

port of **ZEEBRUGGE**

information handbook





port of

ZEEBRUGGE

information handbook



Zeebrugge '85

1

On 20 July 1985, the new port of Zeebrugge was ceremoniously inaugurated by H.M. King Baudouin. The broad outlines of Zeebrugge's expansion have visibly materialized.

The new P. Vandamme sealock had already become operative in 1984 and in a first dock in the new inner port, three modern transshipment enterprises were set up: one for bulk commodities, one for roll-on/roll-off and combined transports, one for fruit and agricultural products. Hereby Zeebrugge has acquired completely new hitherto unknown possibilities.

We have every reason for optimism.

We must gather all our strength and energy to continue work, without delay, on the expansion: a deepwaterquay (with a waterdepth of 18.50 m), a large dock in the new outer port, a dock for ro/ro services, a full-scale inland waterway connection with the hinterland towards the Lys, Scheldt and Rhine.

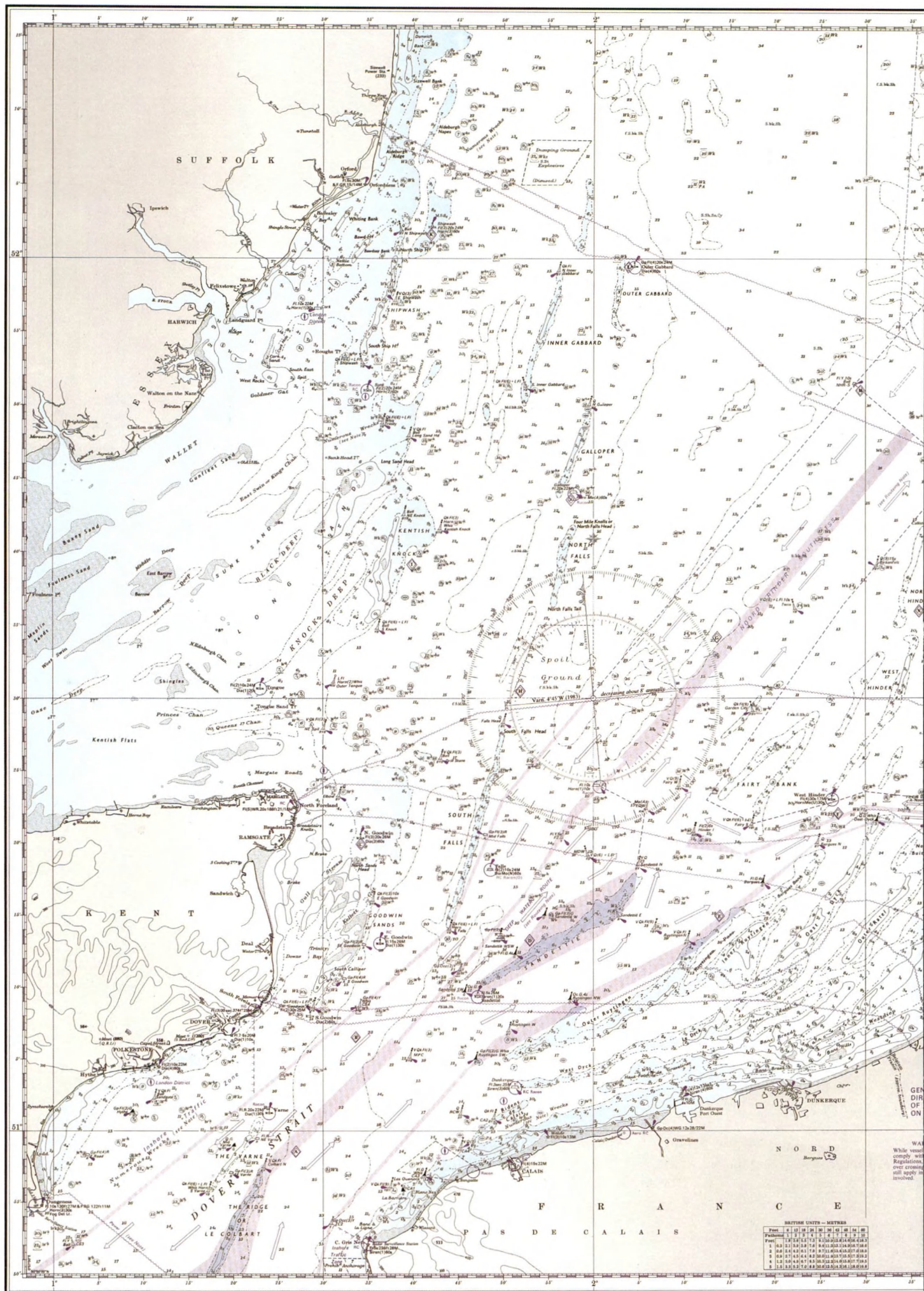
Zeebrugge possesses unique advantages, not least thanks to its geographical position.

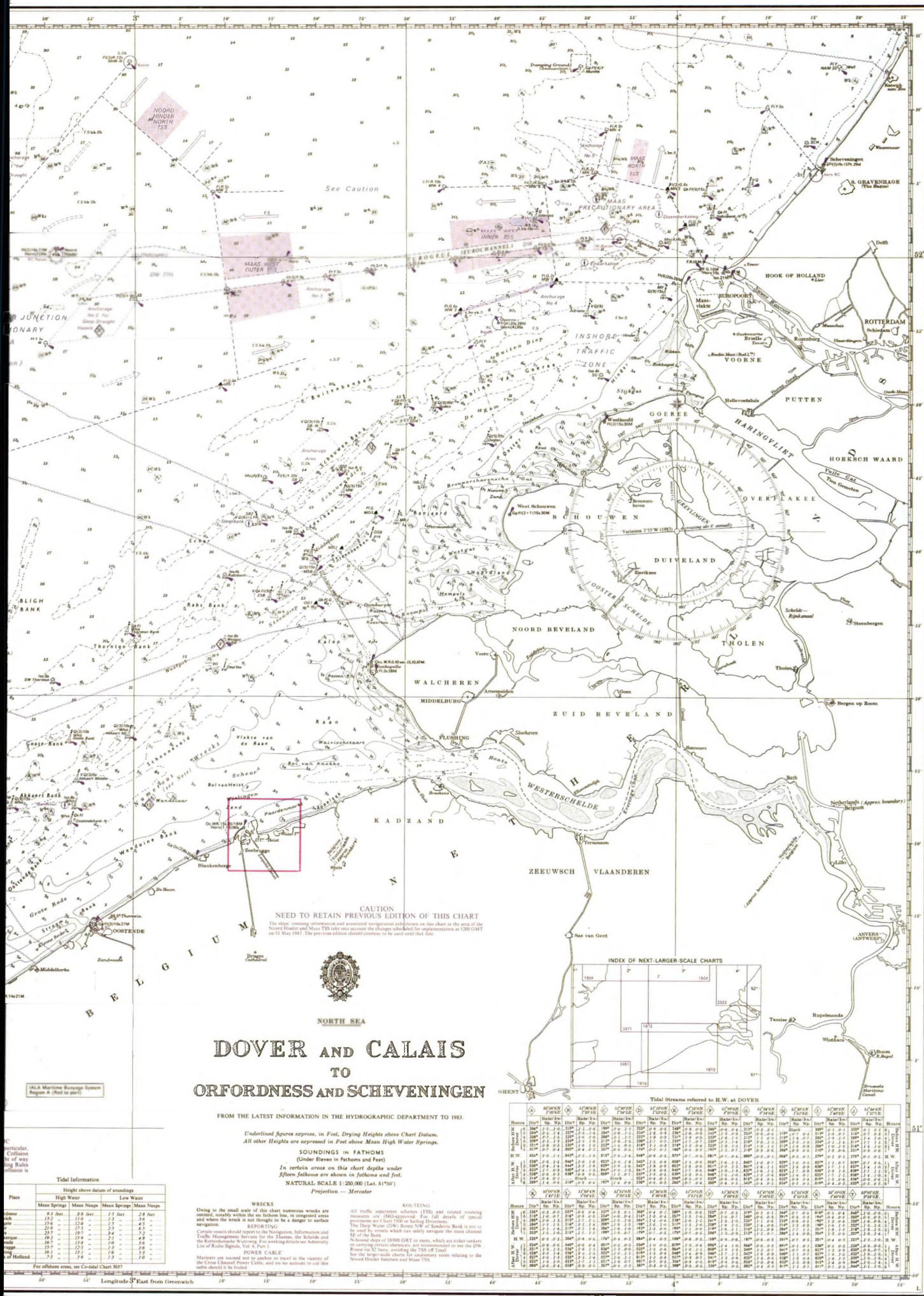
But Zeebrugge is also much more than merely a port of regional significance. For modern transportation techniques, both land- and sea-borne, as they are taking shape now, Zeebrugge offers possibilities – e.g. its new outer port – that only few ports in Western Europe can provide.

With all that is ready today and will become available tomorrow, greath things can be achieved. New techniques and new concepts demand new locations. Zeebrugge is a new port for Europe.

Fernand Traen
President of the
Bruges-Zeebrugge Port Authorities
(MBZ)







DOVER AND CALAIS TO ORFORDNESS AND SCHEVENINGEN

FROM THE LATEST INFORMATION IN THE HYDROGRAPHIC DEPARTMENT TO 1983

Underlined figures express, in Feet, Drying Heights above Chart Datum.
All other Heights are expressed in Feet above Mean High Water Springs.

SOUNDINGS IN FATHOMS
(Under Eleven in Fathoms and Feet)

In certain areas on this chart depths under
fifteen fathoms are shown in fathoms and feet.

NATURAL SCALE 1:200,000 (Lat. 51° 50')

Projection — Mercator

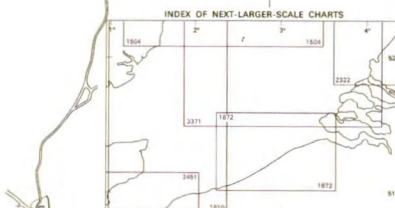
WRECK

Owing to the small scale of this chart numerous wrecks are omitted, notably within the 50 fathom line, in congested areas and where the wreck is not thought to be a danger to surface navigation.

ROUTING
All traffic separation schemes (TSS) and related routing measures are IMO-approved. For full details of special provisions see Chart 5010 or sailing Directions.

POWER CABLE

Mariners are warned not to anchor or trail in the vicinity of the Cross Channel Power Cable, and on no account to cut the cable should it be located.



Tidal Streams referred to H.W. at DOVER											
From	To	Force	Direction	Force	Direction	Force	Direction	Force	Direction	Force	Direction
1	2	1	2	1	2	1	2	1	2	1	2
3	4	3	4	3	4	3	4	3	4	3	4
5	6	5	6	5	6	5	6	5	6	5	6
7	8	7	8	7	8	7	8	7	8	7	8
9	10	9	10	9	10	9	10	9	10	9	10
11	12	11	12	11	12	11	12	11	12	11	12
13	14	13	14	13	14	13	14	13	14	13	14
15	16	15	16	15	16	15	16	15	16	15	16
17	18	17	18	17	18	17	18	17	18	17	18
19	20	19	20	19	20	19	20	19	20	19	20
21	22	21	22	21	22	21	22	21	22	21	22
23	24	23	24	23	24	23	24	23	24	23	24
25	26	25	26	25	26	25	26	25	26	25	26
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37	38	37	38	37	38	37	38	37	38	37	38
39	40	39	40	39	40	39	40	39	40	39	40
41	42	41	42	41	42	41	42	41	42	41	42
43	44	43	44	43	44	43	44	43	44	43	44
45	46	45	46	45	46	45	46	45	46	45	46
47	48	47	48	47	48	47	48	47	48	47	48
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93	94	93	94	93	94	93	94	93	94	93	94
95	96	95	96	95	96	95	96	95	96	95	96
97	98	97	98	97	98	97	98	97	98	97	98
99	100	99	100	99	100	99	100	99	100	99	100

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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 September 20	Installation of the "Commission mixte de Bruges Port de Mer" (Mixed Committee Bruges-Seaport), which on invites designs for the construction of a seaport at Bruges with an outlet to the sea via Heist.
1892	March 31 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 September 6 September 13 November 25	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. Foundation of the "Compagnie des Installations Maritimes de Bruges" (now: "Maatschappij van de Brugse Zeevaartinrichtingen" or in short MBZ) the Bruges-Zeebrugge Port Authority.
1907	July 23	Official inauguration of the harbour complex by H.M. King Leopold II.
1924	April 23/24	Establishment of the "Société Belgo-Anglaise des Ferry-Boats" (Anglo-Belgian Company of Ferry-Boats (now "Belgisch-Engelse Vennootschap der Ferry-Boats") and inauguration of the first trainferry service between Zeebrugge and Harwich.
1953	June 27	Opening of the trainferry terminal in the outer port.
1962	June 1 October 24	Call of the first Sinclair oil tanker. Inauguration of the Prince Philip Dock.
1966	March 16	Start of the first carferry service between Zeebrugge and Dover by Townsend (Thoresen) Car Ferries.
1968	March 19 May 9 June 21	Call of the first container vessel on the Zeebrugge-Harwich run. Call of the first VLCC for Texaco Oil Company. Official inauguration of the Short-Sea Container Terminal.
1970	March	Government decision in favour of the extension of the port of Zeebrugge.
1971	June 10	Official inauguration of the "Ocean Container Terminal 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 eventual dimension of the outer port.
1983	November 8	First commercial sea-going vessel passes through the new sealock.
1984	April 10	Official Opening and Christening of the new sealock as P. Vandamme lock.
1985	July 20	Official inauguration of the new port of Zeebrugge by H.M. King Baudouin I.





