

()

2005 11 15

2005 13

:

:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

. (1) . Multimodal ()

(2) . Modal Shift

(3) .

(4) . Out-Port

(5) , _____

(Nlock Train System)

:

1 :

2 : 5 8 , 8 8

3 : Hamburg Block Train (1)

4 : Hamburg Block Train (2)

5 : Feeder Service .

6 :

7 :

8 : Polzug

1.

9 , 2

, Overnight Jump 가 ,
 , Paperless Port 가 Block Train ,

가 가 가

2.

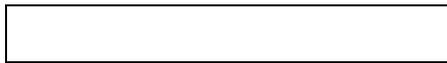
9 , 2 , ,
 ()

Top 10 World-Container Ports 2003-2004*

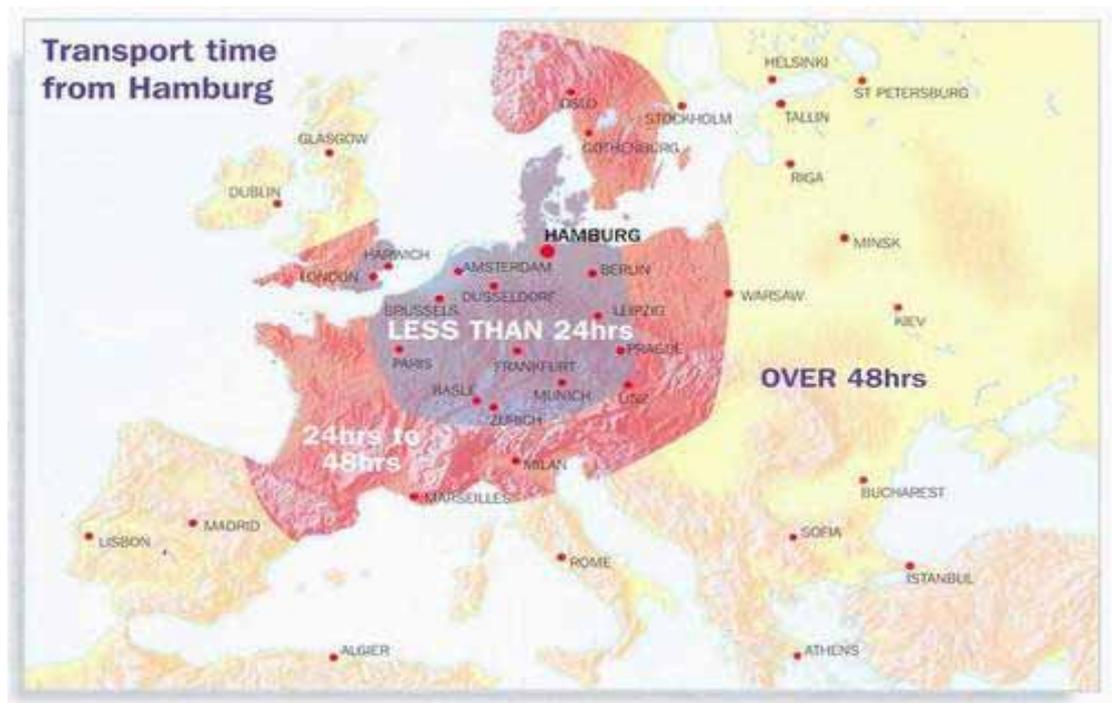
			2003	2004	Differ.	in %
1	(1)	HONGKONG	20 449	21 984	1 535	7,5%
2	(2)	SINGAPUR	18 410	21 340	2 930	15,9%
3	(3)	SHANGHAI	11 281	14 557	3 276	29,0%
4	(5)	SHENZHEN PORTS	10 649	13 615	2966	27,8%
5	(4)	PUSAN	10 367	11 430	1 063	10,3%
6	(6)	KAOHSIUNG	8 843	9 710	867	9,8%
7	(8)	ROTTERDAM	7 143	8 270	1 127	15,8%
8	(7)	LOS ANGELES	7 179	7 321	142	2,0%
9	(9)	HAMBURG	6 138	7 003	962	14,1%
10	(11)	DUBAI PORTS	5 152	6 428	1 276	24,8%
Total			105 908	122 340	16 432	15,5%

