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# zeebrugge port information handbook



## zeebrugge port information handbook

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## President's Introduction

Zeebrugge is in full development.

The port has acquired world reknown mainly for unit loads: for the handling of container and ro/ro-vessels, both for services to Great Britain and Scandinavia and for intercontinental services.

Today, Zeebrugge is one of the most important ports in Europe for general cargo. In other fields too, the port's activities are considerable.

These results were achieved, thanks to its seaboard location and modern equipment, and particularly to the dedication of the labour force and the reliability of the port services.

But Zeebrugge also is one of the great building sites of Europe.

The year 1983 will be a milestone in its history: a new sealock will give access to a new inner port.

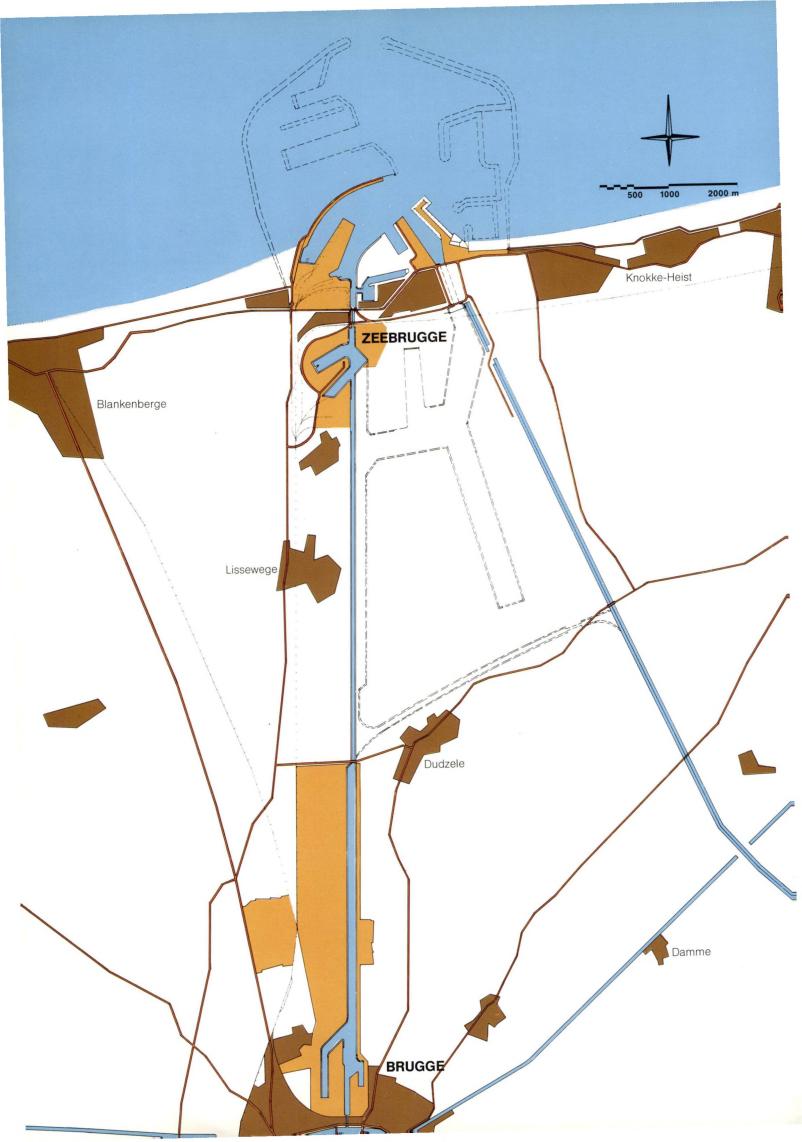
In addition, the new outer harbour will become operational in 1986. In this way the country will add a new dimension to its port infrastructure and so safeguard its future role in maritime traffic.

This publication intends to provide precise information to port users and potential customers. At the same time, it is an invitation to get acquainted more closely with this working community.

For a port is not only an area where commodities are handled; it is also a place where people meet, work together, learn to know and to appreciate each other.

OF

Fernand Traen
President.



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## Historical Synopsis

| 1877 | November                                 | "Over eene rechtstreeksche verbinding van Brugge met de zee" (On a direct link of Bruges with the sea) published by Baron A. De Maere-Limnander.  |  |
|------|--|---|--|
| 1891 | March 25                                 | Installation of the "Commission mixte de Bruges Port de Mer" (Mixed Committee Bruges-Seaport), which on   |  |
|      | September 20                             | invites designs for the construction of a seaport at Bruges with an outlet to the sea via Heist.  |  |
| 1892 | March 31<br>November 24                  | Opening of the entries.  Approval of the design introduced by Messr. Coiseau and Cousin.  |  |
| 1894 | June 1                                   | Convention concluded between the Belgian Government, the City of Bruges and Messrs. Coiseau and Cousin for the construction of the harbour complex along the lines of their approved project. |  |
| 1895 | August 23<br>September 6<br>September 13 | Approval by the Chamber of Representatives and by the Senate, of the above mentioned convention. Publication in the Official Gazette of the law concerning approval of the convention.        |  |
|      | November 25                              | Foundation of the "Compagnie des Installations Maritimes de Bruges" (now: "Maatschappij van de Brugse Zeevaartinrichtingen", or in short M.B.Z.) the Bruges Port Authority.                   |  |
| 1907 | July 23                                  | Official inauguration of the harbour complex by His Majesty King Leopold II.  |  |
| 1924 | April 23/24                              | Establishment of the "Société Belgo-Anglaise des Ferry-Boats" (Anglo-Bel Company of Ferry-Boats) and inauguration of the first trainferry service between Zeebrugge and Harwich.              |  |
| 1953 |  | Opening of the trainferry terminal in the outer port.   |  |
| 1962 |  | Call of the first Sinclair tanker and inauguration of the Prince Philip Dock.   |  |
| 1966 | March 16                                 | Start of the first carferry service between Zeebrugge and Dover.  |  |
| 1968 | March 19                                 | Call of the first container vessel on the Zeebrugge-Harwich run.  |  |
|      | May 9                                    | Call of the first VLCC for Texaco Oil Company.  |  |
|      | June 21                                  | Official inauguration of the Short-Sea Container Terminal.  |  |
| 1970 |  | Government decision in favour of the extension of the port of Zeebrugge.  |  |
| 1971 | June 10                                  | Official inauguration of the "Ocean Containerterminal Zeebrugge".   |  |
| 1972 | March 1                                  | Start of the construction of the new sealock.   |  |
| 1976 | September                                | Approval by the Government of the framework contract for the construction of the outer port.  |  |
| 1980 | August 9                                 | Government decision on the final dimensions of the new outer port.  |  |

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## Management and Operation

3.1 Legal basis 3.2 Structure of M.B.Z.

The Port of Brugge-Zeebrugge is managed and operated by the "Maatschappij van de Brugse Zeevaartinrichtingen" (M.B.Z.), under a joint concession from the Belgian State and the City of Bruges.

The M.B.Z., founded on November 25, 1895, has the legal status of a "limited company"; but in its quality of "institution of public utility", it is a semi-official body and is placed under the supervision of the Minister of Public Works.

The highest authority is the General Assembly of Shareholders.
The board of Directors counts at least 5 and, at most, 15 members; two of them are appointed directly by the Belgian Government, two other directly by the City of Bruges; the remaining members are appointed by the General Assembly of Shareholders. Directors are appointed for a period of 6 years and are reeligible.

The Board elects a President among its members, who also acts as Deputy-Director.

Control by the Higher Authority is exercised by an Auditor of the Government (Ministry of Public Works) and by a Representative of the Minister of Finance.

The College of auditors is appointed by the General Assembly; its strength is at least 3 and at most 5 members. Daily Management is performed by the President-Deputy-Director in collaboration with the General Manager and the Inspector-General, and assisted by the department heads.

#### 3.3 Organization

### General Assembly of Shareholders (G.A.S.)

#### Board of Directors (B.D.)

2 appointed by the Belgian Government (\*) 2 appointed by the City of Bruges (\*\*) 11 appointed by the G.A.S.

President - Managing Director:

Fernand Traen\*\*

Members:

Albert Claes, Jean Cousin, Johan Demoen\*, Louis Gilles,

Etienne Hurtecant\*\*,

Robert Jonckheere, Jean Leclercq,

Paul Nicod, Hendrik Olivier,

Robert Simoen\*,

Philippe Van den Borre,

Marcel Vandewiele, Olivier Vanneste

**Auditor of the Government** 

Eric Stroobants

Representative of the Minister of Finance

Frans Schenk

**College of Auditors** 

(5 members, appointed by the G.A.S.)

André Goossens, Pieter Leys,

Emile Tytgadt,

Andries Van den Abeele, Johan Van Oostveldt

Revisor

Ernest Couckuyt

Management

General Manager: Inspector-General: Maurice Michiels Jan Eerdekens

**Departments** 

Administration:

Financial Department:

Johan Kimpe, Assistant Adviser

Raymond Valcke,

Administrative Secretary

Commercial Department and

Public Relations:

Harbour Master's Office:

Louis Vande Kerckhove, Adviser

René Van Havere, Senior Harbour Master

Robert Creyne, Harbour Master

Jean Decort, Adviser

Donald Duthieuw, Project-leader

Technical Department:

#### 3.4 Addresses

#### **Head Office:**

Louis Coiseaukaai 2 B-8000 Brugge Tel. 050 - 33.52.24 (6 l.) Tlx. 81.201 porbrg b Telegrams: Ports Brugge B V.A.T. 205.097.392 Register of Commerce: 95 (Brugge)

#### **Harbour Master's Office:**

Carferry Building 301 Doverlaan 7 B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.42.63 050 - 54.41.70 (Port Control) 050 - 54.69.29 (Port Administration) Tlx. 81.205 porzrg b

#### Sealock operations:

Kapitein Fryattstraat 1 B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.40.12

#### Technical department Zeebrugge:

Zeestation: Leopold II-Mole 25 B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.42.64

Mole gate watchmen: Tel. 050 - 54.47.67

Swedish Quay gate watchmen: Tel. 050 - 54.47.67

Slipway, Prince Philip Dock: Tel. 050 - 54.62.64

Bridge "Herdersbrug" at Dudzele: Tel. 050 - 54.47.67

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## **Present Situation**

## 4.1 Geographical position

## 4.2 Maritime access

Zeebrugge lies directly at the Belgian coast of the North Sea, 22.4 km West of the mouth of the Scheldt estuary, 10 km West of the Dutch-Belgian border.

Geographical coordinates (lighthouse Mole): 51°20′N - 03°12′E.

Administratively, Zeebrugge belongs to the City of Bruges.

#### Approach:

starts at A.1 buoy, 14 miles N.W. of the port (co-ordinates: 51°22′30″N, 2° 53′30″E).

Fairways: "Het Scheur" - "Ribzand" - "Wielingen".

#### Access Channel:

"Pas van het Zand", beaconed; 4,600 m long, 500 m wide; depth Z (- 11 m) LLWS over a width of 300 m; direction NW-SE.

#### Tidal currents:

rising tide: direction SW-NE average velocity: 2 knots outgoing tide: direction NE-SW average velocity: 2 knots

#### Tidal discrepancies:

- · mean tide:
- + 4.35 m at HW
- + 0.70 m at LW
- + 4 m from 50 min before HW to 1.20 hr after HW
- + 3 m from 1.40 hr before HW to 2.50 hr after HW
- spring tide:
- + 4.70 m at H.W.
- + 0.40 m at L.W.
- · neap tide:
- + 3.82 m at HW
- + 1.05 m at LW

#### Wireless traffic:

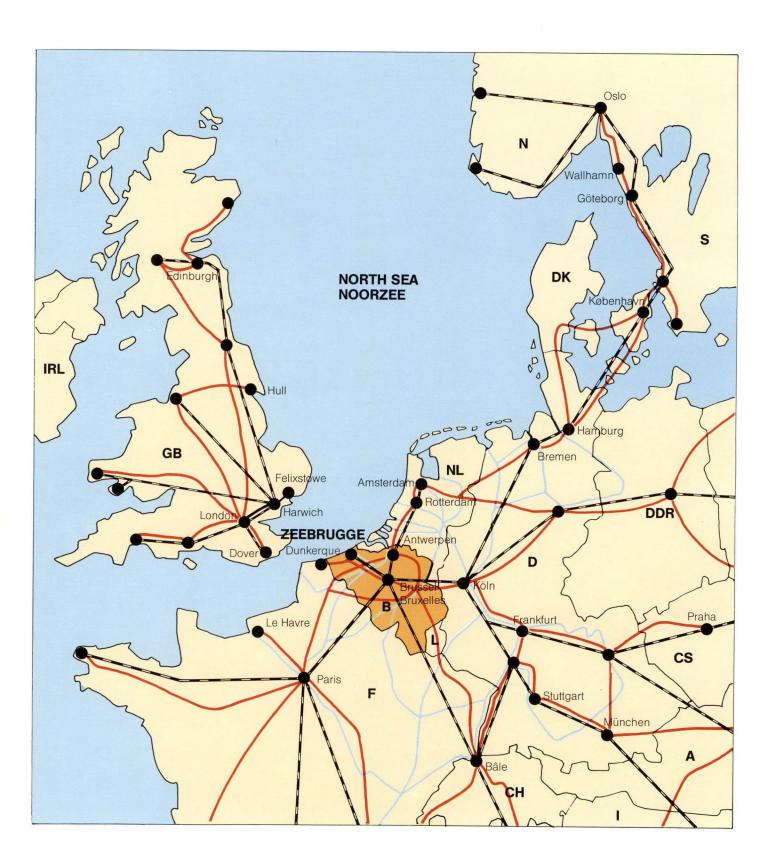
- Ostend Radio for all messages VHF channel 16
- · pilotage:

A1 buoy: VHF channel 6
Port entrance: VHF channel 9
• port control: VHF channel 13

• tugs: VHF channel 13

#### Lighthouses:

- port entrance (top Leopold II-mole): uninterrupted white light; occultation: 15 sec (12 sec light, 3 sec darkness) visible at 25 kms;
- leading lights (indicating channel axis): two superposed fixed white lights, visible at 9.5 kms.