Management and operation

3.1

Legal basis

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

3.2

Structure of M.B.Z.

The M.B.Z., founded on November 25, 1895, has the legal status of a "limited company"; but it is also 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 more 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 Managing 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; it counts at least 3 and at most 5 members.

Daily management is performed by the President-Managing 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

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, André Decloedt**, Robert Jonckheere,
Jean Leclercq, Hendrik Olivier, Robert Simoen*,
Philippe Van den Borre, Marcel Vandewiele,
Oliver Vanneste

Auditor of the Government

Eric Stroobants

Representative of the Minister of Finance

Frans Schenk

College of Auditors

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

André Goossens, Erwin Priem, Emile Tytgadt,
Andries Van den Abeele, Johan Van Oostveldt

Revisor

Freddy Caluwaerts

Management

General Manager :

Maurice Michiels

Inspector-general :

Jan Eerdeken

Departments

Administration and Personnel :

Commercial Department and Public Relations :

Johan Kimpe, Assistant-Adviser
Louis Vande Kerckhove, Commercial Adviser
Walter Falleyn, Administrative Secretary for
Information

Economic Studies Department :

Financial Department :

Harbour Master's Office :

Luc Maertens, Administrative Secretary
Raymond Valcke, Administrative Secretary
René Van Havere, Senior Harbour Master
Robert Creyne, Harbour Master

Technical Department :

Jean Decort, Adviser
Donald Duthieuw, Project-leader



3.4

Addresses

Head Office :

Louis Coiseaukaai 2
 B-8000 Brugge
 Tel. 050/44 42 11
 Tlx. 81.201 porbrg b
 Telegrams : Ports Brugge B
 V.A.T. 205.097.392
 Register of Commerce : 95 Brugge

Harbour Master's Office :

P. Vandamme House
 Isabellalaan 1
 B-8380 Zeebrugge - Brugge 5
 Tel. 050/54 32 40
 050/54 32 34 (Port Administration)
 Tlx. 81.205 porzbr b
 Port Control
 Leopold II Dam 25
 B-8380 Zeebrugge - Brugge 5
 Tel. 050/54 32 33

Sealock operations :

P. Vandamme lock
 P. Vandamme House
 Isabellalaan 1
 B-8380 Zeebrugge - Brugge 5
 Tel. 050/54 32 31

Sealock 1907
 Kapitein Fryattstraat 1
 B-8380 Zeebrugge - Brugge 5
 Tel. 050/54 40 12

Technical Department Zeebrugge :

P. Vandamme House
 Isabellalaan 1
 B-8380 Zeebrugge - Brugge 5
 Tel. 050/54 32 10

Mole gate watchmen
 Tel. 050/54 47 67

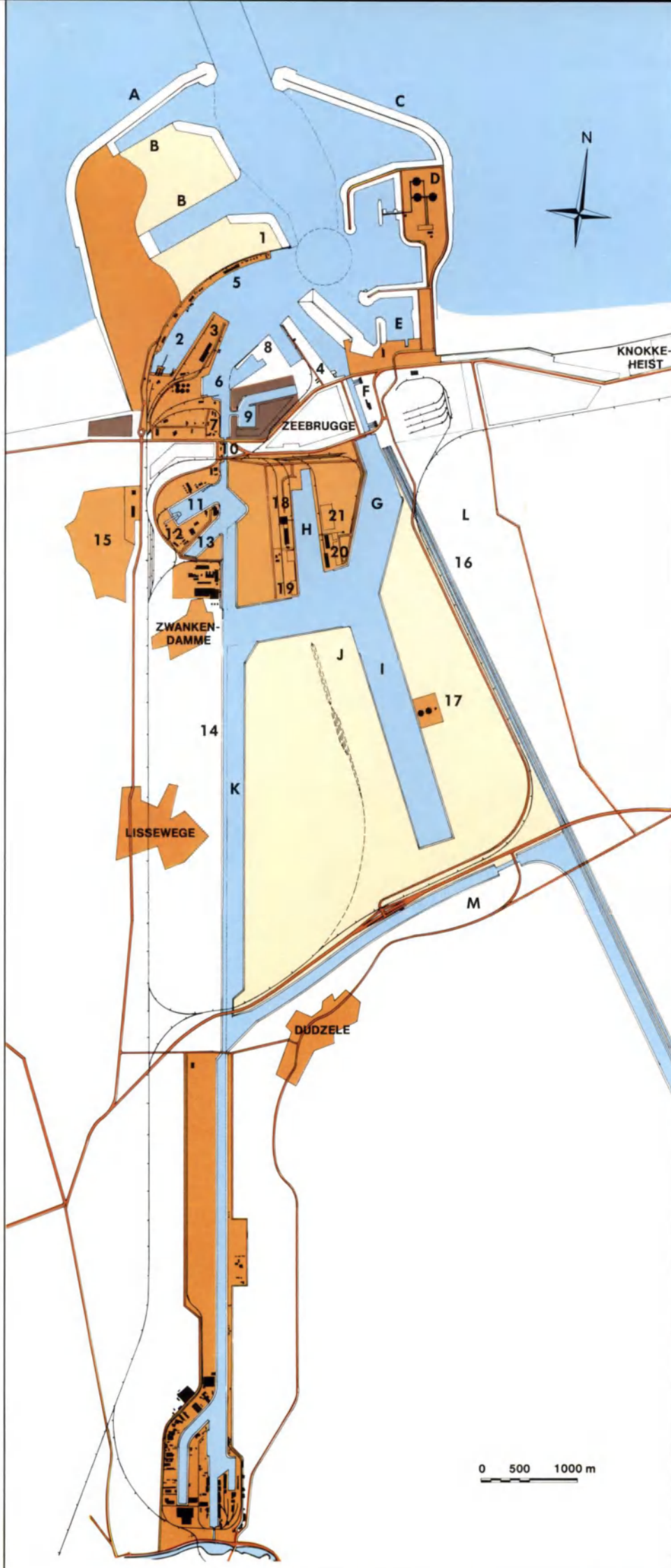
Swedish Quay gate watchmen
 Tel. 050/54 47 67

Slipway Prince Philip Dock
 Tel. 050/54 62 64

Bridge "Herdersbrug" Dudzele
 Tel. 050/59 91 73







Expansion works

(under construction or projected)

- A western dam
- B planned docks
- C eastern dam
- D LNG terminal
- E working harbour
- F new sea lock
- G junction dock
- H northern dock
- I southern dock
- J deepwater quay
- K widening of the Baudouin canal
- L green area
- M canal for pusher barges

Present situation

- 1 Leopold II dam
- 2 ro/ro terminals
- 3 ocean containerterminal Zeebrugge (OCZ)
- 4 SeaRo terminal
- 5 oil quai
- 6 trainferry terminal (TFT)
- 7 short sea container terminal (SCT)
- 8 military base
- 9 fishing harbour
- 10 sea lock
- 11 prince Philip dock
- 12 slipway
- 13 dock
- 14 Baudouin canal
- 15 projected transportarea
- 16 discharge culverts (Schipdonk- and Leopold canal)
- 17 natural gas storage plant (peak shaving installation)
- 18 multi-purpose terminal (C.T.O.)
- 19 terminal for bulk goods (Z.B.M.)
- 20 terminal for fruit and other agricultural products (B.N.F.W.)
- 21 SeaRo

- existing port area
- port area under construction or projected

0 500 1000 m

Present Situation

4.1

Geographical position

Zeebrugge lies directly at the Belgian coast of the North Sea, 22.4 km West of the mouth of the Scheldt estuary, 10.0 km West of the Dutch-Belgian border.

Geographical co-ordinates (lighthouse Mole): 51°20'N - 03°12'E.

Administratively, Zeebrugge is part of the City of Bruges, in the Province of West-Flanders, the only Belgian province bordering the North Sea. Bruges counts approx. 118,000 inhabitants, 5,000 of whom live in Zeebrugge.



4.2

Maritime access

Approach :

starts at A.1 buoy, 14 miles N.W. of the port lco-ordinates: 51°22'N30"N - 2°53'30"E.

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

Access Channel :

"Pas van het Zand", beacons; 4,600 m long, 500 m wide; depth ZI- 12 m) LLWS over a width of 300 m; direction NW-SE.

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 HW
- + 0.40 m at LW

• neap tide :

- + 3.82 m at HW
- + 1.05 m at LW



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.

Wireless traffic: 050/70 24 38

- Ostend Radio for all messages VHF channel 16
- pilotage: A1 buoy: VHF channel 6
- Port pilotage Zeebrugge: VHF channel 9
- Port control: VHF channel 13 & 71
- tugs: via Port control

Pilotage :

- Pilotage obligation;
compulsory for LNG-carriers
- from Al-light buoy (14 miles NW of the port; co-ordinates : 51°22'30"N, 02°53'30"E) or
- from Zand-I buoy (entrance "Pas van het Zand")
- applications to pilot station "Wandelaar", via Ostend Radio, VHF channel 16

- addresses Pilotage Service :
Ostend :
Sir Winston Churchillkaai 2
B-8400 Oostende
Tel. 059/70 77 01

Zeebrugge :
Loodswezenstraat 30
B-8380 Zeebrugge - Brugge 5
Tel. 050/54 50 72

Towage :

- from Zand-I-buoy
- permanently available : 3 tugs (bollard pull : 19 to 43 tons);
- extra tugs available on request;
- applications to Port control Zeebrugge, VHF channel 13 & 71, at least 6 hrs. in advance.
- Address Towage Service : Unie van Reddings- en Sleepdienst (U.R.S.)
c/o Ruys & Co

Leopold II-dam 2
B-8380 Zeebrugge - Brugge 5
Tel. 050/54 42 60
Tlx. 81.930

Salvage :

- via Ostend Radio VHF channel 13
- operated by Pilotage service (see above)

Water salinity :

- 1,025



4.3

Port subdivision

The three main port areas are :

- the outer port at Zeebrugge: 230 ha
 - new eastern outer port: 140 ha (including working harbour and P. Vandamme lock)
 - western outer port: 90 ha (without port under construction of 270 ha)
- the inner port at Zeebrugge and the Baudouin canal up to the Herdersbrug (road bridge) at Dudzele: 1,221 ha (without the Transport Zone)
- the inner port at Bruges, from the Herdersbrug to the junction lock at Bruges, comprising the new industrial area "Herdersbrug": 320 ha.

Total net area of 1,771 ha.