*in 1000 TEU

PORT of HAMBURG
www.portofhamburg.de



-
- , , ,
- , , CIS ,
- 24
- 24-48
- 48 ()



(intermodal transportation)

-
-
- Feeder,
- Rail, ,
- Express High way
- inland waterway



Modal

Port of Hamburg: Multimodal Hub

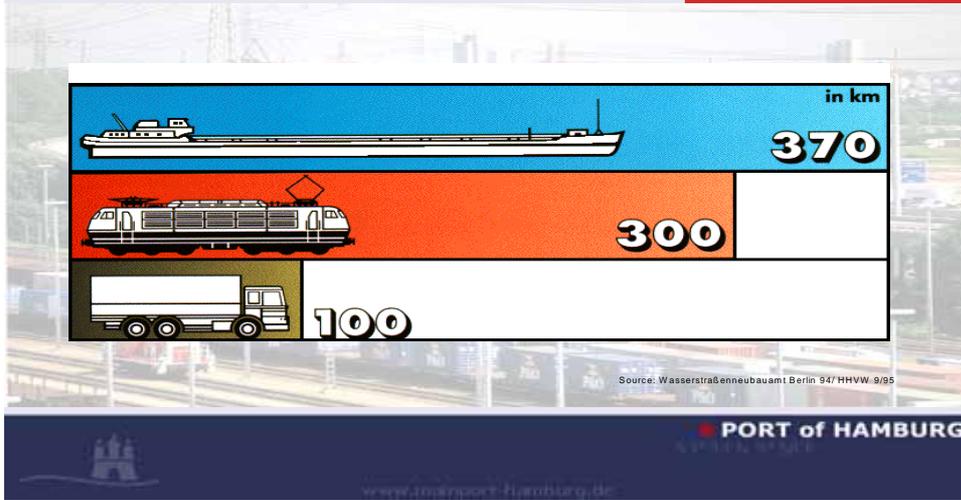
100 containers passing through the Port of Hamburg...

10 containers	30 containers	30 containers	30 containers
stuffed/unstuffed within the port	to European Hinterland (70% by rail, long distance)	Hamburgs economic catchment area (80% by truck)	Transit Baltic Sea / Scandinavia (80% by feeder)

PORT of HAMBURG
www.marport-hamburg.de

-
-
- 40 % local , 60 % 가 (가)
- 70 % 가 . 가

Distance covered per cargo - tonne with the same quantity of fuel



Block Train Service

Non-stop door to door tailor made, one-stop logistics service

⇒ 4. 5.

가,





6

feeder Service



Hamburg – Ruebeck

(Block Train)



3.

(1),
 , 5 7 , 8 8 , (2) 가,
 , 30 %, , WTO

(1,3,4 가

가

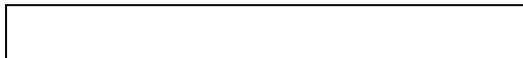


- 2004 2010 85%~103% 가
- 48%

	2004	2005	2010	2015
	143~146.2	153.8~158.5	205~225.5	254.8~294.8
	97.6~98.9	104.1~106.7	136~147.1	164.6~184.7
	46.3~47.2	49.7~51.8	69~78.4	90.2~110.2

• : Ocean Shipping Consultants(2003)

