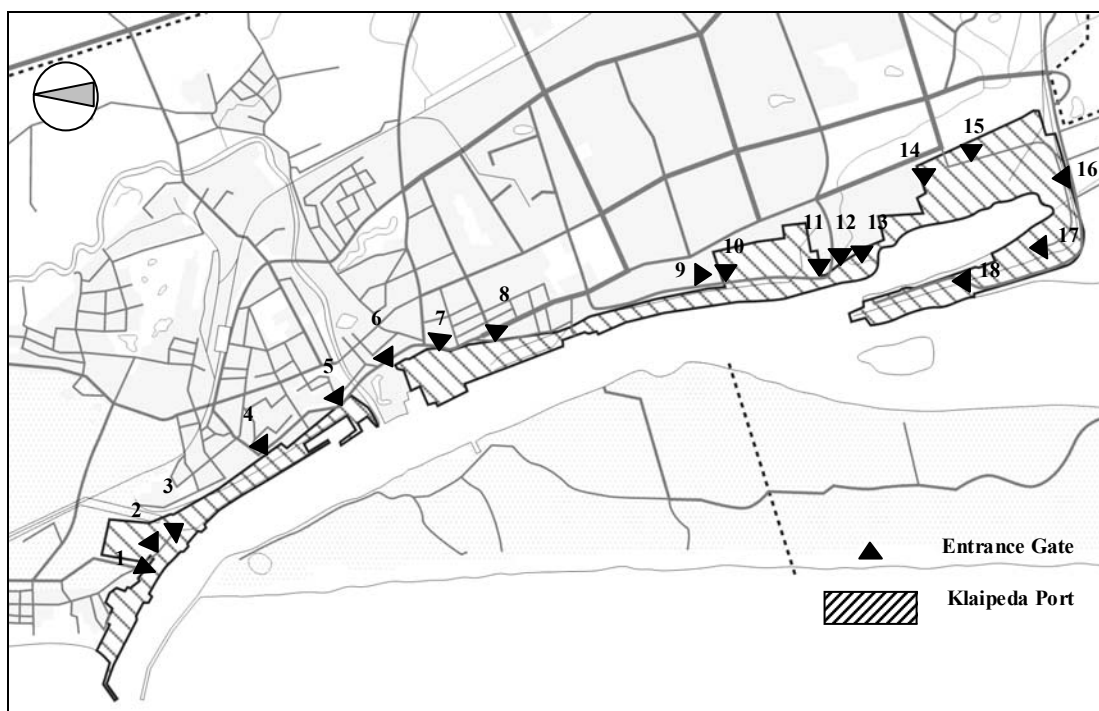


Figure I.2.6-2 Location of Entrance Gate

Table I.2.6-1 Gate No. with Company Name

No.	Company Name	Connection Street
1	Klaipedos Nafta	Buriu Street
2	Cargo Terminal	Buriu Street
3	KLASCO (2nd Gate)	Buriu Street
4	KLASCO (Main Gate)	Naujoji Uosto Street
5	Laivite	Naujoji Uosto Street
6	Klaipeda Ship Repair Yard	Pilies Street
7	Baltija	Minijos Street
8	BEGA	Minijos-Nemuno Street
9	Progresas	Minijos-Kalnupes Street
10	Smelte	Minijos-Kalnupes-Nemuno Street
11	Senoji Baltija	Minijos-Senoji Smilteles Street
12	Klaipedos Hidrotechnika	Minijos-Senoji Smilteles Street
13	Peat Cargo	Minijos-Senoji Smilteles Street
14	Klaipedos Terminalas	Perkelos Street
15	Western Shiprepair Yard	Perkelos Street
16	Timber Terminal	Perkelos Street
17	KLASCO Container Terminal	Perkelos Street
18	KLASCO Int'l Ferry Terminal	Perkelos Street

(2) Buriu Street

Buriu Street is a connecting road from the main street named P.Lideikio through Giruliu Street and is located in the northern part of the Port. Entrances to Klaipeda Nafta, Cargo Terminal and second gate for KLASCO are located along Buriu street. The main function of Giruliu and Buriu streets are as access roads to the above

terminals; therefore there are few houses along these streets. The terminal gates are small as their is little traffic to their territories. The condition and safety of these roads seems good enough for the present volume of lorry traffic.