## 4.3 Port subdivision

#### · Semaphore:

|       |   | Entrance prohibited            |          | Departure prohibited                       |                  | All traffic suspended |
|-------|---|--------------------------------|----------|--|------------------|-----------------------|
| Day   | • | sphere<br>cone p. up<br>sphere | <b>*</b> | cone p. down<br>cone p. up<br>cone p. down | $\blacktriangle$ | cone p. up            |
| Night | 0 | red<br>white<br>red            | 0        | green<br>white<br>green                    | 0                | green<br>white<br>red |

#### Pilotage:

- •from Al-light buoy (14 miles NW of the port; co-ordinates: 51°22′30″N, 02°53′30″E) or
- from Zand-1 buoy (entrance "Pas van het Zand")
- applications to pilot station

  "Wandelaar" via Ostend Radio
- "Wandelaar", via Ostend Radio, VHF channel 16
- addresses Pilotage Service:
  Ostend:
  Sir Winston Churchillkaai 2,
  B-8400 Oostende
  Tel. 059 70.77.01/02/03

Zeebrugge: Loodswezenstraat 30 B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.50.72

#### Towage:

- ·from Zand-1 buoy
- permanently available:
- 4 tugs, bollard pull from 1,500 to 4,000 HP (19 to 43 tons); 2 tugs in inner port (bollard pull 400 and 1,000 HP)
- · extra tugs available on request
- applications to U.R.S.
   (address below), via Ostend Radio,
   VHF, channel 13
- Address Towage Service: Unie van Reddings- en Sleepdiensten (U.R.S.) c/o Ruys & Co Leopold II Mole 2 B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.42.60 Tix. 81.332

#### Salvage:

via Ostend Radio, VHF channel 13
operated by U.R.S.
(see Towage, above)

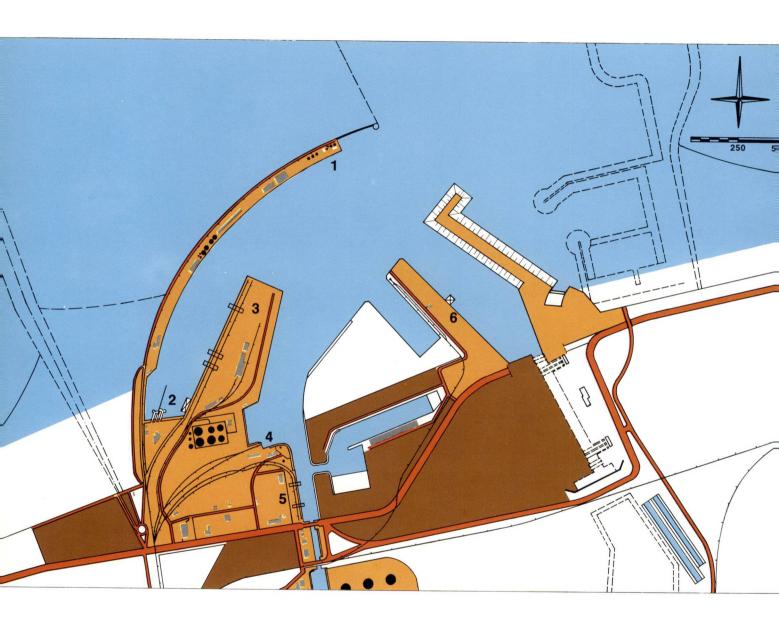
#### Water salinity:

·1,025

The port installations of Brugge-Zeebrugge cover a total net area of 582.5 ha

#### The three main port areas are:

- the outer port at Zeebrugge, 120 ha
- · the inner port at Zeebrugge
- + the sea canal (Baudouin canal) from the sea lock up to the "Herdersbrug" (road bridge) at Dudzele, 142.5 ha
- the Baudouin canal (from the "Herdersbrug" at Dudzele to the lock at Bruges) and the inner port at Bruges (comprising the new industrial area "Herdersbrug"), 320 ha.



#### 44 The outer port at Zeebrugge

(See map, page 12)

#### 1 The Harbour Mole or Leopold II-mole, area 11 ha.

The outer port and the roadstead are protected by a concrete massive breakwater, with a quarter circle shape.

Total length:

2.487 m, of which 1,571 m of quayage, fronting the roadstead.

width: 74 m

Subdivision and equipment of the Mole

#### Other installations:

Bunkering station: 5 tanks, total capacity 20,450 m<sup>3</sup> (bunkering from lighter, however, is possible on all quays). (see 6.9.1)

Gasfreeing station: (near bunkering station); capacity 4,000 m<sup>3</sup> in gaseous nitrogen (see 6.9.2)

#### Maritime station:

- · equipped for the embarkation and disembarkation of cruise-ship passengers (hall, banking services, refreshment rooms, etc.);
- · restaurant (capacity: two rooms with approx. 100 persons each)

Tank storage for molasses: 10 tanks with a total capacity of 87,350 tons

#### Berths for tugs:

4 berths for tugs in stand-by at quays nrs 9 and 10.

#### Area:

3.5 ha (for extension, see 8.2.3) Quays 10, 11, 12: 2 public ro/ro berths Quay 13: 1 private berth Technical description: see 6.2.1.

### The carferry terminal

## The Western Peninsula

Area: 18 ha Total quay length: 1,615 m, of which 1,525 m with a water depth of Z (-13 m) LLWS; quay height 8 m above LLWS West quay: quay n° 13: 90 m of connecting quays quay n° 14, 15: 715 m for Ocean Containerterminal Zeebrugge North quay: quay n° 16: 205 m for OCZ and waiting quay East quay: quay n° 17, 18, 18a: 595 m; terminals for the discharge of crude oil and refined products.

#### Quays

| Number                         | Length         | Water depth              |  |
|--------------------------------|----------------|--------------------------|--|
| 1, 2, 3<br>3, 5, 6<br>(partly) | 450 m<br>375 m | 10.50 m LLWS<br>9 m LLWS |  |
| 6 (partly)<br>7, 8, 9          | 746 m          | 7.20 m LLWS              |  |

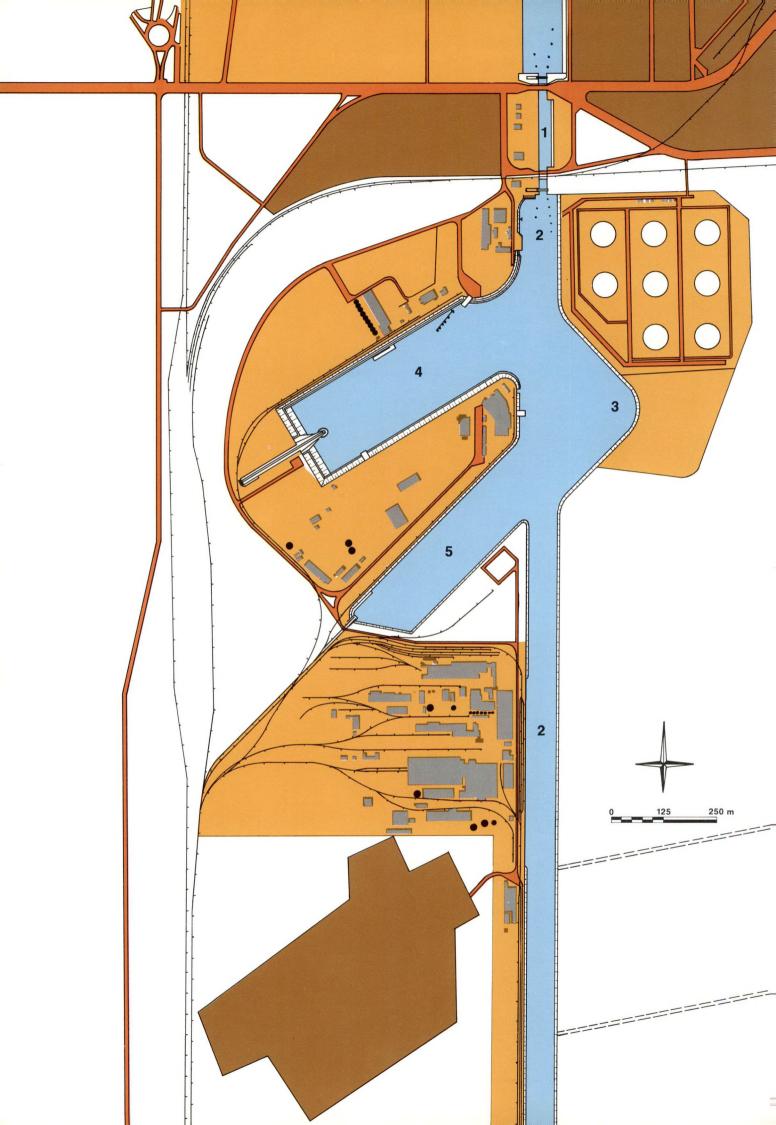
#### Cranes: 13 electric travelling cranes

| Number | Lifting capacity | Reach   |  |
|--------|------------------|---------|--|
| 6      | 8 t              | 24.50 m |  |
| 5      | 8 t              | 32 m    |  |
|        | 16 t             | 16 m    |  |
| 2      | 3 t              | 26.25 m |  |

Sheds: total area: 8,700 m<sup>2</sup>

| Number | Dimensions   | Floor area           |  |
|--------|--------------|----------------------|--|
| I      | 25 x 25 m    | 625 m <sup>2</sup>   |  |
| II     | 50.40 x 15 m | 776 m <sup>2</sup>   |  |
| III    | 35 x 25 m    | 875 m <sup>2</sup>   |  |
| IV     | 25 x 25 m    | 1,250 m <sup>2</sup> |  |
| V      | 60 x 20 m    | 1,200 m <sup>2</sup> |  |
| VI     | 125 x 15 m   | 3,983 m <sup>2</sup> |  |

Open air storage: approx. 4 ha



## 4.5 The inner port at Zeebrugge

(See map, page 16)

## 4.6. The inner port at Bruges

### 4 The Train Ferry Terminal (T.F.T.)

Area: 4 ha

Quay n° 19: berth for trainferry ships water depth: Z (- 6.70 m) LLWS.

#### 5 The Short-Sea Container Terminal (S.C.T.)

Area: 9.5 ha

Quays n° 21, 22: length 270 m; terminal for charging/discharging

container vessels

water depth: Z (- 7 m) LLWS quay height: Z (+ 7.30 m) LLWS.

#### 6 The Swedish Quay

Area: 12.4 ha

Quays: B, C + reserve quay:

length 825 m

water depth: Z (- 18 m) LLWS quay height: Z (+ 8 m) LLWS Includes SeaRo terminal

Note:

The prince Albert Dock and the Tidal Dock form no part of the MBZ concession. They are part of the Zeebrugge fishing harbour which is managed and operated by the City of Bruges.

Address:

Stedelijke Vismijn, Vismijnstraat,

B-8380 Zeebrugge-Brugge 5

Tel. 050 - 54.41.20

#### 1 The sealock

Length: 210 m Width: 19.70 m

Sill depth: Z (- 5.50 m) LLWS. The water level in the Baudouin canal is at Z (+ 3.50 m); according to the level of the tide in the outer port, the usable water depth in the lock varies between 5.50 and 9 m.

#### 2 The Baudouin canal

Length between the sealock to the bridge at Dudzele: 5.5 km Width at water surface: 70 m Width at bottom: 22 m

Width at bottom. 22 m

Depth: 8 m = Z (-4.50 m) + canal

level Z (+ 3.50 m).

Quays, with a length of 450 m, in front of the Coke and Glass works.