10



2004/2005

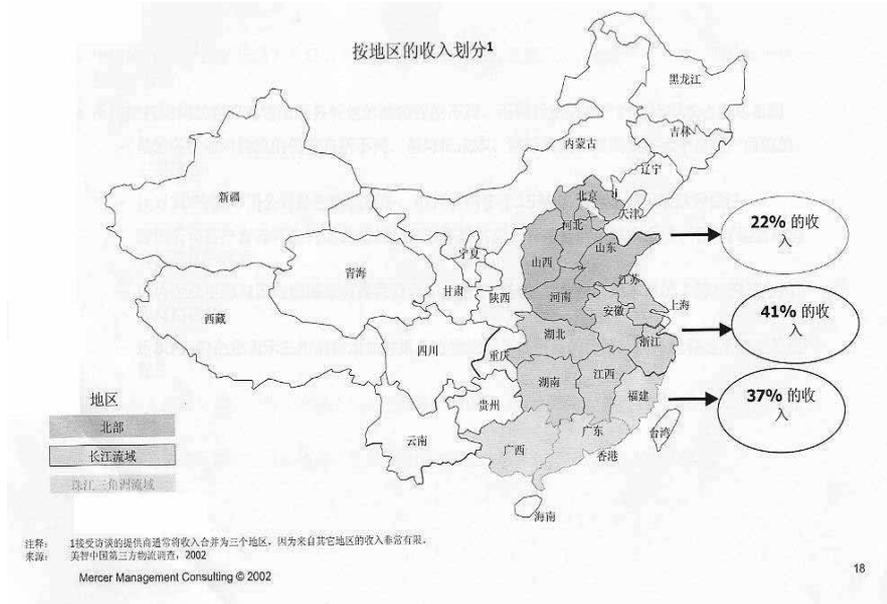
	Foreign Ownership now	Expected Changes
Trucking	<50%	100% in 1 years
Freight forwarding	<50%	100% in 2 years
Customs brokerage	<50%	100% in 2 years
Mail & Parcel (Int'l)	<50%	100% in 2 years
Mail & Parcel (Domestic)	0%	100% in 2 years
Rail services	<50%	No estimate(*)
Air cargo, ground service Local license		No estimate
Warehousing	100%	No change
Domestic maritime/Shipping	0%	Minority foreign ownership with Chinese flag

Source: Industry interviews, Morgan Stanley Research

i* : 2002 : 50%
 2004 : 50 %
 2006 :



Where Are the main Fight Fields ?



가 22 %



5 (2003 ,10,000,000 teu)
 38% (400 teu)
 60 %가 (240 teu)
 40 % ()
 90 % 가
 100 %가
 : - , , , ()
 - , 가
 : , ,

4.



1. : (,), 가
 2. : 가

1998-2002 가 35%
 2003 9.4 %
 2004 1-8 7.4 %
 가,



[Empty box]

2011
 : 1,404 Teu (1,036)
 : 598 , 806
 : 934 Teu (118)

3 :

- , (,)
 - (,)

4. : 89 %

〈표-3〉 부산항 컨테이너화물의 수송수단별 분담률(2002년)

구분	도로	철도	연안해운	합계
수송량(천TEU)	4,904	574	44	5,522
비중(%)	88.8	10.4	0.8	100.0

자료 : 해양수산부, 한국컨테이너부두공단, 철도청.

5.

1. =2003 240 teu

⇒ 7 8

, , () , ,

(240 teu)

()

2003

<동북3성 항만개발계획, 만 TEU>

	현 재		개발목표(처리능력)	
	처리능력	실적 (2003)	2007	2010
대 련	186	166	580	-
천 진	306	300	456	1,000
청 도	300	424	510	1,000

자료 : 중국 각 항만 항무국 및 KMI

, ,
 가 가
 가
 (가)
 ()
 가 , ,
 가
 가
 ()
 가 .
 / 가 7

2,	,	= 2006	450	teu
----	---	--------	-----	-----

〈표-6〉 우리나라 컨테이너 물동량 전망 단위 : 천TEU

구 분	2006	2011
총물동량(A)	19,266	29,668
환적물동량(B)	8,005	13,176
수출입물동량(A-B)	11,261	16,492
수도권물동량	4,504	6,596

자료 : 해양수산부, 「동북아 물류중심기지 구축을 위한 수정 항만개발계획」, 2001. 1.
 주 : 수도권 물동량은 수출입물동량의 40%로 추정.