Photo I.2.6-2 Buriu Street in front of Klaipeda Nafta

(3) Naujoji Uosto Street

Naujoji Uosto Street is a four-lane road and is one of the main streets to the northern part of Klaipeda City along the Port. KLASCO and Laivite each have an entrance gate for lorries from this street. There is a traffic light in front of the KLASCO gate, which is a two-lane entrance because of the heavy traffic coming by road. Laivite has no traffic light at present and only a narrow gate, but they are planning to construct a new improved entrance gate in the near future. It is necessary to have safety facilities such as a traffic light if their gates are facing to the main street.



Photo I.2.6-3 Naujoji Uosto Street in front of KLASCO

(4) Pilies Street

Pilies Street starts from the Dane River to the south and is also one of the main streets connecting Naujoji Uosto and Minijos streets. Klaipeda Ship Repair Yard has an entrance gate from this street. The road seems to have been repaired in front of this intersection, where the street has three lanes in each direction and traffic lights.



Photo I.2.6-4 Pilies Street in front of Klaipeda Ship Repair Yard

(5) Minijos Street

Minijos Street is running from just outside the Klaipeda urban area to the southern end of the Klaipeda region. Nearly half of the Port terminal entrance gates are through the this street as shown in Table I.2.6-1. Minijos Street is six-lane along its northern section and four-lane along its southern section. The road is well maintained but some intersections need traffic light facilities because of increasing traffic volumes.



Photo I.2.6-5 Minijos Street with Six-lane

The entrance gate of BEGA is located on the northern part of Minijos Street through Nemuno Street. The gate is in good condition and well equipped at the entrance except there is no barrier protection against the railway running in front of the gate.

The entrance gates of Progresas and Smelte are located in the middle section of Minijos Street through Kalnupes and Nemuno streets. Kalnupes Street is wide and in good condition with a central reservation but is necessary to have a traffic light at the intersection with Minijos Street because many lorries and other vehicles are turning at this intersection. Smelte also has no barrier protection against the railway running in front of its gate.

The entrance gates to Senoji Baltija, Klaipedos Hidrotechnika and Peat Cargo are located on the southern part of Smelte from the Minijos street through Senoji Smilteles Street.

There are railway crossings on this street without barrier protection. It is reported that there are four railway crossings near this street without barrier protection and an average of three to four accidents occur each year. The road and bridge in front of Peat Cargo have been improved, but it is more important to improve the access road to their entrance.



Photo I.2.6-6 Senoji Smilteles Street

(6) Perkelos Street

Perkelos Street is located at the southern end of Klaipeda City, extending from the Minijos Street to the International Ferry Terminal. Klaipedos Terminalas, Western Shiprepair Yard, Timber Terminal, Container Terminal and International Ferry Terminal are located on this street. There are no residential areas along Perkelos street. The road is in good condition, but it would be better if barrier protection was provided at the railway crossings as mentioned above.

2.6.3 North Access Road to Port

Construction of a new north access road connecting route E272 (A13) through Liepu Street to P. Lideikio Street is planned. At present P. Lideikio Street ends at the junction of Kretingos Street, but the work to extend Liepu Street is scheduled to begin this year by Klaipeda City cofinanced from the national budget. After the completion of the North Access Road, the northern part of Klaipeda Port will be connected with the European principal roads network by four-lanes except for Liepu Street, which has only two-lanes and is sub-standard as a principal road. It is necessary to expand this street into four-lanes to meet the future traffic demand of public and port-related traffic. The location of the northern access route to the Port is shown in Figure I.2.6-3