4.4

The outer port at Zeebrugge

(see map, page 19)

4.4.1

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

Quays

Number	Length	Water depth
1, 2, 3	450 m	10.50 m LLWS
4, 5, 6	375 m	9 m LLWS
6 (partly) 7, 8, 9	746 m	7.20 m LLWS

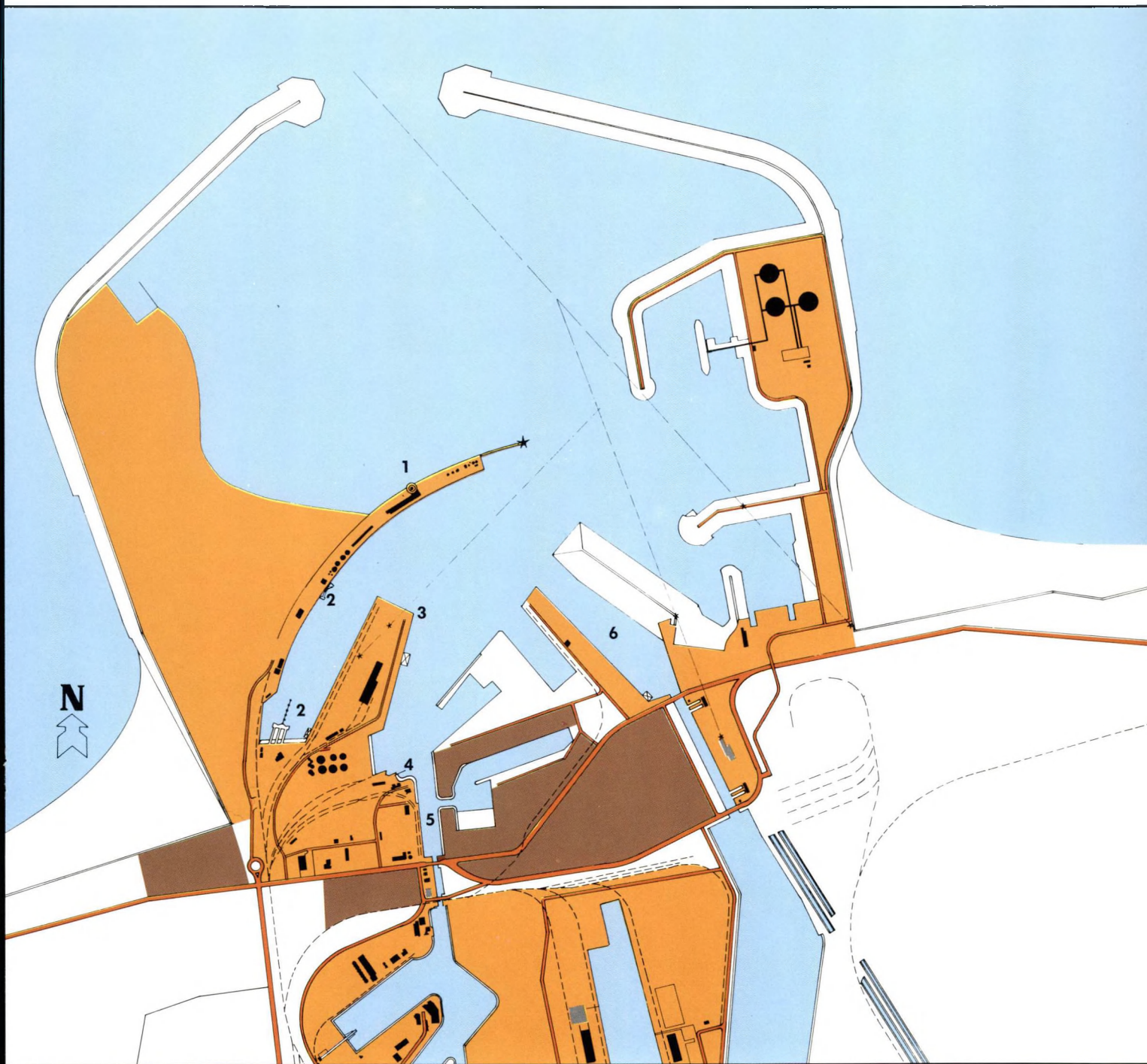
Cranes : 10 electric travelling cranes

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

Sheds : total area : 7,578 sq.m.

Number	Dimensions	Floor area
I	25 x 25 m	625 m ²
II	50,40 x 15 m	776 m ²
V	115 x 20 m	2,300 m ²
VI	125 x 15 m	3,877 m ²

Open air storage : approx. 4 ha





Other installations :

Bunkering station :

5 tanks, total capacity 20,450 cub.m.
(bunkering from lighter, however, is possible on all quays).
(see 6.10.1)

Gasfreeing station :

(near bunkering station); capacity
4,000 cub.m. gaseous nitrogen (see 6.10.2)

Maritime station :

- equipped for the embarkation and disembarkation of cruise-ship passengers (hall, banking services, refreshment rooms, etc.);
- permanent exhibition "Expo Zeebrugge" with film projection room.

Tank storage for molasses :
10 tanks with a total capacity of 87,350 tons (see 6.10.3).

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

Private carferry terminal at quays 6 and 7.

4.4.2

The carferry terminals

Area : 12 ha (for extension, see 8.2.2)

Quays 6 and 7 : 1 private ro/ro terminal, with 2 berths.

Technical description : see 6.2.2.

Quays : 10, 11, 12 : 2 public ro/ro berths

Technical description: see 6.2.1.

Quay 13 : 1 private berth

Technical description : see 6.2.3.

4.4.3

The western pier

Area : 18 ha

Quay length : 1,615 m, 1,525 m of which with water depth of 13 m below LLWS
quay n° 13 : 90 m of connecting quays
quay n° 14, 15 : 715 m (OCZ)
quay n° 16 : 205 m (OCZ and waiting quay)

quay n° 17, 18 : 400 m (SeaRo)

quay n° 18a : 195 m (terminal for refined oil products)

Quay height : 8 m above LLWS

4.4.4

The Train Ferry terminal (T.F.T.)

area : 4 ha

Quay n° 19 : berth for trainferry ships

Water depth : Z (-6.70 m) LLWS

Technical description : see 6.1.

4.4.5

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

Area : 9.50 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

Technical description : see 6.3.1

Includes warehouse (Min. Beernaertstraat), with an area of 2,850 sq.m.

(dimensions: ground floor 75 x 38 m, 1st floor 15 x 7 m).

4.4.6

The Swedish Quay

Area : 12.4 ha

Quays n° 40, 41, 42, 43, 44, with roll-on/roll-off freight terminal

Length : 825 m

Water depth : Z (- 18 m) LLWS

Quay height : Z (+ 8 m) LLWS.

Note

The Prince Albert Dock and the Tidal Dock form no part of the MBZ concession. They constitute the Zeebrugge fishing harbour which is managed and operated by the City of Bruges. At this moment, the Prince Albert Dock is extended with 125 m.

Address :

Stedelijke Vismijn

Vismijnstraat

B-8380 Zeebrugge - Brugge 5

Tel. 050/54 41 20.



4.5

The Inner Port at Zeebrugge

(see map, page 22)

4.5.1

The P. Vandamme lock

Length : 500.30 m between outer gates

width : 57 m

Sill depth : Z (- 15 m) LLWS

The water level in the inner port is at

Z (+ 3.50 m) LLWS;

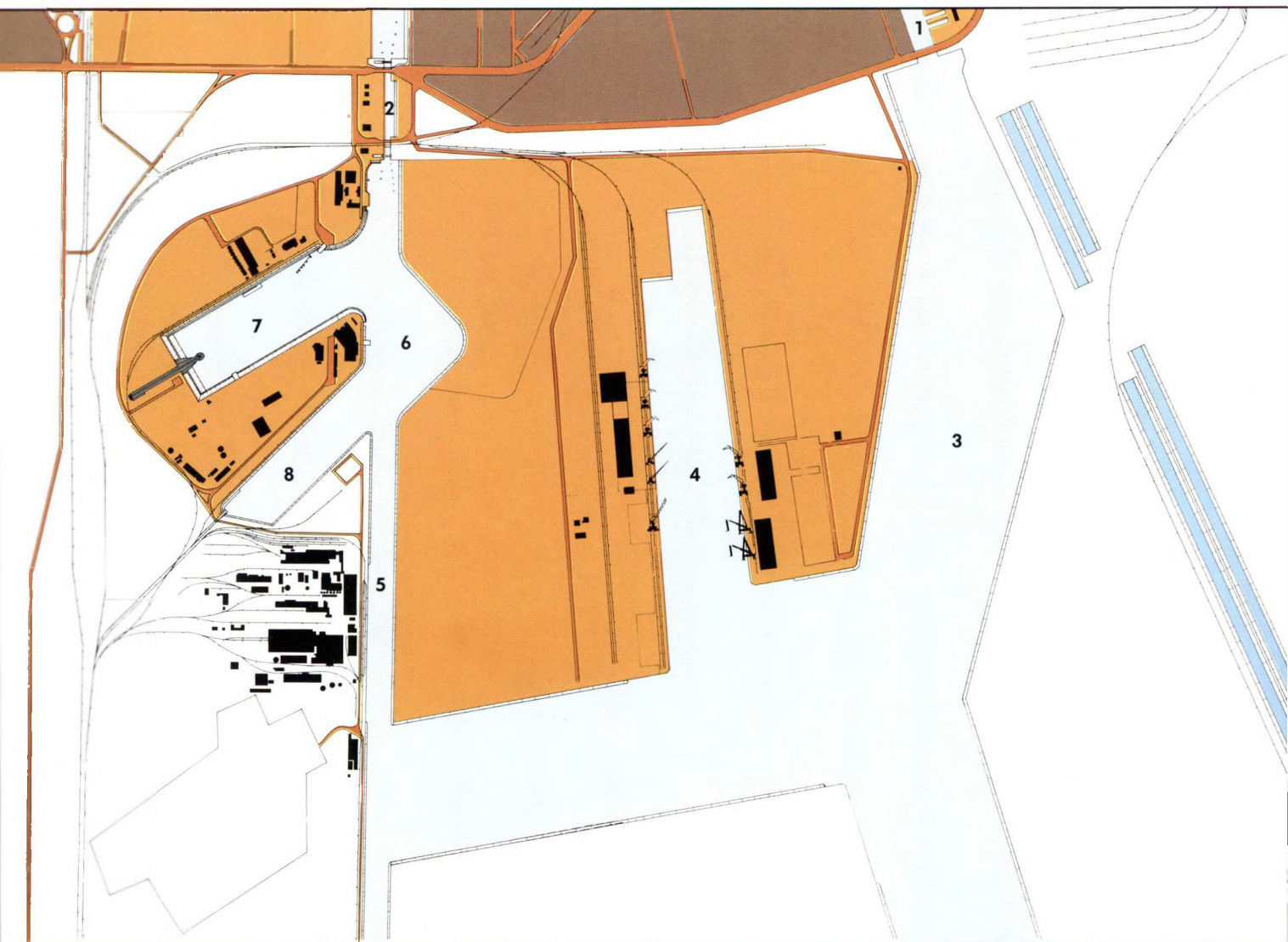
according to the level of the tide in the outer port, the usable water depth in the lock varies between 15.00 and 18.50 m.

Every lock head is equipped with two steel sliding doors, meaning that a reserve-door is always available at both lock heads.

Both the sea-side and land-side heads are equipped with two drawbridges each, in order not to interrupt traffic along the coastal road.

The sealock, which has been named "P. Vandamme lock" after the late Burgomaster of Bruges and President of the Port Authorities, was officially opened on April 10, 1984, by Mr. Louis Olivier, Minister of Public Works.





4.5.2 The Sealock 1907

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 m and 7.80 m.

4.5.3 The connection dock

Total length : 3,200 m, from P. Vandamme lock to Baudouin canal.
Width : 210 m at sealock exit, widening to 400 m in first section, 600 m in front of east quay of North inlet basin, and again 400 m in front of west quay of same basin to Baudouin canal.
Depth: the water level in the Baudouin canal being at Z (+ 3.50 m), the usable depth in the connection dock varies between 15 and 18.50 m.

Length of embankments : 6,000 m, 400 m of which have been executed in perpendicular quay walls (quays n° 100 and 112), the remainder temporarily in slopes (see also 8.3).

4.5.4 The North inlet basin

Length : 1,130 m with a width which varies between 275 m and 225 m + 210 m over a width of 125 m at Northern end
Depth : 14 m

Quays:
East quay : (Nieuw-Zeelandkaai), n° 101 to 105 : length 1100 m along actual basin

West quay : (V.S.A.-kaai), n° 106 to 111 : length : 1,130 m, plus another 210 m of quay, parallel with, but not in line with the length of 1,130 m.

North quay : (Canadakaai), executed as a ro/ro-ramp over the full width of 225 m

Equipment: for further information on terminals and equipment, see 6.4.1, 6.6, 6.7, 6.8, 6.9.

4.5.5

The Baudouin canal

Total length: 12 km

Length between the sealock 1907 and the bridge at Dudzele: 5.350 km

Width at water surface: 70 m between sealock 1907 and Herdersbrug

Width at bottom: 22 m

Depth: 8.40 m = Z (- 4.90 m) + canal level Z (+ 3.50 m), from km 12.000 to km 10.000 (northern part of canal); 7.00 m temporarily from km 10.000 onwards (to Bruges inner port) (will be deepened to 8.00 m).

Quays, with a length of 450 m, in front of the Coke and Glass works (quays n° 312 and 313).

4.5.6

The turning area

Length: 500 m

Width: 175 m

Depth: 8 m

4.5.7

The Prince Philip dock

Length: 560 m

Width: 200 m

Depth: 8.40 m

Quays n° 301 to 307.