#### 3 The turning area

Length: 500 m Width: 175 m Depth: 8 m

#### 4 The Prince Philip dock

Length: 560 m Width: 200 m Depth: 8.40 m

#### The former Ferrydock

Length: 500 m Width: 130 m Depth: 8 m

#### 1 The Baudouin canal

Length between the bridge at Dudzele to the entrance of the

West dock: 4.950 km

Width at water surface: 125 m Width at bottom: 77 m

Depth: 8 m

#### 2 The East dock

Length: 370 m Width: 90 m Depth: 8 m

#### 3 The West dock

Length: 550 m Width: 90 m Depth: 8 m

#### 4 The Industrial dock

Length: 1,080 m Width: 125 m Depth: 8 m

#### 5 The junction lock

Length: 115 m Width: 12 m Sill depth: 4 m



## 6 Equipment

#### Quays

| Number   | Dock      | Length |
|--|-----------|--------|
| 1 - 2 - 3 (Quenastkaai)                                | Fast dock | 389 m  |
| 4 - 5 (Kaap Hoornkaai)                                 | East dock | 228 m  |
| 6 (Albertakaai)  | East dock | 148 m  |
| 7 - 8 - 9 (Graaf Visartkaai)<br>10 - 11 - 12 - 13 - 14 | West dock | 315 m  |
| (Julius Sabbekaai)                                     | West dock | 520 m  |

Total quay area: 35,000 m<sup>2</sup>
Total length of embankments (including quays): 13,080 m

#### Sheds

| Number     | Dimensions | Floor area           |  |
|------------|------------|----------------------|--|
| 1          | 150 x 15 m | 2,250 m²             |  |
| II         | 130 x 30 m | 7,800 m <sup>2</sup> |  |
| III        | 60 x 30 m  | 1,800 m <sup>2</sup> |  |
| IV         | 50 x 30 m  | 1,500 m <sup>2</sup> |  |
| V          | 40 x 26 m  | 1,040 m <sup>2</sup> |  |
| VI         | 96 x 60 m  | 6,000 m <sup>2</sup> |  |
| VII        | 20 x 30 m  | 600 m <sup>2</sup>   |  |
| X          | 40 x 25 m  | 1,000 m <sup>2</sup> |  |
| Total area |            | 21,990 m²            |  |
|            |            |                      |  |

Open air storage area: approx. 25 ha

#### Cranes

| Number | Make | Lifting capacity | Reach |  |
|--------|------|------------------|-------|--|
| 2      | ВМ   | 5 t              | 32 m  |  |
| 2      | BM   | 8 t              | 32 m  |  |



## Port Functions

5.1
Port of call for various North Sea freight and passenger services, mainly to and from Great Britain and Scandinavia

Located at the sea-board, Zeebrugge is especially suited for all forms of modern, quick turn-round traffic. However, it is also a multi-purpose port and plays an important role in the Belgian economy. These functions vary widely.

More than: 120 sailings per week or 6,000 per year 5 million tons of cargo 2.3 million passengers.

#### **Evolution**

| Year | Number of sailings | Cargo<br>(x 1,000 t) | Passengers (x 1,000) | TEU's<br>(number) |
|------|--------------------|----------------------|----------------------|-------------------|
| 1970 | 2,750              | 1,805                | 498                  | ± 92,000          |
| 1975 | 4,888              | 3,596                | 1,164                | 112,500           |
| 1980 | 6,805              | 5,414                | 2,305                | 108,200           |

#### Regular services calling at Zeebrugge

|            | Operated by | Number<br>sailings | Type of service                     |
|------------|-------------|--------------------|-------------------------------------|
| Zeebrugge- | British     | 2 or 3             | Trainferry (freight and passengers) |
| Harwich    | Rail        | per day            |                                     |
| Zeebrugge- | Townsend    | 8 to 10            | Carferry                            |
| Dover      | Thoresen    | per day            | (freight and passengers)            |
| Zeebrugge- | Townsend    | 3 per day          | Carferry                            |
| Felixstowe | Thoresen    |                    | (freight and passengers)            |
| Zeebrugge- | North Sea   | 1 per day          | Carferry                            |
| Hull       | Ferries     |                    | (freight and passengers)            |
| Zeebrugge- | North Sea   | 4 per week         | Ro/ro                               |
| Wallhamn   | RoRo AB     |                    | (freight only)                      |
| Zeebrugge- | North Sea   | 2 per week         | Ro/ro                               |
| Oslo       | RoRo AB     |                    | (freight only)                      |
| Zeebrugge- | British     | 2 per day          | container                           |
| Harwich    | Rail        |                    | (freight only)                      |
|            |             |                    |                                     |

5.2 Base port for intercontinental container and ro/ro services

| Operated by                       | Number of sailings | Ports of call   |
|-----------------------------------|--------------------|---|
| Australia/New Zealan              | nd                 |   |
| A.N.Z.E.C.S.                      | every 10 days      | Fremantle, Melbourne, Sydney,<br>Auckland, Wellington, Lyttelton, Port<br>Chalmers  |
| A.C.T./A.N.L.                     | every 10 days      | Fremantle, Melbourne, Sydney,<br>Auckland, Wellington, Lyttelton, Port<br>Chalmers  |
| A.B.C. Container Line             | every 3 weeks      | Melbourne, Sydney, Fremantle,<br>Adelaide, Brisbane + U.S. Gulf Ports:<br>New Orleans, Houston and Savannah                                     |
| ScanCarriers A/S                  | every month        | Fremantle, Adelaide, Melbourne, Burnie<br>Sydney, Newcastle, Brisbane,<br>Townsville, Auckland, Napier, Timaru<br>and Jeddah                    |
| North America                     |                    |   |
| Pacific Coast<br>Johnson Scanstar | every week         | Long Beach, Los Angeles, Oakland,<br>Stockton, Sacramento, Vancouver,<br>Seattle, Portland  |
| Caribbean Islands<br>Carol        | every week         | Bridgetown, Port-of-Spain, Willemstad,<br>Oranjestad, Ponce, Rio Haina,<br>Port-au-Prince, Kingston, Santo-Tomas-<br>de-Castilla, Puerto Cortes |

| Africa                      |               |   |
|-----------------------------|---------------|---|
| Africatainers<br>S.N.C.D.V. | every 2 weeks | Abidjan, Apapa, Téma, Lomé, Cotonou,<br>Douala, Libreville, Port Gentil,<br>Pointe Noire  |
| Woermann Linien<br>D.A.L.   | every 2 weeks | Abidjan, Apapa, Téma, Lomé, Cotonou,<br>Douala, Libreville, Port Gentil,<br>Pointe Noire  |
| East Asiatic Cy             | every 2 weeks | Dakar, Freetown, Monrovia, Abidjan,<br>Téma, Lomé, Lagos, Apapa, Douala,<br>Las Palmas de Gran Canaria,<br>Santa Cruz de Tenerife |
| O.T. Africa Line AB         | every 2 weeks | Dakar, Abidjan, Téma, Lagos/Apapa<br>+ other ports  |
| Safcon (Saecs)              | every 5 days  | Durban, Port Elisabeth, Cape Town.  |

#### **Evolution of intercontinental container traffic**

| Year | Number of ships | Cargo<br>(x 1,000 t) | Number of TEU's |  |
|------|-----------------|----------------------|-----------------|--|
| 1975 | 198             | 404                  | ± 40,000        |  |
| 1980 | 342             | 905                  | 72,800          |  |
| 1981 | 366             | 1,005                | 88,800          |  |



5.3
Port of charge
and discharge for raw materials
and energy products

| Year | Tonnage<br>liquid fuels<br>(x 1,000 t) | Tonnage solid fuels (x 1,000 t) | Building<br>materials<br>(x 1,000 t) |  |
|------|--|---------------------------------|--------------------------------------|--|
| 1970 | 5,981                                  | 456                             | 668                                  |  |
| 1975 | 6,315                                  | 276                             | 958                                  |  |
| 1980 | 5,424                                  | 374                             | 1,781                                |  |

5.4 Transhipment port for conventional general cargo

| Tonnage of conventional cargo (x 1,000 t) |
|---|
| 172                                       |
| 196                                       |
| 196                                       |
|   |

5.5
Passenger port, with a wide range of sailing possibilities to Great Britain
Also embarkation for international cruises

| Year | Passengers (x 1,000) |  |
|------|----------------------|--|
| 1970 | 510                  |  |
| 1975 | 1,170                |  |
| 1980 | 2,314                |  |



(T.F.T.)

## Train Ferry Terminal

## Technical Characteristics of the various Terminals

6.2 Carferry terminals

#### Operation and Management:

Belgisch-Engelse Vennootschap der Ferry-Boats

Head Office: Frankrijkstraat 85 B-1070 Brussel Tel. 02 - 524.01.08 Tlx. 23.584 ferybo b

Terminal Office: Loodswezenstraat B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.47.91 Tlx. 81.120

Area: 4 ha Water depth: Z (- 6.70 m)

#### Description of the berth:

Slope: length: 195 m width: 25 m inclination: 1% equipped with two tracks

· Loading ramp: length: 50 m width: 9.60 m inclination: 4%

max. load: 600 kg/m<sup>2</sup> (125 lbs/sq.ft)

· Berth cage: semicircular; cross section 18.50 m, with special provisions to safely accomodate train ferries for loading and unloading operations

· Ships: max. length allowed: 163 m max. width allowed: 18.50 m normal draft: 4 m

· Terminal area: parking for 250 cars. Additional fenced area for a further 850 cars

· Terminal building: office accomodation, terminal services and customs control.

#### 6.2.1 Outer port terminal

Operation and management: MBZ

Head office: L. Coiseaukaai 2 B-8000 Brugge Tel. 050 - 33.52.24 TIx. 81.201

Harbour Master's Office, port control and administration: Carferrybuilding, Doverlaan 7 B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.42.63/54.41.70/54.69.29 Tlx. 81.205

Present Area: 3.5 ha (for extension, see 8.2.3.1)

#### Description:

·Ramps: number: 2 lenath: 53 m width of the bridge, including two separate protected footpaths for passengers: 7.10 m max. load capacity: 400 kgs/m<sup>2</sup> (heavy articulated loads to a maximum of 60 tons with an axle load of 20 tons over 4 wheels)

· Berths:

number: 2, on both sides of a line of 6 dolphins with a diameter of 10 m, linked with a gangway length: 145 m

water depth: Z (- 7 m) LLWS

· Ships:

max. length allowed: no limitation max. beam allowed: 21.20 m with the ship's axis in line with the ramp axis (ships of 33 m beam, however, can berth obliquely, or out of axis)

 Bridge complex and jetty: each bridge moves between two bridge piers which serve as bases for the hoisting towers. The jetty is protected by two buffer fenders (steel diaphragms of 7 by 10 m each, with two rubber "giant fenders").

Both main bridges rest on sliding hinges on the land side. They are slug in cables with counterweights and can always be lifted immediately, even during power cuts. The lifting speed is 0.20 m/sec.

- The connection between the main bridge and the ship is by means of a drawbridge (length 4.50 m, width 3.32 m) which is lowered either directly onto the ship's loading deck or onto an interposed pontoon (in case the ship itself is equipped with a drawbridge).
- The ramps are controlled from the engine rooms by means of two closed circuit TV-cameras which show the position of the main bridge and the drawbridge.
- · The terminal area has a capacity of 600 cars and is divided into separate waiting lanes for incoming and outgoing traffic.
- · Handling of unaccompanied vehicles, containers and special cargoes can be done with tugmasters(5,800 cc) and fork lift trucks (ranging from 2 to 15 tons).
- The terminal building (65 by 30 m, three storeys) contains office accomodation for the harbour master services, customs and immigration officers, shipowning companies, ship agencies, shipping companies. Spacious, up-to-date accommodation ensures passenger comfort: waiting hall with video, restaurant and cafetaria (capacity 200 people) exchange, etc.



## 6.3 Container terminals

#### 6.2.2 Inner port terminal

Operation and management:

North Sea Ferries (Belgium) nv Lanceloot Blondeellaan 5 B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.56.01 Tlx. 81.322

Area: 5.50 ha

#### Description:

• Bridge: length: 24 m width: 7.80 m

max. load: 60 tons in articulated vehicles, with a max. of 20 tons per

axle

operation: from a fixed jetty (the water level variations in the Prince Philip dock, max. 0.70 m, being absorbed by the ship's ramp).

·Ships:

max. length (limited by sea lock dimensions): 205 m max. beam (idem): 19 m max. width of bow ramp: 8 m

· Terminal area:

divided into separate areas for freight traffic (100 lorries and trailers and 50 passenger cars)

 Handling of unaccompanied vehicles: containers and special loads: by means of tugmasters, forklift

trucks, tractors and a mobile crane of 30 tons.

30 tons.

• The terminal building (40 by 24 m) accommodates the North Sea Ferries booking offices and administration, customs offices and passenger hall (capacity: 150 people).

#### 6.3.1 The Short Sea Container Terminal (S.C.T.)

Operation and management:

Belgisch-Engelse Vennootschap der Ferry-Boats

Head Office:

Frankrijkstraat 85, B-1070 Brussel Tel. 02 - 524.01.08 Tlx. 23.584

Operations Office: Loodswezenstraat B-8380 Zeebrugge-Brugge 5

Tel. 050 - 54.52.11

Tlx. 81.110

Area: 8 ha

#### Description:

• Quays: length: 270 m

width: 53 m + 26 m handling area waterdepth: Z (- 7 m) LLWS quay height: Z (+ 7.30 m) LLWS two berths for container vessels

· Gantry cranes:

number: two

make: Peiner, with double headbeam

lifting capacity: 30 tons s.w.l. length of the headbeam: 70.50 m of which 18 m overspan the water intermediate width of headbeams:

15 m

portal height: 21.35 m rail width: 31 m

max. lifting height above HHWS:

15 m

max. depth under LLWS: 6 m max. reach beyond seaward

fenderedge: 14 m

max. hoisting speed: 35 m/min. max. speed of longitudinal travel:

50 m/min

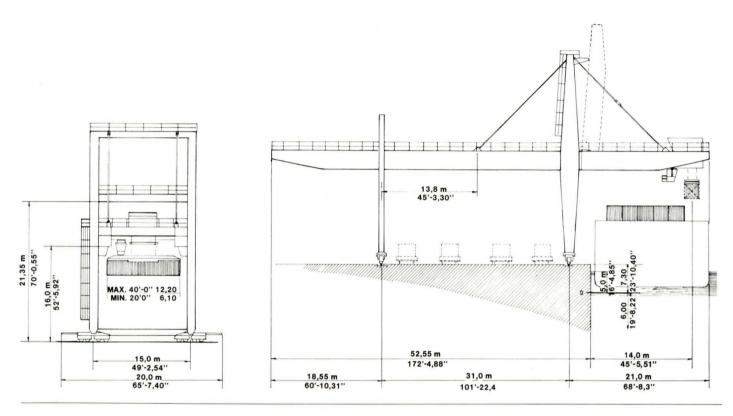
spreader: dead weight: 9 tons automatically adaptable to I.S.O. container dimensions 20 ft, 30 ft, 40 ft.