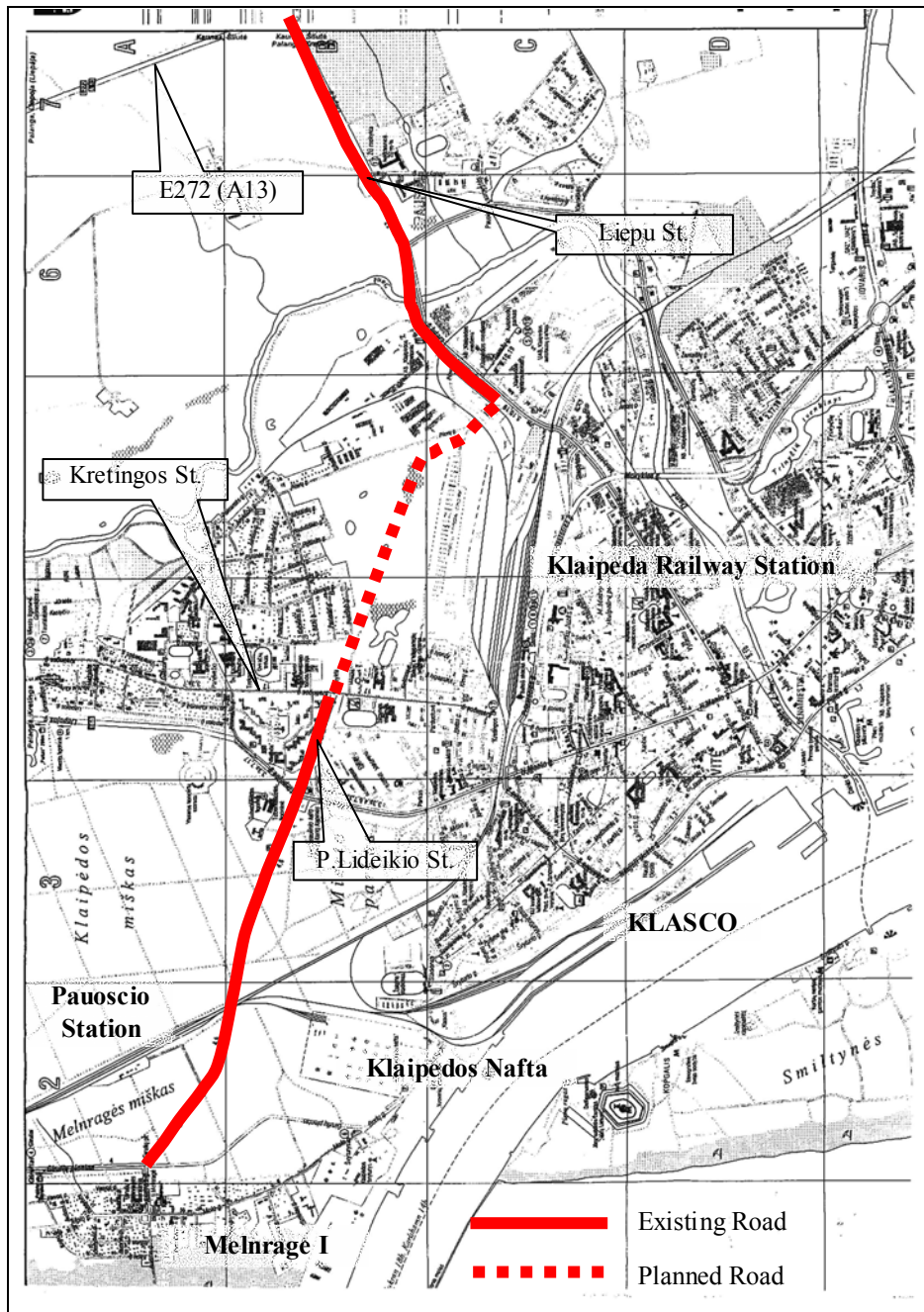


Figure I.2.6-3 Location Map of North Access Road