4.5.8

The former Ferry dock

Length: 500m

Width: 130 m

Depth: 8 m

Quays n° 308 to 311

4.6

The inner port at Brugge

(see map, page 24)

4.6.1

The Baudouin canal

Length between the bridge at Dudzele to the junction lock: 6.650 km

Width at water surface: 115 m (only

between Herdersbrug and junction lock)

Width at bottom: 50 m

Depth: 7.00 m

4.6.2

The East dock (Klein Handelsdok)

Length: 370 m

Width: 90 m

Depth: 8 m

4.6.3

The West dock (Groot Handelsdok)

Length: 550 m

Width: 90 m

Depth: 8 m

4.6.4

The Industrial dock (Burgemeester Vandammedok)

Length: 1,080 m

Width: 125 m

Depth: 8 m

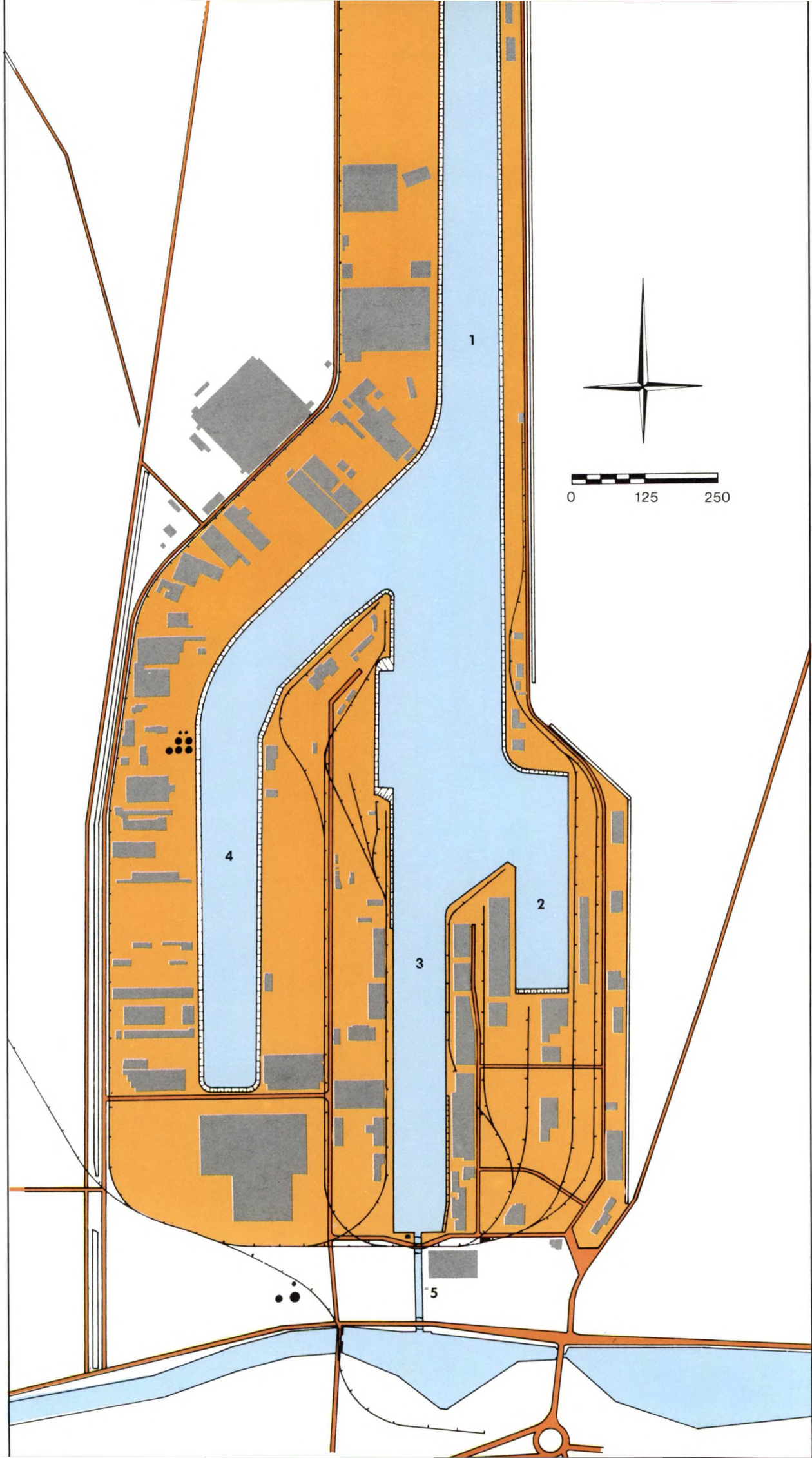
4.6.5

The Junction lock

Length: 115 m

Width: 12 m

Sill Depth: 4 m



Equipment

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

Total quay area : 35,000 m2
Total length of embankments (including quays) : 13,080 m

Sheds

Number	Dimensions	Floor area
I	150 x 15 m	2,250 m2
II	130 x 30 m	7,800 m2 (two stor.)
III	60 x 30 m	1,800 m2
IV	50 x 30 m	1,500 m2
V	40 x 26 m	1,040 m2
VI	96 x 60 m	6,000 m2
VII	20 x 30 m	600 m2
X	40 x 25 m	1,000 m2
Total area		21,990 m2

Open air storage area : approx. 25 ha.

Cranes (not including privately owned cranes)

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





Port functions

5



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 :

5.1

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

More than :

180 sailings per week or 8,000 per year
9 million tons of cargo
2 million passengers.

Evolution

Year	Number of sailings	Cargo (x 1,000 t)	Passengers (x 1,000)	TEU's (number)
1970	2,750	1,805	498	±92,000
1975	4,888	3,596	1,164	112,500
1980	6,085	5,414	2,305	108,200
1983	6,072	6,089	2,021	127,200
1984	6,893	7,835	2,093	140,900
1985 (9 m.)	5,536	6,791	1,586	165,900





Regular services calling at Zeebrugge

	Operated by	Since	Number of sailings	Type of service	Represented in Zeebrugge by
Zeebrugge-Harwich	British Rail	1924	1 or 2 per day	Trainferry (freight & passengers)	B.E.V. der Ferry Boats Tel. 050/54 47 91
Zeebrugge-Dover	Townsend Thoresen	1966	13 per day	Carferry (freight and passengers)	Townsend (Belgium) Tel. 050/54 50 50
Zeebrugge-Felixstowe	Townsend Thoresen	1974	3 per day	Carferry (freight and passengers)	Townsend (Belgium) Tel. 050/54 50 50
Zeebrugge-Hull	North Sea Ferries	1972	2 per day (second sailing freight only)	Carferry (freight and passengers)	North Sea Ferries (Belgium) Tel. 050/54 34 11
Zeebrugge-Oslo	Fred Olsen Lines	1983	1 per week	ro/ro (freight only)	Cobelfret Tel. 050/54 53 12
Zeebrugge-Harwich	Freightliners Ltd.	1968	2 per day	container (freight only)	B.E.V. der Ferry Boats 050/54 52 11
Zeebrugge-Chatham	Kent Lines	1984	12 per week	ro/ro (freight only)	Cobelfret Tel. 050/54 53 12
Zeebrugge-Immingham	Cobelfret	1984	7 per week	ro/ro (freight only)	Cobelfret Tel. 050/54 53 12
Zeebrugge-Dagenham	Ford Motors Cy	1984	2 per week	ro/ro (freight only)	Zeebrugge Shipping & Bunkering Co. Tel. 050/54 42 61

5.2

Base port for intercontinental container and ro/ro services

Regular deep sea services calling at Zeebrugge

Operated by	Number of	Ports of call	Represented in Zeebrugge by
Australia/New-Zealand			
A.N.Z.E.C.S.	every 10 days	Fremantle, Melbourne, Sydney, Auckland, Wellington, Lyttelton, Port Chalmers	C.G.M. Tel. 050/54 53 01
A.C.T./A.N.L.	every 10 days	Fremantle, Melbourne, Sydney, Auckland, Wellington, Port Chalmers	A.Z.A. Tel. 050/54 52 01
A.B.C. Container Line	every 3 weeks	Melbourne, Sydney, Fremantle, Adelaide, Adelaide, Brisbane + US Gulf Ports: New Orleans, Houston and Savannah	Zeebrugge Shipping & Bunkering Co. Tel.050/54 42 61
Scan Carriers A/S	every month	Fremantle, Adelaide, Melbourne, Burnie, Sydney, Newcastle, Brisbane, Townsville, Auckland, Napier, Timaru and Jeddah	Best & Osterrieth Tel. 050/54 51 06
North America			
Caribbean Islands Carol	every week	Bridgetown, Port-of-Spain, Willemstad, Oranjestad, Ponce, Rio Haina, Port-au-Prince, Kingston, Santo-Tomas-de-Castilla, Puerto Cortes	A.Z.A./C.G.M./ A.M.M./Ruys & Co. Tel. 050/54 52 01 54 53 01 54 50 97 54 42 60
Streamline	every month	La Guaira, Cristobal, Puerto Cortes, Santo-Tomas-de Castilla, Port Limon, Cartagena, Santa-Maria	Best & Osterrieth Tel. 050/54 51 06

Africa

Africatainers S.N.C.D.V.	every 2 weeks	Abidjan, Apapa, Téma, Lomé, Cotonou, Douala, Libreville, Port Gentil Pointe Noire	Zeebrugge Shipping & Bunkering Co. Tel. 050/54 42 61
Woermann Linien D.A.L.	every 2 weeks	Abidjan, Apapa, Téma, Lomé, Cotonou, Douala, Libreville, Port Gentil, Pointe Noire	Zeebrugge Shipping & Bunkering Co. Tel. 050/54 42 61
East Asiatic Cy	every 2 weeks	Dakar, Freetown, Monrovia, Abidjan, Téma, Lomé, Lagos-Apapa, Douala, Las Palmas de Gran Canaria, Santa Cruz de Tenerife	Best & Osterrieth Tel. 050/54 51 06
O.T. Africa Line AB	every 2 weeks	Dakar, Abidjan, Téma, Lagos-Apapa + other ports i.s.i.	Zeebrugge Transport Tel. 050/54 42 00
S.A.E.C.S.	every 5 days	Durban, Port Elisabeth, Cape Town	Zeebrugge Shipping & Bunkering Co. Tel. 050/54 42 61



5.3

Transshipment port for conventional general cargo

Year	Tonnage of conventional cargo (x 1,000 t)
1970	172
1975	196
1980	196
1983	258
1984	333
1985 (9 m.)	260



5.4.

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
1983	2,023
1984	2,096
1985 (9 m.)	1,588



6

Technical characteristics of the various terminals

6.1

Train Ferry Terminal (T.F.T.)

Operation and Management :

Belgisch-Engelse Vennootschap der Ferry-Boats

Head Office :

Montoyerstraat 17/19 B-1040 Brussel
Tel. 02/513 06 60
Tlx. 23.584 ferybo b

Terminal Office :

Loodswezenstraat 31
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%
maximum load : 600 kg/m² (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 :
maximum length allowed : 163 m
maximum 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

Carferry terminals

6.2.1

Public outer port terminal

Operation and management: M.B.Z.

Head office :

L. Coiseaukaai 2 B-8000 Brugge
Tel. 050/44 42 11
Tlx. 81.201 portbr b

Public Terminal Office :

Carferrybuilding,
Doverlaan 7
B-8380 Zeebrugge - Brugge 5
Tel. 050/54 42 63

Present area : 7.0 ha

Description :

- Ramps
number: 2
length: 53 m
width of fareway: 3.50 m
width of the bridge, including two separate protected footpaths for passengers: 7.10 m
maximum load capacity: 400 kg/m² (82 lbs/sq.ft) (heavy articulated loads to a maximum of 60 tons with an axle load of 20 tons over 4 wheels).
inclination: maximum 10%

- Berths: 2,
on both sides of a line of 6 dolphins with a diameter of 10 m, linked with a gangway
length: 145 m
width: 33 m
water depth: Z (- 7 m) LLWS

- Ships:
maximum length allowed: no limitation
maximum 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. Both ramps are operated from 1 post by 1 person.

- The terminal area has a capacity of 600 cars and is divided into separate waiting lanes for incoming and outgoing traffic. The parking zone has a surface area of 5.0 ha.

- 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 accommodation for the shipowning companies, ship agencies, shipping companies. Spacious, up-to-date accommodation

ensures passenger comfort; waiting hall with video, restaurant and cafeteria (capacity 200 people). exchange, etc.

6.2.2

Private outer port terminal

Operation and Management:

North Sea Ferries (Belgium) nv
Leopold II-dam (Mole)
B-8380 Zeebrugge - Brugge 5
Tel. 050/54 34 11
Tlx. 81.322

Area: 2 ha 63 a 58 ca on which a terminal building of 47 x 24.8 m and checkpoint for ticket control and customs and immigration; and an extra parking of 5 ha 87 a 36 ca.

Two roll-on/roll-off vessels can moor and load or discharge at the same time at any tide.

Details linkspan:

- Overall length: 104 m
width: 23.20 m
one bridge length: 30 m
maximum load: 180 tons with a maximum of 30 tons per axle
second bridge length: 58 m
maximum load: 180 tons with a maximum of 30 tons per axle
Vessels with a draft of maximum 7.20 can be moored at LLWS
Length of vessel: no limit.
Width of ramp: maximum 18 m.

● Terminal area :

The space along the waterside apart from the checkpoints and building accomodates a parking space of 150 cars short and 50 cars long parking and there are further possibilities to increase upon request.

Besides 1,750 m² for parking small rolling stock.

Handling of unaccompanied vehicles and liftunits.

Unaccompanied trailers are towed by 9 tugmasters with a lifting capacity of 50 tons.