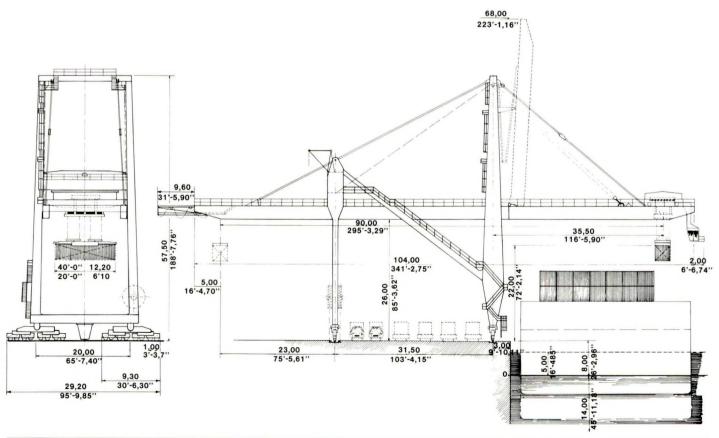
railway tracks served by the cranes number: four, parallel with the quay

and under the cranes total length: 1,124 m (4 x 281 m)

capacity: 160 rail cars terminal area: 5 ha capacity: 2,200 TEU's

• further terminal equipment: parking containers: two Peiner straddle carriers lifting capacity: 30 tons handling of special loads: fork lift trucks and tractors rail car shunting: ASEA shunting device (see 6.3.2).





#### 6.3.2 Ocean Container Terminal Zeebrugge (O.C.Z.)

Operation and management:
Belgisch-Engelse Vennootschap der

Ferry-Boats

Head Office: Frankrijkstraat 85 B-1070 Brussels Tel. 02 - 524.01.08

Tlx. 23.584

Operations Office: New Yorklaan B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.52.71 Tlx. 81.277

Area: 15 ha

of which 14 ha for the actual terminal (3.50 ha front quay, 10.50 ha rear quay, parkings and buildings) 1 ha for access railway yard

#### Description:

· Quays:

length: 1,020 m

West quay: 725 m + 90 m

connecting quay North quay: 205 m

width:

front quay: 55 m

rear quay: 140 m average height: 8 m above LLWS water depth: Z (- 13 m) LLWS

#### · Gantry cranes

| Number: 3  | 2 Munck<br>(double headbeam)     | 1 Boomse Metaalwerken<br>(monorail type) |
|--|----------------------------------|--|
| lifting capacity (s.w.l.)<br>(spreader with dead weight<br>10 tons not included) | 45 tons                          | 30 tons                                  |
| length of headbeam(s)  | 104 m                            | 101 m                                    |
| outreach beyond fender   | 37 m                             | 35 m                                     |
| backreach beyond quay  | 23 m                             | 23 m                                     |
| width between headbeams  | 14 m                             | -  |
| width between legs   | 16 m                             | 15.30 m                                  |
| rail width   | 31.50 m                          | 31.50 m                                  |
| spreader width   | 12.20 m                          | 11.00 m                                  |
| portal height  | 26.00 m                          | 25.00 m                                  |
| max. lift  | 25 m above HHWS<br>43 m over-all | 23 m above quay<br>40 m over-all         |
| max. depth below quay<br>level   | 22 m                             | 16 m                                     |
| max. hoist speed<br>laden<br>empty spreader                                      | 45 m/min<br>91 m/min             | 45 m/min<br>90 m/min                     |
|  |                                  |  |



| max. trolley speed                | 120 m/min  | 150 m/min   |
|-----------------------------------|--|---|
| longitudinal gantry speed         | 50 m/min   | 50 m/min  |
| rotation of the spreader          | 360°, 1RPM   | 360°, 1RPM  |
| occasional heavy lifts            | 60 t   | 45 t  |
| max. wind velocity when operating | 20 m/sec<br>(7/8 Beaufort)<br>pressure: 32 kg/sq.m                           | 25 m/sec<br>(9/10 Beaufort)<br>pressure: 39 kg/sq.m |
| spreader: dead weight             | 10 tons 10 tons automatically adaptable to I.S.O. 20 ft, 30 ft, 40 ft.       |   |
| rail tracks served by the cranes  | number: 4, parallel to quay and under the cranes length: 3,020 m (4 x 755 m) |   |

- ASEA shunting system: Automatic remote control shunting of railway cars under the cranes avoiding use of locomotives. This system is available on all four tracks; the crane driver (or quay personnel) can control the railcars on one or several tracks at will.
- Terminal area: surface area: 3.50 ha for charging/ discharging operations; Rear quay surface area: 10.50 ha, used as back-up area for the storage of containers (up to 10,000 TEU's), for the erection of various service buildings and sheds and additional service equipment, a.o.

consolidated freight station (C.F.S.); installations for chilled and reefer containers; sheds for stuffing and stripping of containers; sheds for repair and maintenance; transtainer area.

Equipment for handling containers on the quay area:
10 straddle-carriers (6 Valmo, 4 Peiner) with a lifting capacity of 35 tons; can stack three high;

- 15 fork lift trucks (ranging from 2 to 30 tons);
- 1 trailer tractor;
- 2 tractors.
- Consolidated Freight Station (C.F.S.): covered sheds: 4,000 m² with railsiding and out; 7 loading bays for lorries; 7 loading bays for containers canopy of 1,000 m² for stripping and revanning of containers and for handling IMCO cargo.
- · Reefer installations:

#### 1 General

Special care is paid to chilled and deep frozen container cargoes during their stay on the terminal. Several hundreds of containers with perishable goods and deep frozen products can be maintained at the desired temperature.

0

Various reefer systems

a)

mechanical chilling: containers are kept cool by cold air circulation. The system can be used for chilled containers and for deepfrozen products.

b)

cryogenous chilling: the system uses liquid nitrogen. It can be used on deep-frozen products, either through direct injection into the cargo space, or by means of a cargo clip-on or cryo-tower unit.

The latter alternative is also possible for chilled products.

3

Various container systems
• integrated containers:
have a built-in chilling system,
powered by a diesel-electro,
an electro or a propane engine.
Containers are usually stacked on
deck and are connected to the ship's
engine or stand-by engines.

• porthole containers: are connected to a cold airinstallation either on board of the ship or on-shore (static chilling system with liquid nitrogen or clip-on system powered by various energy suppliers).

4

Various reefer installations on O.C.Z. terminal

a)

Mechanical systems.

• Wall systems, Grenco type: 24 slots. Wall systems are powered from a central engine room.
Cold air circulates through pipes from air coolers on both sides of the engine room. Every separate pipe (with individual air cooler) can ensure the desired temperature,

independent of the temperature in the other pipes.



## 6.4 Roll-on/Roll-off terminal

#### 6.5 Combined road/rail traffic terminal

The systems comes in sets of 24, 48 or 72 container slots which can keep up a temperature between  $+ 13^{\circ}$  C and  $- 25^{\circ}$  C.

- •Tower system, Holima type: 54 slots. Tower systems deliver chilled air for two containers in chain per tower or for three or four containers in chain if the towers are stacked two high. Fit for both chilled and deep-frozen products with temperatures varying between + 13° C and 18° C.
- Clip-on system, Air Liquide type: 48 slots.

Clip-on systems are used for chilling standard reefer containers. Fit for chilled and deep-frozen products.

b)

Cryogenous systems

· Fixed stations:

freeze-point type: 48 slots, by Air Products

cryo clip-on: 20 slots, by Air Products Fixed stations with liquid nitrogen consist of a large, air tight insulated storage tank for liquid nitrogen with a pipe network for distribution (surface or subsoil) in combination with cryotower or cryclip-on systems (for all types of products) or with freeze points (LIN-injection with temperature control and LIN-injections at regular intervals) for deep-frozen products.

• Mobile stations:
number of slots unlimited.
Mobile installations (liquid nitrogen dump charging): liquid nitrogen is injected at regular intervals with an adapted mobile unit.
This system especially befits terminals where the number of reefer containers is highly fluctuating (as it needs no investment for a fixed installation) and where containers remain on the terminal for a limited time. Is used only for deep-frozen products.

#### Operation and management:

SeaRo nv Zweedse Kaai B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.63.77 Tlx. 81.983

*Area:* 12.40 ha Parking space for 800 lorries or trailers

#### Description:

· Quays:

total length: 825 m width: 120 m

water depth: Z (- 18 m) LLWS

• Equipment for the berthing of ro/ro vessels:

The SeaRo terminal, specially designed for Zeebrugge by MacGregor, consists of a pontoon, which bears a rectangular platform (50 x 33 m).

The four pontoon pillars rest on the bottom by means of chainsupported weights of 160 tons at each corner.

When these weights are lifted, the pontoon can be moved at will with tugs.

The chains can be pulled at two corners in such a way that the platform can be tilted to an inclination of max. 10% which can absorb the height difference between the quay and the ship's loading ramp.

- Other equipment: two railway tracks total length 1,400 m two-lane road, total length 900 m terminal building with office accommodation for SeaRo nv terminal users and customs offices.
- Handling of unaccompanied vehicles, trailers, containers and special loads:
  1 mobile crane (40 tons) fork lift trucks (5 to 30 tons) trailers (up to 60 tons on 10% slope).

#### Operation and management: T.R.W. (Transport Rail Weg)

Head Office: Min. Vandenpeereboomstraat Station West B-1080 Brussels Tel. 02 - 425.62.51 Tlx. 24.829

Operations Office: Zweedse Kaai B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.41.29

- Technique adopted in Zeebrugge: vertical loading and unloading of the units (wheels of trailer removed for transportation, therefore decrease of volume and weight)
- Equipment on the terminal: Autogru Belotti (lifting capacity 40 tons) equipped with a special crane and four splitting arms which frame the unit (frame dimensions: 4.87 m x 2.50 m x 3 m). Containers can also be handled (with use of a spreader).
- Special rail cars used for combined traffic length: 16.44 m width of undercarriage: 2.98 m

#### 6.6 Liquid storage terminals

#### 6.6.1 For crude oil

#### Operation and management:

Texaco Oil Company

Head Office Belgium: Louizalaan 149 B-1040 Brussels Tel. 02 - 538.80.10/539.38.38 Tlx. 22.629

Operations Office: Meeuwenstraat 13, B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.49.92

Area: 3 ha

#### Description:

· Quayage: length:

priority on 367 m on East Quay

width: 35 m

water depth: Z (- 13 m) LLWS

height: Z (+ 8 m) LLWS

max. length of ships: no limitation max. beam of ships: no limitation

max. draft of ships: 12 m

Discharge equipment: number of discharge hoses: 3 capacity:

1 m<sup>3</sup>/sec per hose, or approx. 10,000 m<sup>3</sup>/hr over-all, by the ship's pumps

pipe-line to tank farm: diam. 36" (0.90 m)

length: 1.5 km

Tank farm in inner port:

area: 21 ha

number of storage tanks: 8 storage capacity: 320,000 m<sup>3</sup> pipe-line to Ghent refinery:

length 55 km diam. 20" (0.50 m) 6.6.2 For refined products

| Name + address   | Number of storage tanks | Total storage capacity |
|--|-------------------------|------------------------|
| 1<br>Outer port  |                         |                        |
| • Zeetank nv<br>New Yorklaan 12<br>B-8380 Zeebrugge-Brugge 5<br>Tel. 050 - 54.46.12<br>Tlx. 81.304 | 11                      | 146,000 m³             |
| 2<br>Inner port  |                         |                        |
| • Petrover nv<br>L. Coiseaukaai,<br>B-8000 Brugge 1<br>Tel. 050 - 59.94.17/59.94.18                | 4                       | 12,500 m³              |
| • Detavernier pvba<br>L. Coiseaukaai 29<br>B-8000 Brugge 1<br>Tel. 051 - 65.58.14                  | 3                       | 5,500 m <sup>3</sup>   |
| •L. François<br>Baron Ruzettelaan 308<br>B-8320 Brugge 4<br>Tel. 050 - 35.51.51                    | 2                       | 4,000 m <sup>3</sup>   |
| • Groep Rosseel<br>L. Coiseaukaai 21<br>B-8000 Brugge 1<br>Tel. 050 / 33.99.14                     | 2                       | 4,000 m <sup>3</sup>   |
| • Lambert & Dauw<br>L. De Bruynestraat 75-81<br>B-8310 Brugge 3<br>Tel. 050 - 35.44.20/35.49.68    | 3                       | 3,500 m³               |
| • Traen Gebr. pvba<br>Pathoekeweg 50<br>B-8000 Brugge 1<br>Tel. 050 - 31.51.15                     | 9                       | 10,000 m³              |

## 6.7 Various other facilities and services

#### 6.6.3 For glues

Merckx nv

Head Office: St.-Janslaan 1, B-1150 Brussels Tel. 02 - 762.70.95 Tlx. 21.521

Operations Office: Loodswezenstraat 21, B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.56.51

Storage capacity: 4,200 m<sup>3</sup> (glues and other raw materials for timber industry)

### 6.6.4 For molasses

Tameco nv Leopold II-Mole, B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.43.18 Storage capacity: 29,700 m<sup>3</sup>

#### 6.6.5 For cereals

Borlim nv

Head Office: Lanceloot Blondeellaan B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.48.61

Storage capacity: 9 siloes, total capacity: 35,000 tons Discharge capacity: 150 tons/hr Loading capacity: 300 tons/hr Shore and quay length: total shore length: 160 m actual guay length: 99 m

Dumingra
Pathoekeweg 32,
B-8000 Brugge 1
Tel. 050 - 31.51.61
Storage capacity:
2 siloes, 11,300 tons

H.E.L.B. Krakeleweg 34, B-8000 Brugge 1 Tel. 050 - 31.50.24 Storage capacity: 95 cells, 10,000 tons.