Containers, flats are carried on slave trailers which are available in sizes 6 m, 9 m and 12 m (20, 30, and 40 ft).

Lifting by a mobile crane, capacity SWL 30 tons.

3 forklift trucks with capacities varying from 7.5 to 30.5 tons.

With each lantern pole electrical facilities for cooling or heating units.

The terminal building accomodates the North Sea Ferries booking offices and administration, customs and immigration facilities.

Waiting halls and general facilities can very comfortably accomodate 1,500 passengers per call per vessel.

Checking-in freight and passengers is fully computerised.

The computer has direct links with Rotterdam-Europoort, Hull, Ipswich and Paris.

The terminal has rail connection.



6.2.3

Private inner port terminal

Management :

North Sea Ferries (Belgium) nv. (see 6.2.2.)

Area : 5.50 ha

Description :

- Bridge :

length : 24 m

width : 7.80 m

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

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

- Ships :

maximum length : unlimited

maximum beam : unlimited

maximum width of bow ramp : 8 m

- Terminal area :

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

- The terminal building (40 by 24 m) (2 floors) comprises booking offices and administration, customs offices and passenger hall (capacity : 150 people).



6.3

Container terminals

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

Operation and management :

Belgisch-Engelse Vennootschap der
Ferry-Boats

Head Office :

Montoyerstraat 17/19 B-1040 Brussel
Tel. 02/513.06.60
Tlx. 23.584

Operations Office :

Loodswezenstraat 31
B-8380 Zeebrugge - Brugge 5
Tel. 050/54 52 11
Tlx. 81.110

Area : 8 ha

Description :

- Quays : n° 21-22
length : 270 m
width : 53 m + 26 m handling area
water depth : Z (- 7.00 m) LLWS
quay height : Z (+ 7.30 m) LLWS
two berths for container vessels
- Gantry cranes : 2
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 beam : 15 m
portal height : 21.35 m
rail width : 31 m
maximum lifting height above HHWS :
15 m
spreader: dead weight: 9 tons

automatically adaptable to I.S.O.
container dimensions : 20, 30 and 40 feet

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

total length : 1,124 m (4 x 281 m)

capacity : 160 rails 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 :
B.E.V. der Ferry-Boats

Head Office :
Montoyerstraat 17/19 B-1040 Brussel
Tel. 02/513.06.60
Tlx. 23.584

Operations Office :
New Yorklaan
B-8380 Zeebrugge - Brugge 5
Tel. 050/54 52 71
Tlx. 81.277

Area : 16 ha
of which 15 ha for the actual terminal
(3.50 ha front quay, 11.50 ha rear quay,
parking and buildings)
1 ha for access railway yard

Description :

- Quays : n° 14-15
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 (double headbeam)	1 Boomse Metaalwerken (monorail type)
lifting capacity (s.w.l.) (spreader with dead weight 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	monorail
rail width	31.50 m	31.50 m
spreader width	12.20 m	11.00 m
portal height	26 m	25 m
maximum lift height	25 m above HHS 43 m over all	23 m above quay 40 m over all
maximum depth below quay level	22 m	16 m
maximum hoist speed laden empty-spreader	45 m/min 90 m/min	45 m/min 90 m/min
maximum trolley speed longitudinal gantry speed	120 m/min 50 m/min	150 m/min 50 m/min
rotation of the spreader	360°, 1 RPM	360°, 1 RPM
occasional heavy lifts	60 tons	45 tons
maximum wind velocity when operating	20 m/sec (7/8 Beaufort) pressure: 32 kg/sq.m	25 m/sec (9/10 Beaufort) pressure: 39 kg/sq.m
spreader: dead weight	10 tons automatically adaptable to I.S.O. 20 ft, 30 ft, 40 ft.	10 tons
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: 11.50 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;
trainstainer 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 (CFS):
covered sheds :
4,000 m² with railsiding inside and out;
7 loading bays for lorries;
7 loading bays for containers;
canopy of 1,000 m² for stripping and rewinning of containers and for handling IMO 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.

2.
Various reefer systems
 - a) mechanical chilling :
containers are kept cool by cold air circulation. The system can be used for chilled containers and for deep-frozen 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
 - a) 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 engines or stand-by engines.
 - b) porthole containers :
are connected to a cold-air-installation 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.

The system comes in sets of 24, 48 or 72 container slots which can keep up a temperature between + 13°C and - 25°C.

- Tower system, Holima type: 54 slots.

Tower system delivers 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 cryo-tower 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.





6.4

Roll-on/Roll-off terminals

(for freight only)

Operation and management: SeaRo nv
Zweedse kaai
B-8380 Zeebrugge - Brugge 5
Tel. 050/54 63 77 or 54 63 85
Tlx. 81.983

SeaRo nv operate three different terminals in Zeebrugge :

- one for ro/ro freight at the East Quay of the Western Pier in the outer port (adjacent to O.C.Z.).
- a second one for ro/ro freight also, at the Swedish Quay in the outer port;
- one for new cars only at the Nieuw-Zeelandkaai in the new inner port.

6.4.1

Western Pier terminal

Area : 2.50 ha

Quays :

total length : 400 m (quays n° 17 and 18)

width : 60 m

water depth : Z (13 m) LLWS

Equipment: MacGregor link span.

This is a special adaptation of the MacBridge (F) pontoon.

This pontoon bears a rectangular platform of 50 x 33 m.

The four pontoon pillars rest on the bottom by means of chains supported 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.

6.4.2

Swedish Quay terminal

Area : 12.40 ha

Parking space for 800 lorries or trailers

Description :

Quays :

total length : 825 m (lnrs. 40 to 44)

West quay : 725 m + 90 m

width : 120 m

water depth : Z (- 18 m) LLWS

Equipment: MacGregor-Navire link span

Design criteria :





- Tidal variation in quay height:
8.00 m at MLW
3.50 m at MHW
- Ship beams: 16 m to 21 m
- Ship ramp widths: 5 m to 16 m, axial ramps
- Design load : on shore ramp : 88 tonnes;
on pontoon superstructure : 120 tonnes.

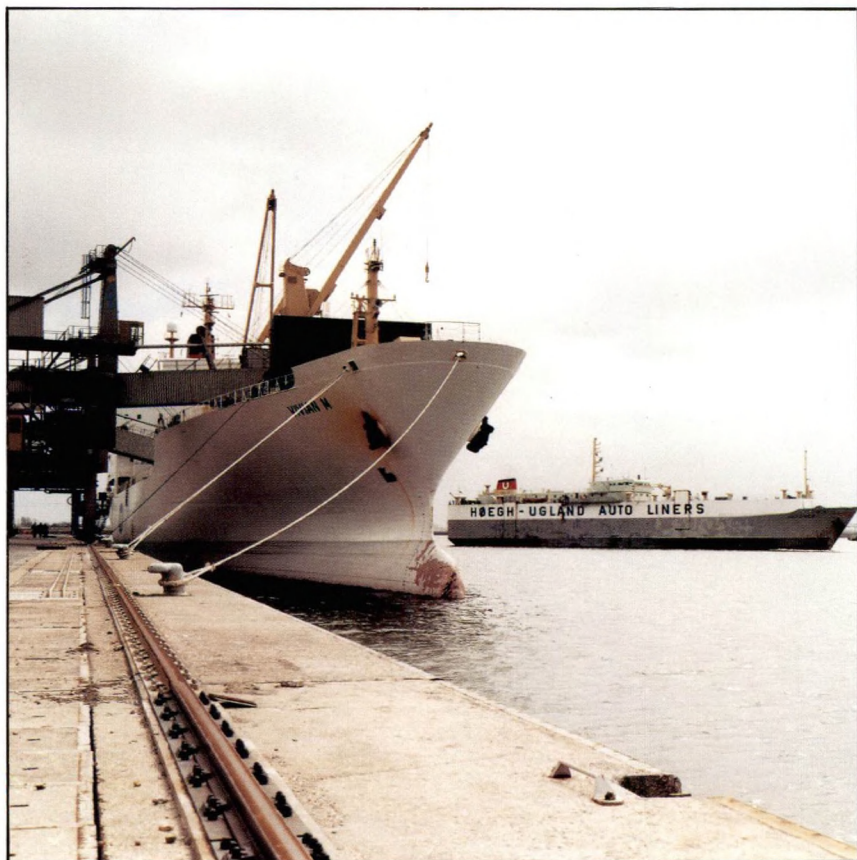
Pontoon :
dimensions : length 30.4 m (alongside

quay)
width : 19.5 m
is kept afloat by four ballast tanks and seven void spaces; height-adjusted and trimmed by means of a passive ballasting system.



Superstructure :
fixed ramp, 27.5 m long, providing a 1:10
incline leading to the shore ramp
entrance;
tapering in width from 18.5 m at landing
end to 7.0 m at shore ramp end.

Ramp :
length : 40 m
width : 7 m
consisting of two-lane driveway coupled
to a smooth-bottomed flap resting on the
shore.



Other equipment :
two railway tracks
total length 900 m
terminal building with office
acomodation 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 and 10% slope).



6.4.3.
Terminal for new cars.

Nieuw-Zeelandkaai at the North dock in the new inner port.
 Area: 3 ha, with possibility of extension to 6 ha.

Description:
 Quay nr. 103
 Pontoon: 27 x 13 m.
 Terrain of 30,000 m², surfaced and subdivided into parking lots, for storing 2,500 cars.

6.5

Combined rail/road traffic terminal

Operation and management:

Transport Rail Weg (T.R.W.)

Head Office:

Min. Vandenpeereboomstraat

Station West B-1080 Brussel

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 units (frame
dimensions : 4.87 x 2.50 x 3 m)
Containers can also be handled (with use
of a spreader).

- Special rail cars used for combined
road/rail traffic :
length : 16.44 m
width of undercarriage : 2.98 m



6.6

Terminal for fruit and other agricultural products

Operation and management:

Belgian New Fruit Wharf (B.N.F.W.)

Head Office:

Citroenweg 2 B-2020 Antwerpen

Tel. 03/541 71 85

Tlx. 32.343

Operations Office:

BNFW - North Sea division

Nieuw-Zeelandkaai

B-8380 Zeebrugge - Brugge 5

Tel. 050/54 52 56

Area: 8.64 ha

Description:

- Quays: nrs, 101, 102

length: 400 m along East quay

Depth: 14.50 m

- Sheds:

1.: shed of 142.90 m x 38 m

area: 5,430 m²

free height over all: 10 m

entrance gates: 6 m x 6 m

rail connection inside shed.

2.: shed of 143.92 m x 38.26 m

area: 5,506 m², fully insulated;

divided in two halves, one of which with

a free height of 10 m, the other

subdivided into four different temperature controlled compartments.

entrance gates: 6 m x 6 m

- Equipment:

cranes:

2 electric travelling cranes

capacity 8 t with 32 m reach or 16 t with

16 m reach.

3 mobile general cargo cranes, with

capacity of 40 t for handling palletised

commodities.

Cargoveyors:

Special facilities for continuous ship

unloading (esp. crates): 2, built by PWH.

capacity: 3,800 boxes p.h.







6.7

Multipurpose terminal

Operation and management:

Combined Terminal Operators nv (C.T.O.)
Noordelijk Insteekdok
V.S.A.-kaai B-8380 Zeebrugge - Brugge 5
Tel. 050/54 54 64
Tlx. 81.608

Area: 18 ha (extendable by 4 ha)

- parking area for containers and trailers: 8 ha
- open quay for storage in crane reach: 52 x 600 m
- 4 ha reserved for expansion of warehouses

Description:

- 600 m quay wall, quays nrs 106, 107, 108
 - 50 m fixed Ro/ro berth
 - a Ro/ro pontoon 60 x 22 m of 3,600 t deadweight
 - constant draught of 13.50 m
- General cargo warehouse of 6,000 sqm
With an apron covering a railconnection over 32 m
 - flatsilo of 32,000 m³ with two compartments ventilated
 - apron of 50 x 34 m
- 3 x 750 m railtracks along the waterfront with weighing bridge
 - 3 x 750 m railtracks on the landside of the warehouse, one of which running under an apron of 32 x 8 m, enabling cargo handling under cover.