Voeders Huys Krakeleweg 28, B-8000 Brugge 1 Tel. 050 - 31.80.38 Storage capacity: 84 cells, 8,000 tons

WACO Pathoekeweg 68a, B-8000 Brugge 1 Tel. 050 - 31.80.08 - 016 - 24.26.43 Storage capacity: 34 cells, 15,000 tons

#### 6.7.1 Bunker Station

Belgische Bunkeroliemaatschappij Administrative Office: Wetstraat 33, B-1040 Brussels

Head Office: Zeebrugge Shipping and Bunkering Cy, Minister Beernaertstraat 9, B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.42.60 Tlx. 81.138

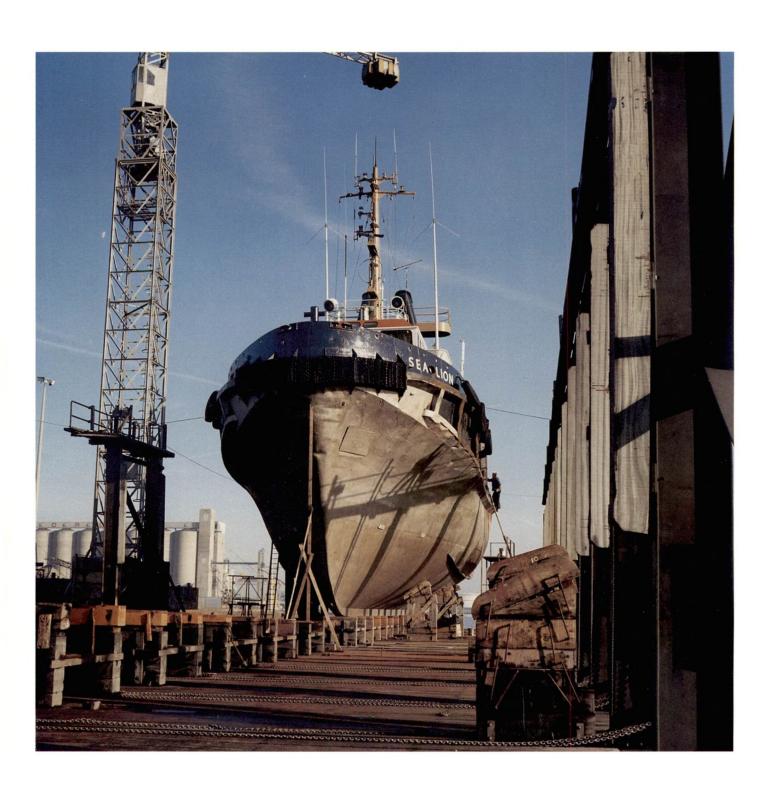
The bunkering station situated at the end of the mole delivers all grades of marine fuel. Supplies can be effected directly ex-wharf (quays 1 and 2) or by barges and tanklorries throughout the port. The depot is offering 24-hour service.

Operators are Messrs. Belgische Bunkeroliemaatschappij.

#### 6.7.2 Cleaning station

Euroservices nv Minister Beernaertstraat 9 B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.42.61 Tlx. 81.138

The nitrogen plant operated by Euroservices nv offers gasfreeing and cleaning facilities for liquid gascarriers. The station is equipped with a ground flare and provides the necessary equipment to change grade in the shortest delay. 24-hour service is guaranteed (quay n° 1).



#### 6.7.3 Towage service

Unie van Reddings- en Sleepdiensten (U.R.S.) Jordaenskaai 15, B-2000 Antwerpen Tel. 031 - 32.38.80 Tlx. 31.864

Represented in Zeebrugge by Ruys & Co Leopold II-Mole B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.42.60 Tlx. 81.930

Three tugs are permanently available in the port (quay 9); additional tugs can be requested, if necessary.

## 6.7.4 Ships' maintenance and repair

Slipway on the transverse quay of the Prince Philip Dock in the inner port at Zeebrugge.

Management: MBZ

Operated by: nv Valcke Frères Tijdokstraat 26, B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.41.79 Tlx. 81.426

Actual maintenance of ships is done by the company commissioned by the shipowner.

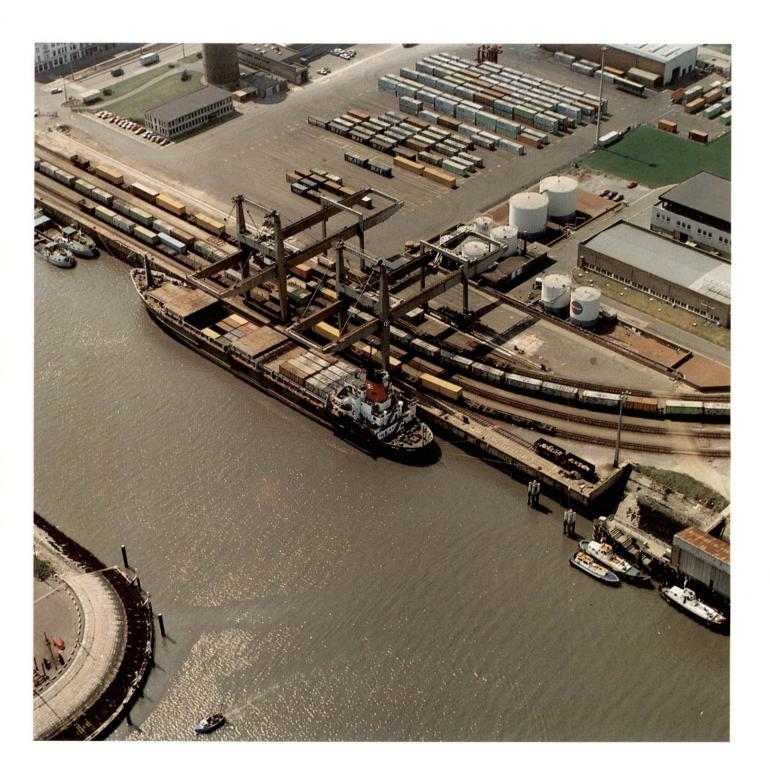
Slope:

length: 248 m

width of the cradle: 17.50 m capacity: ships up to 1,000 t

Transfer area:
length: 85 m
width: 25 m
Equipment:
tower crane:
lifting height: 30 m
max. reach: 30 m
lifting capacity:
1.8 t with jibs at 29 m
6 t with jibs at 11 m

Several ships can use the slope and the transfer area simultaneously. Area of the adjacent grounds: 3.8 ha, which can be used by various ship repairers.



7

# Connections with the Hinterland

### 7.1 Rail

#### 7.1.1 Location

All terminals for cargo transhipment in the outer and inner ports at Zeebrugge, as well as the passenger stations in Zeebrugge, are connected, via line 50 bis (Zeebrugge-Bruges, 10 km) with the international line n° 50 (London - Ostend - Bruges - Ghent -Brussels - Liège - Aachen -Cologne...) with junctions at Brussels to all important European destinations. Zeebrugge has been included in the networks of Interfrigo, Intercontainer, Interferry and T.R.W., who supply special custom-made rail cars, available on request. If necessary, special trains are put on with rail cars

#### 7.1.2 Main regular train services to and from Zeebrugge

of one and the same type only

#### T.E.E.M.-trains

(= block trains).

(Trans-Europ-Express-Marchandises) Transportation of bulk cargo, goods charged in isothermic or refrigerated cars or in large containers with regulated temperature and perishable goods.

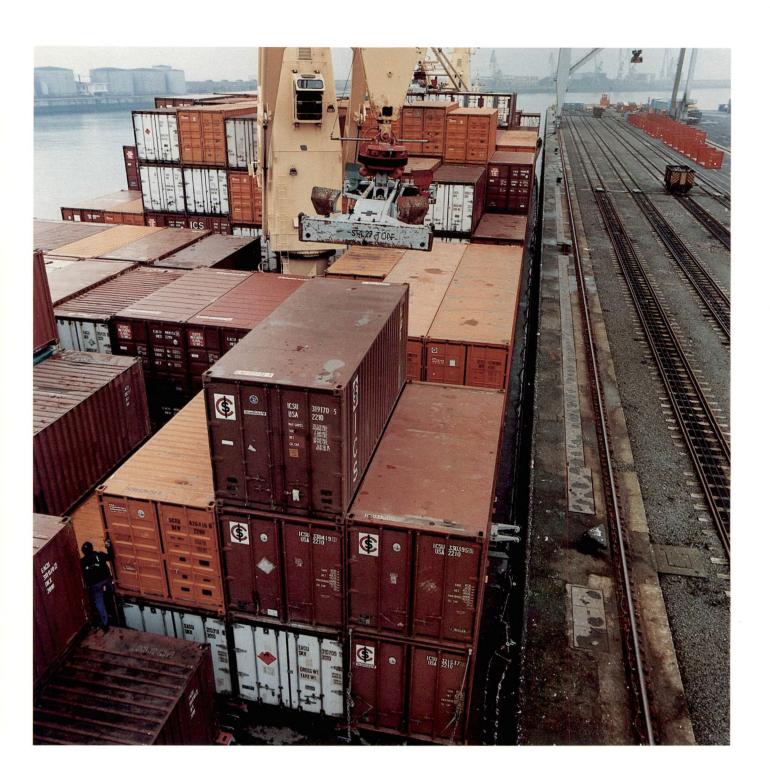
Service speed: 85 to 100 km/hr Min average speed for the whole itinerary: 45 km/hr

#### T.E.C.-trains

(Transport Européens Combinés)

T.E.C. trains provide the most rapid international transportation mode for large containers (from 20') and road vehicles (lorries and trailers)

| Countries and stations            | Distance (kms) | Duration (hrs) |
|-----------------------------------|----------------|----------------|
| Luxembourg                        |                |                |
| Bettembourg                       | 366            | 9              |
| Netherlands                       |                |                |
| Rotterdam                         | 251            | 10             |
| France                            |                |                |
| Thionville                        | 387            | 10             |
| StLouis                           | 709            | 14             |
| Paris                             | 438            | 19             |
| West-Germany                      |                |                |
| Aachen                            | 287            | 7              |
| Köln                              | 365            | 10             |
| Switzerland                       |                |                |
| Bâle                              | 716            | 15             |
| Chiasso                           | 1,029          | 25             |
| Zürich                            | 918            | 40             |
| Austria                           |                |                |
| Wien                              | 1,029          | 31             |
| Italy                             |                |                |
| Milano                            | 1,090          | 28             |
| Bologna                           | 1,294          | 32             |
| Other                             |                |                |
| Budapest                          | 1,740          | 40             |
| Praha                             | 1,169          | 32             |
| Beograd                           | 1,968          | 61             |
| Great Britain                     |                |                |
| (the duration includes the sea ve |                |                |
| London                            | 115            | 23             |
| Liverpool                         | 398            | 25             |
| Glasgow                           | 639            | 37             |



# 7.1.3 Transport structure, especially for container transport

#### **Domestic Traffic:**

Dealt with by Belgian National Railways.

"Nationale Maatschappij der Belgische Spoorwegen, N.M.B.S." Frankrijkstraat 85,

B-1070 Brussels Tel. 02 - 523.80.80

Tlx. 25.035

### Traffic between Belgian and Dutch ports:

Transport of large containers between Belgian (Antwerp, Zeebrugge) and Dutch ports (Amsterdam, Rotterdam) is dealt with by N.M.B.S. and Dutch Railways (NS).

#### **International Traffic**

Is co-ordinated by "Intercontainer" the International Company for Transport by Transcontainers, which is formed by the national railway companies of 23 european countries as well as the international company "Interfrigo".

Intercontainer acts a "Common Commercial Agency" which represents the railway companies of these 23 countries in international container transport.

Intercontainer puts on special container block trains (TECE) on certain lines; moreover, Intercontainer provides individual shipments which are normally routed through the networks of TEEM or TEC.

#### Intercontainer.

Margarethenstrasse 38, CH-4008 Basle Tel. 41.61 - 22.25.25 Tlx. 62.298

represented in Belgium by: *Interferry nv* Zomerweg 26,

B-2030 Antwerp Tel. 031 - 41.69.50 Tlx. 32.529

Both for domestic and for international transport of transcontainers every shipper can negotiate individually with N.M.B.S. or Intercontainer.

To rationalize organisation of container transportation throughout Europe, in particular by rail, the "Railtrans nv" company was established. It counts over 100 members (shippers, shipowners, non-vessel operators, road haulage companies, etc.) This company groups the members' shipments and intermediates between them and N.M.B.S. and Intercontainer. This scheme ensures more advantageous transport conditions.