Equipment:

- Cranes
All cranes equipped with grabs, cargo hooks or container spreader 20'-40'
 - one crane Boomse Metaalwerken:
 - hook:
 - 20 t x 50 m
 - 28 t x 40 m
 - 40 t x 25 m

- grab:
 - 20 t x 50 m
 - 28 t x 36 m

three cranes Peiner:
8 t x 32 m
16 t x 16 m

- two mobile cranes
Gottwald 40 t x 11.29 m
19.7 t x 45 m

- one Bridge crane 45 t

- Rolling material
 - Forklifts ranging from 3 to 42 t, Ro/ro-forklifts, tugmasters, Ro/ro-tugmasters
 - bulldozers, tractors, flatbeds
 - own transportation for all cargo and containers within port area
 - maintenance in own workshop, completely equipped

- Bulk handling
(Capacities referring to hard grains, density 0.6 free flowing)
 - transportation system developed for minimal breakage.
 - discharge by grabs - 10,000 t/24 h.
 - ex-rail via two dumping pits: 700 t/h
 - discharging and loading of trucks
 - loading ships from silo: 10,000 t/24 h
 - weighing tower: with an accuracy of 1/100
 - specially developed system for direct transfer ex-rail into ship for delicate products - all free-flowing on belts - no redlers - 350 t/h
 - mobile shiploader - 10 m reach - 10 m height above quay - 700 t/h

- Bagging
 - 3000 t/24 h for 50 kg bags density 0.6
 - bags from 12 to 75 kg
 - accuracy maximum 25 g on 50 kg



6.8

Terminal for bulk commodities

**Zeebrugse Behandelingsmaatschappij
(Z.B.M.)**

Noordelijk Insteekdok

V.S.A.-Kaai B-8380 Zeebrugge - Brugge 5

Tel. 050/54 42 66

Head Office :

Compagnie Belge de Manutention
(C.B.M.)

Doornzelestraat 71 B-9000 Gent

Tel. 091/25 75 01

Tlx. 12.872

Area : 13.80 ha

Description :

• Quays : nrs. 109, 110, 111

total length : 530 m

total width : 250 m

water depth : 14.50 m

• Equipment :

1 electric travelling crane, for grab or
general cargo operations :

lifting capacity :

40 t at 25 m

28 t at 36 m

20 t at 50 m.

discharging capacity: 750 t p.h.

3 electric travelling cranes for grab or
general cargo operations :

lifting capacity :

16 t at 16 m

8 t at 32 m

discharging capacity : 250 t per hr.

2 mobile cranes for grab or general
cargo operations :

lifting capacity : 20 t at 45 m

discharging capacity : 600 t per crane
and per hr.





6.9

Liquid storage terminals

6.9.1

For refined products

Name + address	Number of storage tanks	Total storage capacity
1.		
Outer port		
Zeetank nv New Yorklaan 12 B-8380 Zeebrugge - Brugge 5 Tel. 050/54 46 12 Tlx. 81.304	11	146,000 m3
2.		
Inner port		
Petrover Louis Coiseaukaai B-8000 Brugge Tel. 050/59 94 17 59 94 18	4	12,500 m3
Detavernier pvba Tieltstraat 57 B-8050 Wingene Tel. 051/65 58 14	3	5,500 m3
L. François Baron Ruzettelaan 308 B-8320 Brugge 4 Tel. 050/53 51 51	3	3,500 m3
Groep Rosseel L. Coiseaukaai 21 B-8000 Brugge Tel. 050/33 99 14	2	4,000 m3
Traen Gebrs. pvba Pathoekeweg 50 B-8000 Brugge Tel. 050/31 51 51	9	10,000 m3



6.9.2 For glues

Merckx nv

Head Office :

St. Janslaan 1 B-1150 Brussel
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 m3 (glues and other raw materials
for timber industry)

6.9.3 For molasses

Tameco nv

Leopold II-dam B-8380 Zeebrugge -
Brugge 5
Tel. 050/54 43 18

Head Office :

Tate & Lyle PLC
Sugar Quay, Lower Thames Street
GB-London EC 3R 6DQ

- Storage capacity :
11 tanks, total 29,700 m3

6.9.4 **For cereals**

1) Borlim nv

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 quay length : 99 m

2) Dumingra

Pathoekeweg 32 B-8000 Brugge
Tel. 050/31 51 61

- Storage capacity :
2 siloes, 11,300 tons

3) H.E.L.B.

Krakeleweg 34 B-8000 Brugge
Tel. 050/31 50 24

- Storage capacity :
95 cells, 10,000 tons

4) Voeders Huys

Krakeleweg 28 B-8000 Brugge
Tel. 050/31 80 38

- Storage capacity :
84 cells, 8,000 tons

5) W.A.C.O.

Pathoekeweg 68a B-8000 Brugge
Tel. 050/31 80 08
016/24 26 43

- Storage capacity :
95 cells, 10,000 tons



6.10

Various other facilities and services

6.10.1

Bunker station

Belgische Bunkeroliemaatschappij

Administrative Office :

Wetstraat 33 B-1040 Brussel

Head Office :

Zeebrugge Shipping & Bunkering Co
Min. Beernaertstraat 9
B-8380 Zeebrugge - Brugge 5
Tel. 050/54 42 61
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.

6.10.2

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).

6.10.3

Towage service

Unie van Reddings- en Sleepdiensten (U.R.S.)

Jordaenskaai 15 B-2000 Antwerpen
Tel. 03/232 38 80
Tlx. 31.864

Represented in Zeebrugge by
Ruys & Co
Leopold II-dam
B-8380 Zeebrugge - Brugge 5
Tel. 050/54 42 60
Tlx. 81.930

Tugs are permanently available in the port (quay 9);



6.10.4 Ships' maintenance and repair

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

Management: M.B.Z.

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 tons

Transfer area :
length : 88 m
width : 25 m

Equipment :
tower crane :
lifting height : 30 m
maximum reach : 30 m
lifting capacity :
1.8 tons with jibs at 29 m
6 tons 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.

6.10.5 Transport zone

Operation and management :

Transportzone Zeebrugge nv
Walram Romboutstraat 6
B-8380 Lissewege - Brugge 5
Tel. 050/54 54 29
Tlx. via 82.137

Area : 1st stage : 12.7 ha (extendable to 60 ha).

Purpose : Uniting of port linked and transportation linked activities.

Amenities (partly under construction; partly foreseen).

- direct rail connection
- technical service centre
- administrative transport centre with :
 - customs facilities
 - offices for port users
 - parking area
 - covered warehouses
 - open-air storage



Connections with the Hinterland

7.1

Rail

Total railway length within the Bruges-Zeebrugge port area is 96,411 m, broken down as follows:

Bruges inner port: 23,569 m;
connection Brugge-Zeebrugge: 22,000 m;

Zeebrugge area: 50,842, broken down into

• Leopold II-dam	6,950 m
• O.C.Z.	9,950 m
• S.C.T.	5,020 m
• T.F.T.	5,290 m
• Swedish quay and Fishing harbour	3,170 m
• North dock inner harbour	
West quay	4,850 m
East quay	2,200 m
Connections (partly still under construction)	9,000 m
Junction dock (under construction)	4,414 m

A further extension of 19,000 m is foreseen between 1986 and 1990.

7.1.1

Location

All terminals for cargo transshipment in the outer and inner ports at Zeebrugge, as well as the passenger station in Zeebrugge, are connected with the international line n° 71 (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 of one and the same type only (=block trains).

7.1.2

Main regular train services to and from Zeebrugge.

T.E.E.M.-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. Minimum 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).





Some of the main destinations, effective 6 times per week

Countries and stations	Distance (km)	Duration (hrs)
Luxembourg Bettembourg	366	9
Netherlands Rotterdam	251	10
France Thionville	387	10
St.-Louis	709	14
Paris	438	19

West-Germany

Aachen	287	7
Köln	365	10
Düsseldorf	343	13
Mannheim	579	20
München	959	23
Stuttgart	714	20

Switzerland

Bâle	716	15
Chiasso	1,029	25
Zürich	918	40

Austria

Wien	1,090	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

(by trainferry Zeebrugge-Harwich)

London	115
Liverpool	398
Glasgow	639

7.1.3**Transport structure, especially for container transport**

N.M.B.S. - Commercial agency
Stationsplein B-8000 Brugge
Tel. 050/38 39 97

Domestic Traffic :

Dealt with by Belgian National Railways
Nationale Maatschappij der Belgische
Spoorwegen (NMBS).

Head Office :

Frankrijkstraat 85 B-1070 Brussel

Tel. 02/525 21 11

Commercial management:

Ravensteinstraat 60, box 24

B-1000 Brussel

Tel. 02/525 21 11

Tlx. 25.035

Local Office :

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 as 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 Antwerpen
Tel. 02/541 69 50 - Tlx. 32.529

Both for the domestic and for international transport of transcontainers every shipper can negotiate individually with N.M.B.S. or Intercontainer. To rationalize organization 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 Antwerpen
Tel. 03/542 03 10
Tlx. 31.338

7.1.4.

Tariffs for container transport

Freightliner tariff

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:

Freightliners Ltd

43, Cardingtons Street London NW 1 2 LR
Tel. 01-3880661
Tlx. 24.743

Belgisch-Engelse Vennootschap der Ferry-Boats

Montoyerstraat 17/19 B-1040 Brussel
Tel. 02/513 06 60
Tlx. 23.584

NMBS Commercial Management

Shell Building
Ravensteinstraat 60 box 24 B-1000 Brussel
Tel. 02/525 21 11
Tlx. 25.035

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 mileage tariff, 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, Rotterdam and Flushing.

7.2

Motorways

State road n° 31 (dual carriageway Zeebrugge-Bruges (17 km) links the port of Zeebrugge directly with the E40 motorway (exit 8 south of Bruges), which opens up Europe from North-West to South-East (Great Britain to Italy).

The motorway interchange E40/E17 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 E40 and E17, any destination in Europe can be reached by motorway conveniently. At the motorway interchange E40/A17 at Bruges, State road n° A17 links up with the E17 motorway, which links the port with its immediate hinterland, and via the A17 (interchange at Kortrijk) with Lille and Paris.

Distance from Zeebrugge to some important european cities :

	Distance (kms)	Roads	
		(as from 1.1.86)	(up to 31.12.85)
Belgium			
Ghent	55	E40	E5
Brussels	110	E40	E5
Antwerp	125	E40/E17	E5/E3
Liège	210	E40	E5
Netherlands			
Amsterdam	305	E40/E17/E19	E5/E3/E10
Rotterdam	220	E40/E17/E19	E5/E3/E10
Luxembourg			
Luxembourg	320	E40/E411	E5/E40
France			
Lille	70	A17/E17	A17/E3
Paris	330	A17/E17/E19	A17/E3/E10
West-Germany			
Aachen	260	E40	E5
Köln	340	E40	E5
Bremen	495	E40/E17	E5/E3
Hamburg	600	E40/E17	E5/E3
Mannheim	526	E40/A61	E5/A61
München	853	E40/A61/E314	E5/A61/E4
Düsseldorf	329	E40/E17/A57	E5/E3/E4/E11
Stuttgart	654	E40/A61	E5/A61/E12

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 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

Natural gas

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

As from 1987, when the Zeebrugge maritime LNG terminal will become operational, the pipe-line networks will be used in a reversed direction.



7.5
Air links

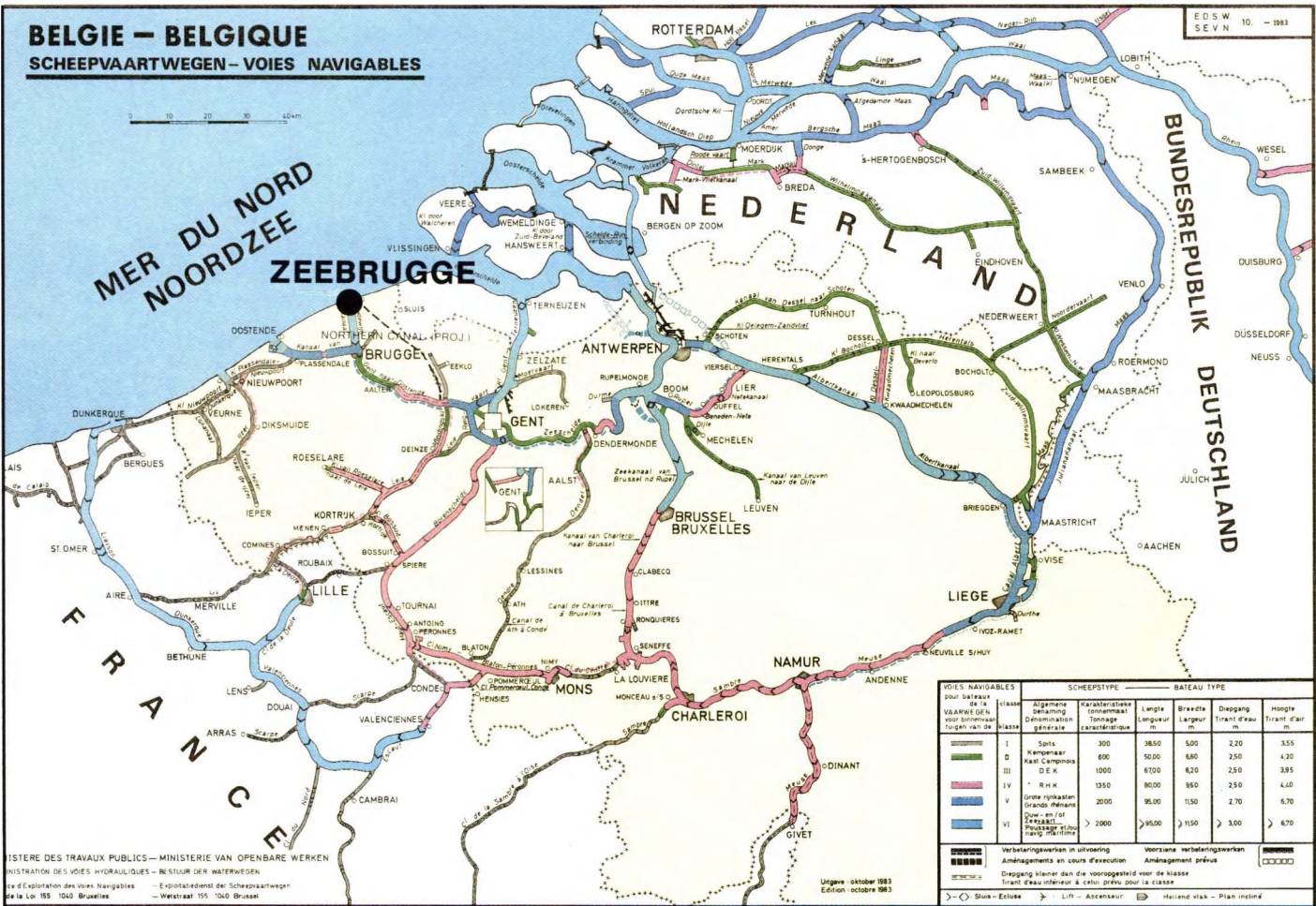
7.5.1
Ostend Airport

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

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.