#### Railtrans nv

Zomerweg 26, B-2030 Antwerp Tel. 031 - 42.03.10 Tlx. 31.338

### 7.1.4 Tariffs for container transport

#### British Rail/Freightliner tariff 3022

Is applicable for transport between Zeebrugge on the one hand and Harwich and all Freightliner terminals in the U.K. on the other, as well as for inland transport in the U.K. from all Freightliner terminals to Harwich and the adjoining sea voyage to Zeebrugge:

### *N.M.B.S. commercial management* Frankriikstraat 85.

B-1070 Brussels Tel. 02 - 523.80.80

#### Belgisch-Engelse Vennootschap der Ferry-Boats

Frankrijkstraat 85, B-1070 Brussels Tel. 02 - 524.01.08

#### British Rail

General Representation Rogierplein 23, B-1000 Brussels Tel. 02 - 218.74.25

### Belgian Inland Tariff (special tariff 0902)

Applies exclusively to transport of transcontainers between container terminals mutually, and between these terminals and any railway station in Belgium.

The special tariff 0902 is a mileagetariff, influenced by the size of the container and the type of rail car used.

Information: All commercial agencies and railway stations of N.M.B.S. in Belgium.

#### Tariff 9574

Applies to transport between the Belgian ports of Antwerp and Zeebrugge, and the Dutch ports of Amsterdam and Rotterdam.

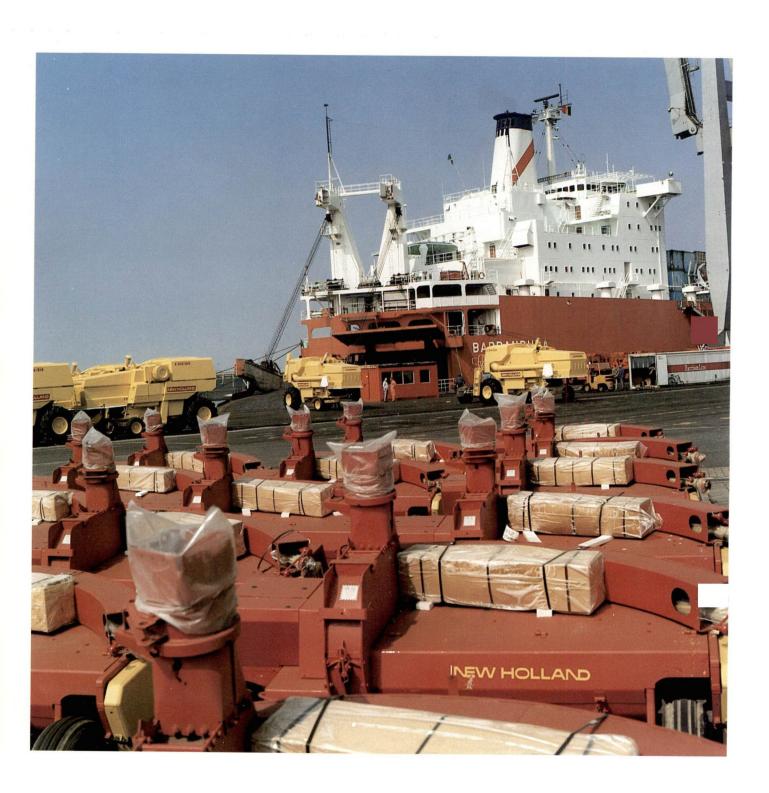
#### Intercontainer or General Transcontainer tariff 9145

Only applicable to international container transport.

The rates are not calculated according to mileage, but to link or service destination (the type of commodity and usually the weight of cargo of no importance). The freight rate depends on the size of the container and its gross weight, loaded or empty.

The tariff is calculated in UIC-francs (average value of the member country currencies).

Basically, this tariff is at par for container transport from the Benelux ports to destinations in Switzerland, Italy, Austria, Yugoslavia, Hungary and a large number of West-German landterminals. It applies only to international traffic; for inland traffic the national tariffs of the various countries are applicable.



### 7.2 Motorways

State road n° 905 (dual carriageway) Zeebrugge - Bruges (17 kms) links the port of Zeebrugge directly with the E5 motorway (exit 8 south of Bruges), which opens up Europe from North-West to South-East (Great-Britain to Italy). The motorway interchange E5/E3 at Ghent (40 kms from Bruges) links up with the North-South axis of Western Europe (Scandinavia - Portugal). Via the interchanges of other motorways with the motorways E5 and E3, any destination in Europe can be reached by motorway conveniently. The A17 (Tournai - Kortrijk -Roeselare - Bruges) presently under construction, will link the port with its immediate hinterland, with the South of West-Flanders, and via the E41 with Wallonia and via the E3 with Northern France.

#### Dinstances from Zeebrugge to some important european cities:

|              | Distance (kms) | Via E-motorway |
|--------------|----------------|----------------|
| Belgium      |                |                |
| Ghent        | 55             | E5             |
| Brussels     | 120            | E5             |
| Antwerp      | 125            | E5/E3          |
| Liège        | 210            | E5             |
| Netherlands  |                |                |
| Amsterdam    | 305            | E5/E3/E10      |
| Rotterdam    | 220            | E5/E3/E10      |
| Luxembourg   |                |                |
| Luxembourg   | 320            | E5/E40         |
| France       |                |                |
| Lille        | 130            | E5/E3          |
|              | 70             | A17            |
| Paris        | 330            | E5/E3/E10      |
| West-Germany |                |                |
| Aachen       | 260            | E5             |
| Köln         | 340            | E5             |
| Bremen       | 495            | E5/E3          |
| Hamburg      | 600            | E5/E3          |



# 7.3 Inland navigation

### 7.3.1 Zeebrugge - Brugge

Both ports are linked by the Baudouin Canal (for description, see 4.5 and 4.6) which gives access to the canal Ostend - Bruges - Ghent.

#### 7.3.2 Link Bruges - Ostend

Via the canal in westerly direction canal width: 35 m water depth: 4.50 m

#### 7.3.3 Link Bruges - Ghent and the complete network of Belgian and European waterways

Via the canal in easterly direction (navigable for inland water crafts up to approx. 900 metric ton, soon to be extended to 1,350 tons).

# 7.3.4 Estuary class inland water craft

Estuary-ships (which have a tonnage certificate both as sea-going vessel and as inland water craft) can call and leave at Zeebrugge via the Hont (Wester Scheldt) and the Flushing approaches.

### 7.4 Pipe-lines

#### 7.4.1 Crude oil

A pipe-line leads from the oil terminal in the outer port to the tank farm in the inner port (diam. 36" or 0.90 m; length 1.5 km) and from this tank farm to the Texaco refinery in Ghent (diam. 20" or 0.50 m; length 55 kms) (see also under 6.6.1).

#### 7.4.2 Natural gas

Zeebrugge is connected to the European pipe-line gridge. At this moment, gas arrives from inland in the Zeebrugge peakshaving storage plant, situated in the inner port.

As from 1986, when the Zeebrugge maritime LNG terminal will become operational, the pipe-line networks will be used in a reversed direction.

### 7.5 Air links

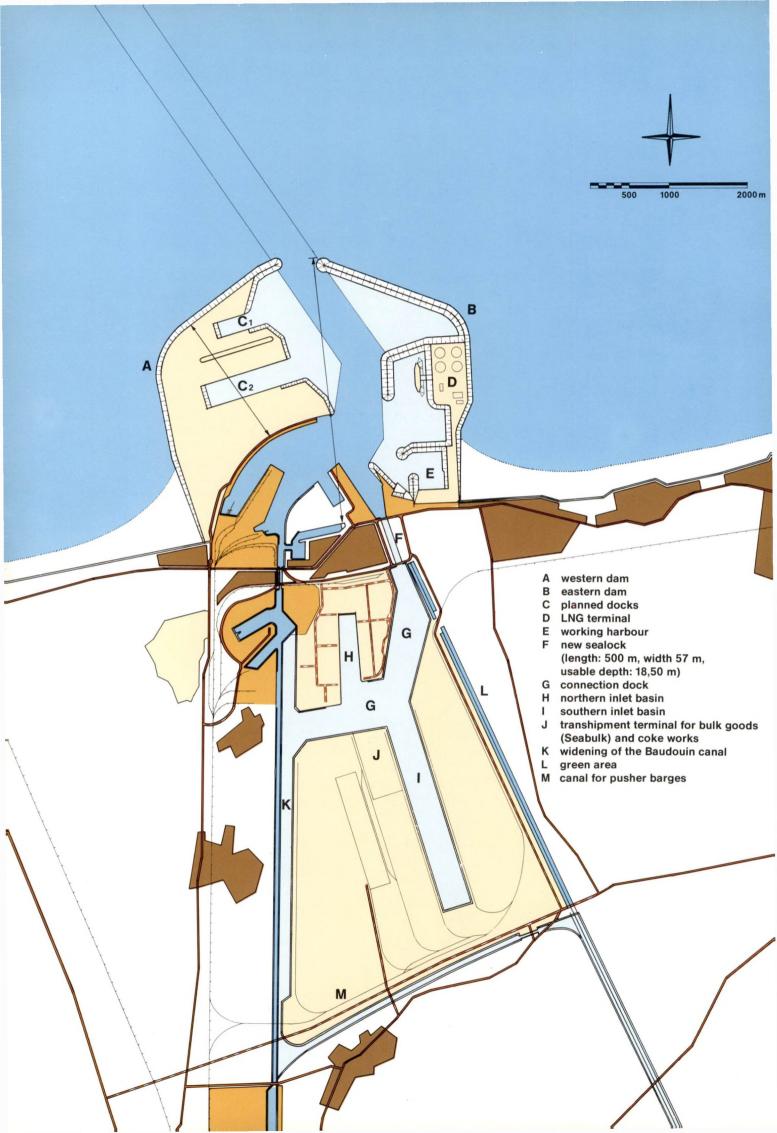
## 7.5.1 Ostend Airport:

situated at 30 kms from Bruges and Zeebrugge. Especially suited for regular daily flights to the U.K. (Gatwick and Southend). Also charters and private business flights.

## 7.5.2 Brussels Airport:

at 120 kms from Bruges and 135 kms from Zeebrugge (to be reached via E5-motorway and Circular road R1 around Brussels) or by rail (1.5 hr ride).

More than 50 air-line operators have landing rights at Brussels Airport. An average of 200 take-offs and landings take place every day, of which 80% to and from european airports and 20% to and from outside Europe. These flights are either direct or indirect via the closest transit airports of Amsterdam, Paris, London, Frankfurt.



8

# Port Extension Works

# 8.1 Government decisions and evolution

8.2 The new outer port

Early 1970 the then Government decided to extend the port.
This decision has been preceded by a feasability study to build a new port for large ships either in the open sea or on the Belgian coast.
The study had shown that preference should be given to the extension of a multi-purpose deepwater seaport

at Zeebrugge.

The first decision included the construction of a big sealock, of an inner port (limited to 1,300 ha) and in principle, the extension of the outer port in order to ensure the access of the port and the sealock for large ships. The works for the sealock were commenced in 1972.

The detail decision concerning the construction of the outer port followed after thorough studies of all relevant aspects (hydraulics, nautical and sedimentological aspects and their environmental impact).

After these extensive studies the Government, in 1978, gave the order to start the work for the actual construction of the outer port.

The August 1980 decision was the final one in a series which is to give Zeebrugge its definitive future shape.

The definitive plan is composed of two main sections:

- the construction of a protected outer port reaching to greater sea depths.
- the construction and equipment of a new inner port completely alongside deep fairways, and accessible via a big sealock.

## 8.2.1 Study and contracting

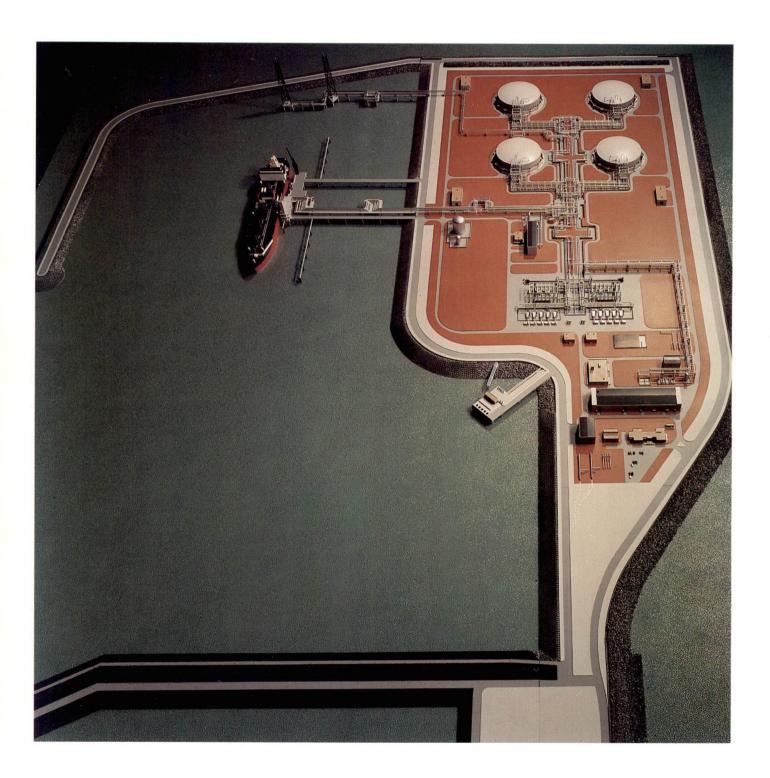
In 1976, after an international call, the Government passed a frame-contract for the construction of the outer port with the "Tijdelijke Vereniging Zeebouw-Zeezand (TVZ2)" (Temporary Association Sea Construction – Sea Sand), a group of contractors specialised in civil engineering water works.