7.5.2
Brussels Airport

at 120 kms from Bruges and 135 kms from
Zeebrugge (to be reached via E40
motorway and circular road RO 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



8.1

Chronological Survey 1950 - 1970

Since the opening of the harbour complex in 1907, the situation of the port of Bruges-Zeebrugge had remained almost unaltered. Except for the repairs of the damages caused by two consecutive World Wars, no important works had been executed. The water depth in the port and in the access channel to the port had also remained unchanged: 6.50 m below LLWS.

Between 1950 and 1960 a few adaptations were made, which, however, did not constitute a real programme of systematical port development.

Nevertheless, some of these works constituted a serious improvement:

- The new terminal for train-ferries in the outer port was built between 1950 and 1953 and ascertained for this type of traffic an interesting gain of time over the previous location in the former ferrydock.
- Reclamation of part of the West rig in the outer port with a first plant for storage and distribution of oil products.
- The fishing harbour was extended by the development of the North dock. In the North-West corner of the fishing harbour, a yachting harbour was developed.
- In the inner port of Zeebrugge, the Prince Philip Dock was established.

In 1960 for the first time, an over-all programme was designed in order to develop the port of Zeebrugge for larger ships and to make it accessible to oil tankers of max. 50,000 t dwt at high tide, and to tankers of 35,000 t dwt at any tide. To this effect, the following works were executed between 1960 and 1971.

1 East Dam

The protection of the outer port from the East with a low dam was executed between 1960 and 1966.

2 Development of the Westerhoofd (Western Pier)

The development of the Western Pier in the outer port is one of the realisations of this period.

Area: 18 ha; quay length: 1,615 m with a depth of -13 m.

Upon the completion of the Western Pier in 1971 the West quay wall was equipped as a deepsea container terminal.

The East quay wall received at the same time the necessary superstructures for the unloading of crude oil.

3 Other Works

- On the West bank of the access channel to the sealock, a quay wall with a length of 270 m was built, which is now used as a container terminal for channel traffic (Short-sea Container Terminal).
- Between the landward end of the Leopold II-dam and the Western Pier, a new carferry terminal was established; a second ramp was built in 1975 already.

Moreover, in 1971 a systematic deepening of the access channel to Zeebrugge and its outer port was taken on; the depth is now 11.5 to 12 m below low water.



8.2

The Government decision of 1970

Early in 1970, the Belgian Government decided to develop the port of Zeebrugge. This decision was preceded by a feasibility study of the possibilities of developing a new port for very large ships either on the Belgian coast or in the open sea. This study proved the choice of Zeebrugge to be developed into a multi-purpose deepwater seaport as the most favourable solution.

The first decision concerned the construction of a big sealock, of an inner port (limited to 1,300 ha) and of a certain extension of the outer port to ensure the accessibility of the port and the sealock for large ships.

The works for the new sealock started in 1972.

The decision regarding the construction of the outer port could only be taken after a thorough study of all aspects of the construction (hydraulics, nautical, sedimentological and ecological consequences).

After these extensive studies, the Government could order the works for the actual outer port to start in 1978. The decision of August 1980 meant the last one of a series whereby the development of Zeebrugge received its eventual shape.

The definitive plan therefore comprises two large parts:

- the construction of an open, yet protected outer port towards the greater sea depths;
- the construction and equipment of a new inner port, with deepwater quays, and accessible via a big sealock.

8.2.1

The new outer port

Study and contracting

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





T.V.Z.2. 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.

Schedule and timing of the works

The contract for the study and the execution of the works, proposed by T.V.Z.2. and approved by the Government, has been subdivided into six subcontracts, scheduled between 1978 and 1985.

Description

The new outer port was to be protected by two long breakwaters with a length of 4,450 m for the Western (A) and of 4,100 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 3,300 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 or "Wielingen" dock;
- the southern dock 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 spacious surface area of the quay grounds, will allow a considerable increase of the port's transshipment 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-mole, will be reserved for the extension of carferry terminal parking grounds.

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 company Distrigaz decided to build its LNG-terminal 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 regasification plant. The terminal is scheduled to become operational in 1987.

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

After completion of the works, this dock will be equipped as a ro/ro-port.

8.2.2

Sealock and new Inner harbour.

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 surface 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.

Sealock (operational since November 1983; see also 4.5.1.)

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

- the Western quay (or Swedish 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 dimensions of the sealock are:
length between the outer gates: 500.30 m; width: 57 m
sill depth: Z (- 15 m) LLWS.

The first commercial ship was locked on 8 November 1983, whereas the lock was officially put to use by Mr. Louis Olivier, Minister of Public Works, on 10 April 1984.

The Northern part of the new inner port

(operational since early 1984; see 4.5.4.1).
Area: 150 ha
(former Texaco tank farm, 21 ha, not included)
Equipment: for further information regarding terminals and equipment, see 6.4.1, 6.6, 6.7, 6.8, 6.9.

The South inlet basin and adjacent quay grounds

The southern part of the inner harbour (approx. 850 ha situated South of the Connection dock) is intended for transshipment 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 : 18,5 m
A first part of this South inlet basin, the so-called "deepwater quay", with a usable length of 300 m, is under construction. It will be operated as a discharge quay. An extension of this discharge quay with another 300 m is planned, as well as the construction of a loading quay with a length of 250 m along the connection dock.
- between the connection dock and the railway bridge at Dudzele, the Baudouin Canal will be widened 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

a

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 peak consumption.

b

Transshipment terminal for bulk goods

Site:

60 ha along the South bank of the Connection dock (600 m) and the West bank of the South inlet dock (1,250 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: 18.5 m
capacity: unloading quay: ships of 125,000 tons
loading quay: ships of 80,000 tons

Quay grounds:

Stage 1:

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

Stage 2:

20 additional ha for doubling the storage and transshipment capacity.

Equipment:

2 gantries for discharge operations; 1 for loading operations (capacity 50,000 tons of iron ore or 40,000 tons of coal per 24 hours);
3 stacker-reclaimers;
loading bays for rail transportation;
conveyor belt installations.

Other current projects :

Ferry berths in the outer port :

Along the Leopold II-mole, 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 with two traffic lanes will be constructed along quay n° 6. It will be equipped to accomodate twindecked ships, in order to accelerate loading and unloading operations.

Works will commence presently; the new berths will be operational by 1987.

- Plans are now studied to equip the working harbour and the eastern side of the East Quay in the access to the P. Vandamme lock with ro/ro-facilities.

- 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 southern port.

New passenger station at Zeebrugge :
In view of the busy passenger traffic, especially to and from Great-Britain, with several hundreds of thousands of people travelling by train, the new passenger station of Zeebrugge will be built in the immediate vicinity of the carferry berths in the outer port.

Waterways**Northern Canal :**

The Zeebrugge port extension is expected to result in a considerable 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 3,000 ton inland watercraft between Zeebrugge and Merendree (junction with the Bruges-Ghent canal);



Zeebrugge '85

The frame-contract for the development of the port of Zeebrugge, signed in 1976 between the Belgian Government and the association of contractors T.V.Z.2, was finalized in 1985.

The new port of Zeebrugge was inaugurated by H.M. King Baudouin on 20th July 1985.

Around this official ceremony, which was attended by more than 7,000 invited guests, a "maritime fortnight" was held in Bruges and Zeebrugge, which had the sailing ships for motive.

The programme of "Zeebrugge '85" comprised the following highlights:

- July 15 to 30: Promotion fortnight Zeebrugge '85 for Trade and Tourism, with the collaboration of four foreign countries (England, France, Italy and West-Germany);
 - July 19 to August 31: Exhibition "Zeebrugge, a Port For Europe" in Bruges (Market Square);
 - July 20: Royal inauguration of the new port by H.M. King Baudouin;
 - July 20 to 26: Arrival, stay and departure of 10 A-class sailing ships (*), the largest sailing vessels that still cross the oceans.
 - July 25 to 27: Arrival, stay and departure of "Sailbruggebinnendoor", a regatta Amsterdam-Brugge-Amsterdam by rivers and canals, for 30 authentic Dutch flat-bottomed sailing ships.
 - July 28 to 30: Arrival, stay and departure of the "Cutty Sark Tall Ships' Race" a regatta Chatham-Zeebrugge-Ymuiden, for which 114 B- and C-class sailing ships from 8 different countries had entered.
- About half a million spectators came and admired these magnificent sailing ships.

(*) Italy: Amerigo Vespucci; Portugal: Sagres; France: Belle Poule, Etoile; Colombia: Gloria; Denmark: Georg Stage; Norway: Sørlandet; U.S.S.R.: Kruzenstern, Sedov; Poland: Dar Młodzieży.





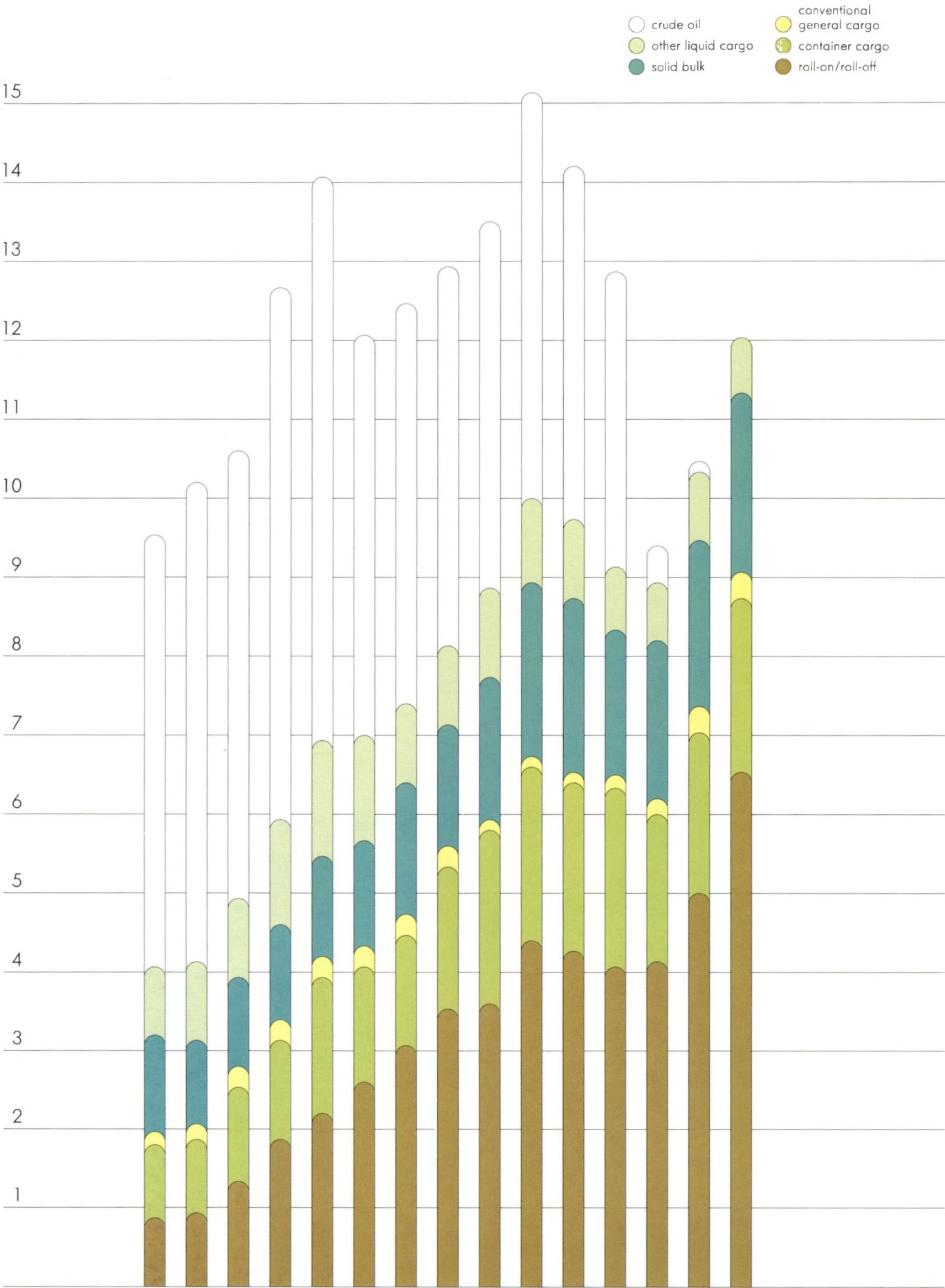




10.1**Evolution of Maritime Traffic**

Year	Number of ships	G.R.T. (x 1,000 t)	Imports (tonnes)	Exports (tonnes)	Total sea-borne cargo (tonnes)	Index (1970 = 100)
1910	1,031	-	784,166	245,126	1,029,292	10.8
1920	73	-	7,804	1,716	9,520	0.1
1930	1,415	-	767,056	328,467	1,095,523	11.5
1940	218	-	120,179	29,784	149,963	1.6
1950	911	-	153,879	186,861	340,740	3.6
1960	1,679	-	792,092	420,467	1,212,559	12.7
1965	2,280	3,761	1,683,333	568,470	2,206,803	23.0
1970	4,691	18,765	8,332,853	1,177,176	9,510,029	100.0
1971	4,746	22,471	8,816,590	1,284,998	10,101,588	106.2
1972	5,658	26,866	8,768,656	1,766,647	10,535,303	110.8
1973	6,105	29,546	10,478,291	2,216,662	12,694,953	133.5
1974	6,796	32,541	11,272,168	2,771,601	14,043,769	147.7
1975	7,452	35,987	9,465,970	2,639,329	12,105,299	127.3
1976	7,593	36,511	9,828,128	2,700,207	12,528,389	131.7
1977	8,373	39,654	9,727,783	3,182,712	12,910,495	135.7
1978	8,700	42,001	10,028,139	3,437,560	13,465,699	141.6
1979	9,043	45,163	10,884,931	4,190,686	15,075,617	158.5
1980	9,550	48,212	10,087,862	4,101,620	14,189,482	149.2
1981	9,043	45,368	8,551,696	4,289,426	12,841,122	135.0
1982	8,625	39,287	5,241,745	4,096,982	9,338,727	98.2
1983	8,930	39,382	5,686,513	4,617,988	10,304,501	108.4
1984	9,775	41,106	6,226,407	5,774,757	12,001,164	126.2

Sea-borne cargo traffic
(x 1 mio t)



10.2

Traffic breakdown per commodity

Commodities	1970	%	1980	%	1984	%
1						
General cargo						
Roll-on/roll-off						
Trainferry	343,805	3.6	450,025	3.2	473,225	4.0
Carferry	491,756	5.2	3,881,616	27.3	6,100,166	50.8
Subtotal	835,561	8.8	4,331,641	30.5	6,573,391	54.8
Containers						
European	962,404	10.1	1,083,035	7.6	1,304,504	10.8
Intercontinental	-	-	905,229	6.4	850,884	7.1
Subtotal	962,404	10.1	1,988,264	14.0	2,155,388	17.9
Other general cargo	142,192	1.5	169,697	1.2	332,717	2.8
Total	1,940,157	20.4	6,489,602	45.7	9,061,496	75.5
2						
Liquid products						
Crude oil	5,408,103	56.9	4,531,344	31.9	-	-
Refined products	573,253	6.0	892,682	6.3	577,928	4.8
Other liquids	349,223	3.7	88,469	0.8	130,750	1.1
Total	6,330,579	66.6	5,512,495	38.8	708,678	5.9
3						
Solid bulk						
Coal and coke	488,278	5.1	373,870	2.7	491,593	4.1
Building materials	721,318	7.6	1,781,643	12.6	1,558,489	12.9
Other solid bulk	29,697	0.3	31,872	0.2	180,908	1.5
Total	1,239,293	13.0	2,187,385	15.5	2,230,990	18.6
Overall total	9,510,029	100.0	14,189,482	100.0	12,001,164	100.0

10.3

Evolution of transit traffic (in percentages)

Year	Unloadings		Loadings		Total	
	Import	Transit	Export	Transit	Imp./Exp.	Transit
1970	82.0	18.0	32.6	67.4	73.6	26.4
1971	85.7	14.3	40.3	59.7	78.4	21.6
1972	86.2	13.3	48.3	51.7	79.8	20.2
1973	87.2	12.8	51.9	48.1	81.1	18.9
1974	86.4	13.6	43.7	56.3	78.0	22.0
1975	79.5	20.5	38.5	61.5	69.5	30.5
1976	82.8	17.2	39.5	60.5	73.0	27.0
1977	78.6	21.4	36.4	63.6	68.2	31.8
1978	79.2	20.8	36.0	64.0	68.7	31.3
1979	80.4	19.6	41.6	58.4	71.1	28.9
1980	79.5	20.5	40.0	60.0	69.5	30.5
1981	77.7	22.3	42.0	58.0	67.8	32.2
1982	63.0	37.0	41.7	58.3	54.8	45.2
1983	57.5	42.5	43.2	57.8	51.6	48.4

10.4

Evolution of container traffic (in TEU's)

Year	Number	Index (1970 = 100)
1970	92,400	100.0
1971	84,800	91.8
1972	130,800	141.0
1973	126,200	136.0
1974	155,600	168.5
1975	152,500	165.0
1976	147,500	160.3
1977	180,200	195.0
1978	191,800	208.3
1979	190,000	205.6
1980	181,000	196.7
1981	222,200	241.5
1982	177,200	191.8
1983	205,000	221.9
1984	201,400	218.0

10.5

Evolution of passenger traffic

Year	Number of Passengers	Index (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
1982	2,204,188	431.8
1983	2,023,362	396.3
1984	2,096,443	410.7

Useful Addresses

Port Authority Brugge/Zeebrugge

Maatschappij van de Brugse Zeevaartinrichtingen

L. Coiseaukaai 2 B-8000 Brugge
Tel. 050/44 42 11
Tlx. 81.201

Harbour Master's Office Zeebrugge

P. Vandamme House
Isabellalaan 1
B-8580 Zeebrugge - Brugge 5
Tel. 050/54 32 40
Tlx. 81.205

National bodies

Ministry of Public Works

- Direction of the Waterways
Office of the Coast
Vrijhavenstraat 3 B-8400 Oostende
Tel. 059/50 19 61
Tlx. 81.604

- Public Relations (Regional Office)
Oude Gentweg 75c 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
P. Vandamme House
Isabellalaan 1
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 50 71

Provincial bodies

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

Regional Development Authority (Gom - West-Vlaanderen)

Baron Ruzettelaan 33
B-8320 Brugge 4
Tel. 050/35 81 31

Municipal bodies

City Administration Bruges

City Hall
Burg 12 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
Tlx. 81.016

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

Other Organizations

Belgian Foreign Trade Office

Regional Direction for West-Flanders
Baron Ruzettelaan 35 B-8320 Brugge 4
Tel. 050/35 81 40

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

Employment Office

Rijksdienst voor Arbeidsvoorziening (RVA)

Spanjaardstraat 17 B-8000 Brugge
Tel. 050/33 52 03

Noordhinderstraat 12
B-8380 Zeebrugge - Brugge 5
Tel. 050/54.76.58

Belgian Railways (NMBS)

Head Office:
Frankrijkstraat 85 B-1070 Brussel
Tel. 02/525 21 11

Commercial Management:
Ravensteinstraat 60, box 24
B-1000 Brussels
Tel. 02/525 21 11
Tlx. 25035

Bruges Office:
Stationsplein 2, B-8000 Brugge
Tel. 050/38 39 97

Stations:
Brugge: Tel. 050/38 58 71
Brugge-Zeehaven: Tel. 050/32 41 65
Zeebrugge: Tel. 050/54 40 27

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

Dispensary Zeebrugge

(First Aid Centre)

C.M.B.T.
Minister Beernaertstraat 11
B-8380 Zeebrugge - Brugge 5
Tel. 050/54 65 15

Shipping Association

Scheepvaartvereniging
Minister Beernaertstraat 9
B-8380 Zeebrugge - Brugge 5
Tel. 050/54 42 61

Association of Freight Forwarders

VEREXZ
Baron de Maerelaan 111
B-8380 Zeebrugge - Brugge 5
Tel. 050/54 49 61

Employers' Association

CEPOZ
Doverlaan 7
B-8380 Zeebrugge - Brugge 5
Tel. 050/54 50 50

Emergency telephone numbers

900: General (accidents, catastrophes, etc...)
901: State Police (Gendarmerie)
906: Municipal Police

Numbers of quays

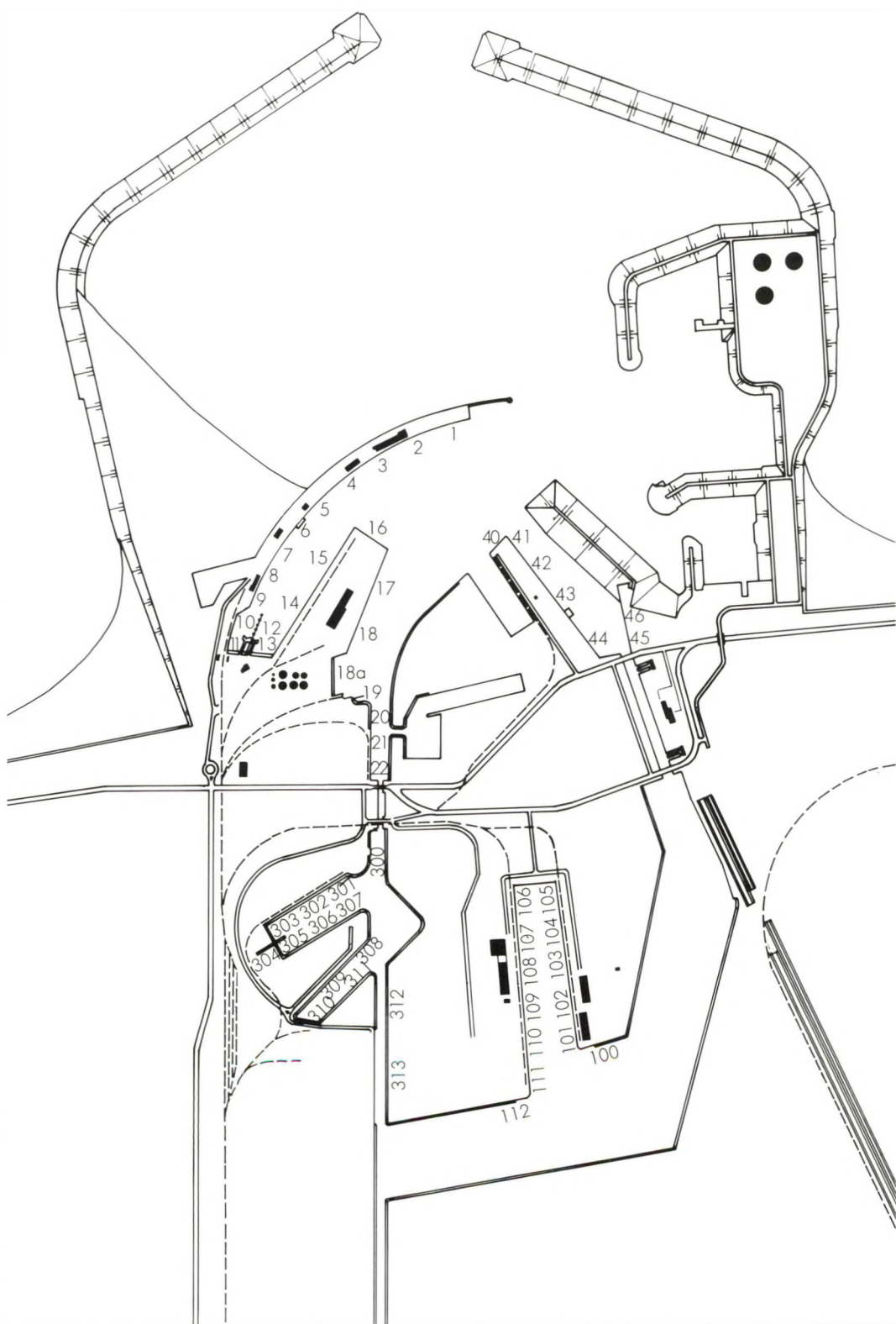






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