TVZ2 was charged with both the study of the project and its complete execution, in close co-operation with and under the supervision of the Ministry of Public Works, Direction of Waterways, Office of the Coast.

## 8.2.2 Schedule and timing of the works

The contract for the study and the execution of the works, proposed by TVZ2 and approved by the Government, has been subdivided into several subcontracts.

| Contract number | Contents  | Completion date |
|-----------------|---|-----------------|
| I               | Study   | 1985            |
| II              | Beach improvement works for the East Coast  | 1978            |
| III A & B       | Construction of the working harbour, the working site and the basis of the Eastern breakwater               | 1978/1979       |
| IV A & B        | Construction of the southern section of the Eastern breakwater; construction and completion of the LNG-site | 1981            |
| V A & B         | Construction of the first section of the Western breakwater and completion of the Eastern breakwater        | 1984            |
| VI              | Completion of the Western breakwater and dredging of the new outer port and its access.                     | 1985            |



#### 8.2.3

**Description** (See map page 46) The new outer port will be protected by two long breakwaters with a length of 4,250 m for the Western (A) and of 4,000 m for the Eastern (B) breakwater respectively. The shape and dimensions of this outer port follow from the so-called "Project 1,750 G" which was considered to be the most favourable; therefore, the outer port will extend 1,750 m into the sea beyond the existing outer port; the distance from the actual coast line to the breakwaters ends will be 3,000 m. Within this enclosure, a new port area of 350 ha will be reclaimed from the sea; it will be divided into a western and an eastern area which will have distinct functions.

#### Western zone

The extension length of this zone allows the construction of two inlet basins:

- the northern dock (C<sub>1</sub>), most remote from other port facilities and specially protected, will be reserved for the handling of dangerous goods, specials, Imco, ...;
- the southern dock (C<sub>2</sub>) will specifically be constructed and equipped to deal with all modern modes of maritime transport and handling techniques for general cargo e.g. container- and ro/ro-vessels. The length foreseen for the quays in this dock will be 2 x 1,200 m with a water depth of Z (— 16 m) LLWS.

Its direct access and favourable location, modern equipment and spaceous surface area of the adjacent quay grounds will allow a considerable increase of the port's transhipment capacity. It will also enable to cope with future maritime transport and cargo handling developments.

The southern part of the new outer port area, between the Western breakwater and the Leopold II-môle, will be reserved for the extension of carferry terminal parking grounds. Along the Leopold II-môle additional berths for ferries will be built, using these parking areas.

#### Eastern zone

Following the Government decision of 1975 by which Zeebrugge was selected as port of discharge, storage and distribution for LNG, which will be supplied by ship, the national gas utility Distrigaz decided to build its LNG-terminal (D) in this part of the outer harbour.

A plot of 40 ha, completely protected by the Eastern breakwater, was put at its disposal for this purpose. This terminal will include a discharging facility, storage tanks for liquid gas and a regazification plant.

The terminal is scheduled to become operational in 1985; its distance from the adjacent beaches Knokke-Heist will be 1,500 m.

South of the area exists the working harbour (E) which is a special dock, used temporarily by the constructors for berthing all floating-stock and equipment which they use on the port's construction.

### 8.3 Sealock and new Inner Harbour

(See maps page 46 and 54)

### 8.3.1 Study and contracting

The sealock and the inner harbour are built in accordance with a schedule decided in 1970. Each separate part of it is allotted through public tendering (lock, connection dock, northern and southern inlet basin). The total service area of that new inner port will be 1,300 ha, of which 300 ha for docks and waterways, so that the net service area of the quay grounds will be 1,000 ha.

#### 8.3.2 Sealock (F)

Along both sides of the access channel to the lock, new quay walls have been built:

- the Western quay (or Swedisch quay) has a length of 825 m and is equipped with stilling basins with indented sill, in order to dissipate the energy of the incoming surf (see also SeaRo terminal 6.4);
- the Eastern quay will have a length of 500 m upon completion and will function as a waiting quay for ships.

The foreseen water depth will be Z (— 18 m) LLWS, which will allow, even at low tide, the use as a waiting quay for deep-draft ships.
The dimensions of the sealock are: length:

500.30 m (between outer gates) width: 57 m sill depth:

Z (-15 m) LLWS; as the water level in the inner harbour is at Z (+ 3.50 m), the usable depth of the sealock goes up to 18.50 m.

Every lock head is equipped with two steel sliding doors, meaning that a reserve-door is always available. Both the sea-side and land-side heads are equipped with two drawbridges each, in order not to interrupt traffic along the coastal road.



#### 8.3.3

#### The Connection dock (G)

This dock links the new sealock with the northern and southern inlet basins and with the Baudouin Canal. Total length is 3,500 m, subdivided into the following four sections:

300 m at a width of 200 m 1,500 m at a width of 425 m 800 m at a width of 600 m (to be used as a shipturning area) 900 m at a width of 400 m

Water depth is 18 m everywhere: all banks will be slanting.

#### 8.3.4 Northern inlet basin and adjacent quay grounds (H)

The northern part of the inner harbour (approx. 150 ha, situated north of the Connection dock) is being equipped with terminals for loading/unloading container and ro/ro vessels and for handling general cargo such as perishables, also timber, neo-bulks.

Quay length:

West quay wall: 1,130 m East quay wall: 894 m

Width:

at entrance (South): 275 m at transverse: 225 m Water depth: 14 m the northern transverse quay will be

equipped with a disembarkation ramp for ro/ro vessels.

· on the Eastern quay, one shed has already been built, with following characteristics:

length along quay: 142.90 m

width: 39 m

surface area: 5,434 m<sup>2</sup> free height: 10 m

· three additional sheds of the same type will be built, to be equipped with a loading bay and platform for loading/unloading road vehicles.

#### Cranes

· Eastern quay: general cargo grab cranes of 8 tons at 32 m;

additional cranes will be erected;

· Western quay:

two heavy general cargo grab cranes each with a lifting capacity of 20, 28 and 40 tons at a reach of 50, 36 and 25 m respectively.

#### Rail and road connections:

foreseen on all guays and guay grounds (total track length: 3.000 m; road length: 5,200 m).

#### 8.3.5

#### The South inlet basin and adjacent quay grounds (I)

The southern part of the inner harbour (approx. 850 ha situated South of the Connection dock) is intended for transhipment of general cargo, bulk cargo and energy products and for the implantation of marine-orientated industries.

#### Planned docks

· the Southern inlet basin has been planned with the following dimensions:

length: 2,500 m width: 400 m water depth: 18 m

· between the connection dock and the railway bridge at Dudzele, the Baudouin Canal will be widened (K) from 70 to 250 m, over a length of 4,150 m, and will be deepened to 17.50 m.

Rail and road connections are foreseen on all quays and adjacent grounds.

#### Existing and planned facilities

#### 1

Gas peak shaving installation

Distrigaz nv built two natural gas storage tanks (capacity 114,000 m³) in 1978. During low consumption periods, natural gas is stored in liquid form.

It is regazified and redistributed during consumption peaks.

#### 2

### Transhipment terminal for bulk goods

Management and operation: Seabulk nv (established July 1980 with the participation of private and public bodies) with head office at: L. Coiseaukaai 2, B-8000 Brugge.

#### Site:

60 ha along the South bank of the Connection dock (600 m) and the West bank of the South inlet dock (1.000 m).

The surface area covered by the adjacent grounds for railtracks is 18 ha (length 1,500 m; width 120 m). Quays:

length: along the Southern inlet basin: 600 m (unloading quay) along the Connection dock: 250 m (loading quay)

water depth: 18 m capacity:

unloading guay: ships of 125,000

loading quay: ships of 80,000 tons

#### Quay grounds:

Stage 1:

40 ha for simultaneous storage of coal and other bulk; transhipment capacity: 8 million tons p.a. Stage 2:

40 additional ha for doubling the storage and transhipment capacity.



Equipment:

2 gantries, (capacity 50,000 tons of iron ore or 40,000 tons of coal per 24 hours):

3 stacker -reclaimers (capacity 5,200 m³ per hour as stacker, or 3,000 m³ per hour as reclaimer).

### 8.3.6 Other current projects

#### Ferry-berths in the outer port

Along the Leopold II-mole, two additional berths for carferries will be built for which the recently reclaimed grounds between this breakwater and the new Western breakwater will serve as parking area.

- The first berth will be constructed along quay n° 6. It will be equipped to accommodate twindecked ships, in order to accelerate loading and unloading operations.
- The second berth will be built along quay n° 5, mainly for North Sea Ferries, who are planning to affect their jumbo ferries to the Zeebrugge service.

The car loading installations will be of the same type as the N.S.F. one in the inner port (see 6.2.2), with mobile main and drawbridges. Ships with a length up to 160 m and a beam up to 30 m will be able to berth.

The terminal building, with passenger hall (capacity 150 seats), N.S.F. office accommodation, customs and imigration offices and forwarding agencies, will be directly accessible from the ship via a covered exit. The terminal is scheduled to become operational in the second half of 1983.

The adjacent quay grounds will be equipped and subdivided to serve as joint parking lots for freight and tourist vehicles for both berths.

#### Railway links

The existing railway line from Zeebrugge to Knokke-Heist will be disrupted at the new sealock, and will be replaced by a diversion link which will cross the Baudouin Canal at Dudzele, then to follow the South and East perimetre of the new inner port area.

At Zeebrugge, a few hundred metres South of the new sealock, the new railway line will cross the Leopold and Schipdonk canals in order to again link up with the existing line to Knokke-Heist.

The diverted line will also carry all the railway branches necessary to develop the southern part of the new inner port.

The bifurcation and the electrification of railway line n° 66 Brugge-Kortrijk (planned for 1985) will assure a better service to the southern part of the Province of West-Flanders, Hainaut and Northern France.

### Motorways

#### A17

The A17 (Tournai - Kortrijk - Roeselare - Brugge) provides a direct link between the E3 at Kortrijk and the E5 at Brugge.

At this moment, approx, 50 km have been built; completion is scheduled for 1985.

This motorway will ensure a yet more direct connection with the Southern part of the province, via the E41 with Wallonia, and via the E3 with Northern France.

#### **Waterways**

Northern Canal:

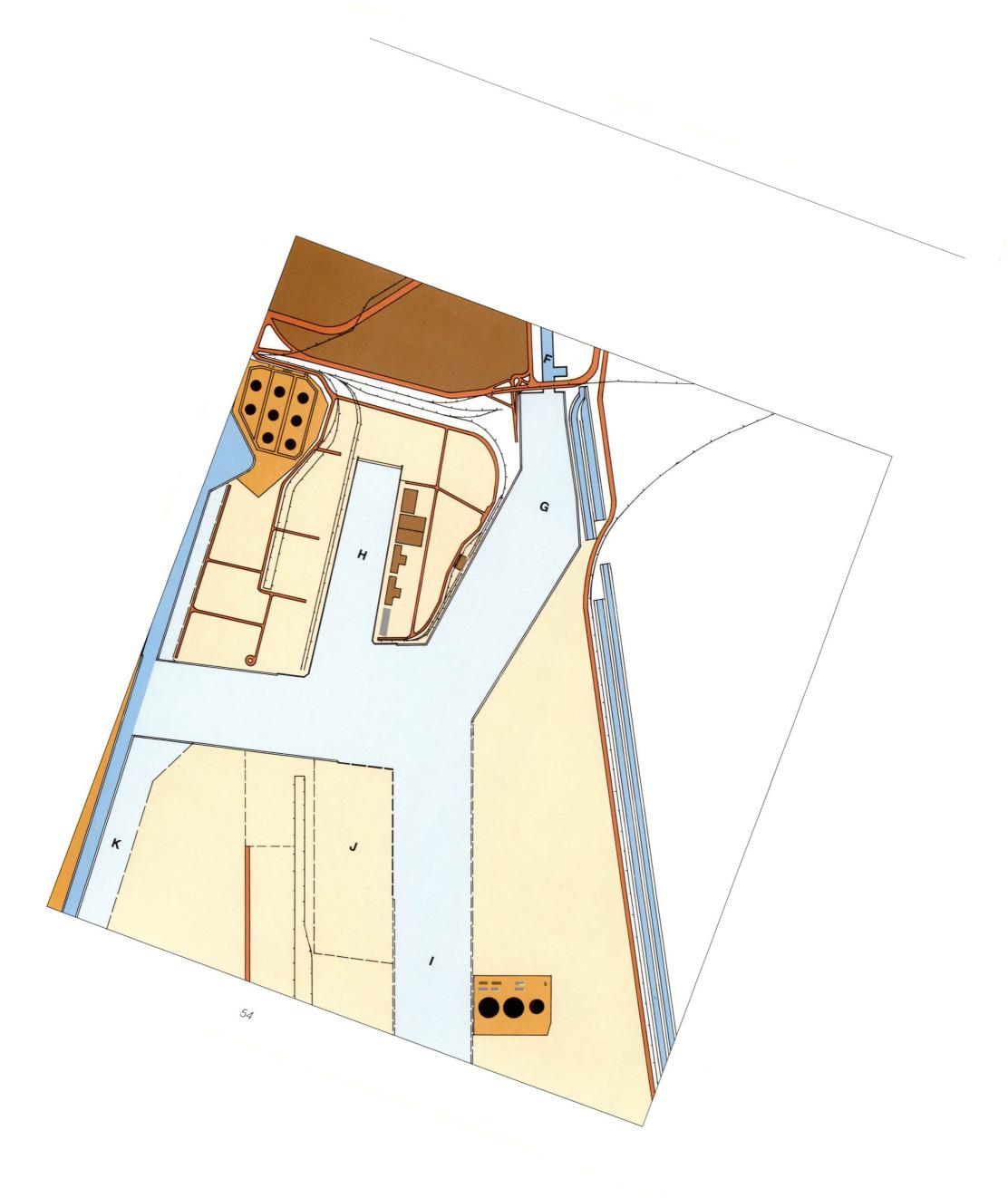
The Zeebrugge port extension is expected to result in appreciable increase in traffic.

Also to avoid the passage of large inland watercraft through the City of Bruges, consideration has been given to adapt the port's waterways connections with the hinterland to the size of large inland watercraft and pusher convoys.

The "Northern Canal" plan envisages two stages:

- the adaptation of the Schipdonk canal to handle 2,000 ton inland watercraft between Zeebrugge and Merendree (junction with the Bruges
- Ghent canal).
- the further adaptation of this section, to receive pusher convoys of 10,000 tons and its connection with the Terneuzen - Ghent canal.

This project will allow Zeebrugge to fully link up with the Scheldt - Rhine water transport system, of which it is the most southerly port.



9

# Statistical Information

9.1 Evolution of Maritime Traffic

| Index<br>(1970 = 100) | Total      | Exports (tons) | Imports<br>(tons) | Gross tonnage<br>(1,000 t GRT) | Number of ships | Year |
|-----------------------|------------|----------------|-------------------|--------------------------------|-----------------|------|
| 10.8                  | 1,029,292  | 245,126        | 784,166           | _                              | 1,031           | 1910 |
| 0.1                   | 9,520      | 1,716          | 7,804             | _                              | 73              | 1920 |
| 11.5                  | 1,095,523  | 328,467        | 767,056           | _                              | 1,415           | 1930 |
| 1.6                   | 149,963    | 29,784         | 120,179           | _                              | 218             | 1940 |
| 3.6                   | 340,740    | 186,861        | 153,879           | _                              | 911             | 1950 |
| 12.7                  | 1,212,559  | 420,467        | 792,092           | _                              | 1,679           | 1960 |
| 230                   | 2,206,803  | 568,470        | 1,683,333         | 3,761                          | 2,280           | 1965 |
| 100.0                 | 9,510,029  | 1,177,176      | 8,332,853         | 18,765                         | 4,691           | 1970 |
| 106.2                 | 10,101,588 | 1,284,998      | 8,816,590         | 22,471                         | 4,746           | 1971 |
| 110.8                 | 10,535,303 | 1,766,647      | 8,768,656         | 26,866                         | 5,658           | 1972 |
| 133.5                 | 12,694,953 | 2,216,662      | 10,478,291        | 29,546                         | 6,105           | 1973 |
| 147.7                 | 14,043,769 | 2,771,601      | 11,272,168        | 32,541                         | 6,796           | 1974 |
| 127.3                 | 12,105,299 | 2,639,329      | 9,465,970         | 35,987                         | 7,452           | 1975 |
| 131.7                 | 12,528,389 | 2,700,207      | 9,828,182         | 36,511                         | 7,593           | 1976 |
| 135.7                 | 12,910,495 | 3,182,712      | 9,727,783         | 39,654                         | 8,373           | 1977 |
| 141.6                 | 13,465,699 | 3,437,560      | 10,028,139        | 42,001                         | 8,700           | 1978 |
| 158.5                 | 15,075,617 | 4,190,686      | 10,884,931        | 45,163                         | 9,043           | 1979 |
| 149.2                 | 14,189,482 | 4,101,620      | 10,087,862        | 48,212                         | 9,550           | 1980 |
| 135.0                 | 12,841,122 | 4,289,226      | 8,551,096         | 45,368                         | 9,043           | 1981 |



9.2 Traffic breakdown per commodity

| Commodities          | 1970      | %     | 1980       | %     | 1981       | %     |
|----------------------|-----------|-------|------------|-------|------------|-------|
| 1<br>General cargo   |           |       |            |       |            |       |
| Roll-on/roll-off     |           |       |            |       |            |       |
| Trainferry           | 343,805   | 3.6   | 450,025    | 3.2   | 487.980    | 3.8   |
| Carferry             | 491,756   | 5.2   | 3,881,616  | 27.3  | 3,540,900  | 27.6  |
| Total                | 835,561   | 8.8   | 4,331,641  | 30.5  | 4,028,880  | 31.4  |
| Containers           |           |       |            |       |            |       |
| European             | 962,404   | 10.1  | 1,083,035  | 7.6   | 1,101,926  | 8.5   |
| Intercontinental     | _         | _     | 169,697    | 6.4   | 1,126,209  | 8.8   |
| Total                | 962,404   | 10.1  | 1,988,264  | 14.0  | 2,228,135  | 17.3  |
| Other general cargo  | 142,192   | 1.5   | 169,697    | 1.2   | 194,309    | 1.5   |
| Grand total          | 1.940,157 | 20.4  | 6,489,602  | 45.7  | 6,451,324  | 50.2  |
| 2<br>Liquid products |           |       |            |       |            |       |
| Crude oil            | 5,408,103 | 56.9  | 4,531,344  | 31.9  | 3,741,267  | 29.1  |
| Refined products     | 573,253   | 6.0   | 892,682    | 6.3   | 716,824    | 5.6   |
| Other liquids        | 349,223   | 3.7   | 88,469     | 0.8   | 90,502     | 0.7   |
| Total                | 6,330,579 | 66.6  | 5,512,495  | 38.8  | 4,548,953  | 36.4  |
| 3                    |           |       |            |       |            |       |
| Solid bulk           |           |       |            |       |            | 15    |
| Coal and coke        | 488,278   | 5.1   | 373,870    | 2.7   | 368,391    | 2.8   |
| Building materials   | 721,318   | 7.6   | 1,781,643  | 12.6  | 1,354,546  | 10.5  |
| Other solid bulk     | 29,697    | 0.3   | 31,872     | 0.2   | 117,800    | 9.1   |
| Total                | 1,239,293 | 13.0  | 2,187,385  | 15.5  | 1,840,817  | 14.4  |
| Overall total        | 9,510,029 | 100.0 | 14,189,482 | 100.0 | 12,841,122 | 100.0 |



9.3 Evolution of transit traffic (in percentages)

9.4 Evolution of container traffic (in TEU's)

| Year | Unloadin | gs      | Loadings | 6       | Total     |         | Year | Number  | Index        |
|------|----------|---------|----------|---------|-----------|---------|------|---------|--------------|
|      | Import   | Transit | Export   | Transit | Imp./Exp. | Transit |      |         | (1970 = 100) |
| 1970 | 82.0     | 18.0    | 32.6     | 67.4    | 73.6      | 26.4    | 1970 | 92,400  | 100.0        |
| 1971 | 85.7     | 14.3    | 40.3     | 59.7    | 78.4      | 21.6    | 1971 | 84,800  | 91.8         |
| 1972 | 86.2     | 13.3    | 48.3     | 51.7    | 79.8      | 20.2    | 1972 | 130,300 | 141.0        |
| 1973 | 87.2     | 12.8    | 51.9     | 48.1    | 81.1      | 18.9    | 1973 | 126,200 | 136.0        |
| 1974 | 86.4     | 13.6    | 43.7     | 56.3    | 78.0      | 22.0    | 1974 | 155,600 | 168.5        |
| 1975 | 79.5     | 20.5    | 38.5     | 61.5    | 69.5      | 30.5    | 1975 | 152,500 | 165.0        |
| 1976 | 82.8     | 17.2    | 39.5     | 60.5    | 73.0      | 27.0    | 1976 | 147,500 | 160.3        |
| 1977 | 78.6     | 21.4    | 36.4     | 63.6    | 68.2      | 31.8    | 1977 | 180,200 | 195.0        |
| 1978 | 79.2     | 20.8    | 36.0     | 64.0    | 68.7      | 31.3    | 1978 | 191,800 | 208.3        |
| 1979 | 80.4     | 19.6    | 41.6     | 58.4    | 71.1      | 28.9    | 1979 | 190,000 | 205.6        |
| 1980 | 79.5     | 20.5    | 40.0     | 60.0    | 69.5      | 30.5    | 1980 | 181,000 | 196.7        |
|      |          |         |          |         |           |         | 1981 | 222,200 | 241.5        |

9.5 Evolution of passenger traffic

| Year | Number of<br>Passengers | Index<br>(1970 = 100) |
|------|-------------------------|-----------------------|
| 1970 | 510,500                 | 100.0                 |
| 1971 | 530,900                 | 104.0                 |
| 1972 | 701,600                 | 137.4                 |
| 1973 | 781,000                 | 153.0                 |
| 1974 | 884,400                 | 173.2                 |
| 1975 | 1,170,300               | 229.2                 |
| 1976 | 1,344,200               | 263.3                 |
| 1977 | 1,605,900               | 314.6                 |
| 1978 | 1,732,800               | 339.4                 |
| 1979 | 1,691,300               | 331.3                 |
| 1980 | 2,313,800               | 453.3                 |
| 1981 | 2,309,800               | 452.5                 |



## **Useful Addresses**

# Port Authority Brugge/Zeebrugge

#### National bodies

#### Maatschappij van de Brugse Zeevaartinrichtingen n.v. MBZ

Louis Coiseaukaai 2, B-8000 Brugge Tel. 050 - 33.52.24 Tlx. 81.201

#### **Ministry of Public Works**

Direction of the Waterways
Office of the Coast,
Residentie "De Mast"
Ernest Feysplein 15, B 5,
B-8400 Oostende
Tel. 059 - 50.19.61
Tlx. 81.604
Public Relations (Regional Office)
Spanjaardstraat 7,
B-8000 Brugge
Tel. 050 - 33.94.20

#### Ministry of Finance

Customs and Excise Office Louis Coiseaukaai,
B-8000 Brugge
Tel. 050 - 33.69.16
Zeebrugge Customs Office
Baron de Maerelaan 4,
B-8380 Zeebrugge-Brugge 5
Tel. 050 - 54.54.55

#### **Ministry of Communications**

Marine Administration & Sea Salvage Service, Immigration Officer, Chief Pilot Loodswezenstraat, B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.40.07

#### **Belgian Foreign Trade Office**

Regional Direction for West Flanders Baron Ruzettelaan 35, B-8320 Brugge 4 Tel. 050 - 35.81.40

#### **Regional Development Authority**

(GOM – West-Vlaanderen) Baron Ruzettelaan 33, B-8320 Brugge 4 Tel. 050 - 35.81.31

#### **State Police (Gendarmerie)**

Predikherenrei 3, B-8000 Brugge, Tel. 901 or 050 - 33.75.44 Port Brigade Zeebrugge Veerbootstraat 1, B-8380 Zeebrugge-Brugge 5 Tel. 901 or 050 - 33.75.44

#### Belgian Railways (N.M.B.S.)

Head Office:
Frankrijkstraat 85,
B-1070 Brussel
Tel. 02 - 513.18.70
Commercial Department
Station Brugge
Tel. 050 - 33.69.97
Station Zeebrugge
Tel. 050 - 54.50.27

#### **Employment Office**

Rijksdienst voor Arbeidsvoorziening R.V.A. Spanjaardstraat 17, B-8000 Brugge Tel. 050 - 33.52.03 Noordhinderstraat 12, B-8380 Zeebrugge-Brugge 5

#### Provincial bodies

### Municipal bodies

### Private organizations

#### **Government of West-Flanders**

Burg 3, B-8000 Brugge Tel. 050 - 33.06.41

#### **Military Authority of West-Flanders**

Kuipersstraat 21 B-8000 Brugge Tel. 050 - 33.44.17

#### **City Administration Bruges**

City Hall Burg 4, B-8000 Brugge Tel. 050 - 33.07.46

#### **Tourist Information**

Tourist Office Markt 7, B-8000 Brugge Tel. 050 - 33.07.11 Tlx. 81.328

#### **Municipal Police**

Hauwerstraat 7, B-8000 Brugge Tel. 906 or 050 - 33.77.33 St.-Donaasstraat 6, B-8380 Zeebrugge-Brugge 5 Tel. 906 or 050 - 33.77.33

#### Fire Brigade

Walweinstraat B-8000 Brugge Tel. 900 or 050 - 33.10.10

## Chamber of Commerce and Industry

Ezelstraat 25, B-8000 Brugge Tel. 050 - 33.36.96

### Association Port of Zeebrugge Interests

APZI Ezelstraat 25, B-8000 Brugge Tel. 050 - 33,49,68

#### Seamen's Club Zeebrugge

Duinpad 1, B-8380 Zeebrugge-Brugge 5 Tel. 050 - 54.44.63

# Emergency telephone numbers

#### 900:

General (accidents, catastrophes, etc.

901:

State Police (Gendarmerie)

906:

Municipal Police

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