가 /

TEU
가

1000
Feeder ing
가

⇒ 7

3. = teu ?

Port 가 , Feeder ing
가
win win

가

6. 가 가 ?

.1. Multimodal ()

Sea & Sea : Feeder (. ,)

Rail & Sea : , , (,)

Truck & Sea : 가

Air & Air : (, , ,) , , . .

Sea & Air : Feeder ,

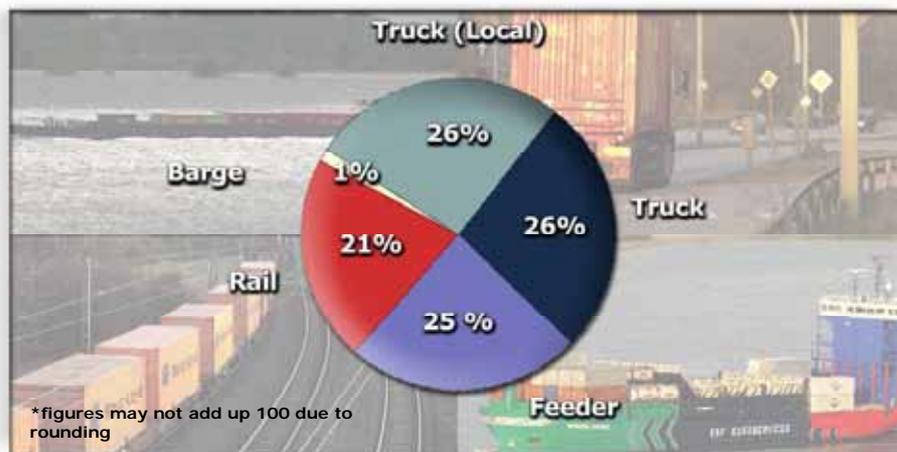
2. Modal Shift

〈표-3〉 부산항 컨테이너화물의 수송수단별 분담률(2002년)

구분	도로	철도	연안해운	합계
수송량(천TEU)	4,904	574	44	5,522
비중(%)	88.8	10.4	0.8	100.0

자료 : 해양수산부, 한국컨테이너부두공단, 철도청.

Modalsplit in container traffic (2003)



300
가 가

(89 %)

가
가

3.

〈표-7〉 도로운송과 복합운송의 운임비교(40ft 컨테이너, 인천-부산 구간)

구분	도로운송	복합운송(해운)	비고
요금	513,000원	인천→부산 : 245,000원 부산→인천 : 298,000원	트럭운송요율은 실제 15~20% 할인
회주→CY 운송	0	120,000원	
계	513,000원	하행 365,000원 상행 418,000원	운임차액 : 평균 121,000원 하행 : 148,000원 상행 : 95,000원

자료 : (주)한진.

Sea to Sea : Feeder

가 /

Reail to Sea :

가 on-dock

Truck to Sea :

-

, (/ ,) ,

On Dock Rail Terminal :

가 free on rail
rail to see

4. Out-Port

- _____
- _____ / _____ / _____
- _____ Block Train
- UN ESCAP
- Block Train
- _____ / _____ (rail port)가
- _____

5, _____ (Block Train System)

Feeder, Inland river ferry, _____, _____ 가

_____ station to station _____ door to door Block Train system

Block Train (BT)

(1) Block Train (BT) _____ ?

door _____ (track) _____ Rail & Truck Combined Transportation

(2) BT _____ (POLZUG _____)
 (8 : POLZUG _____)

Tailor Made _____ (_____), _____ (_____) 가
 가 _____ door to door _____ 6 _____ ,
 non-stop, _____ 30
 32

Slawkow Rail(Train) Ferry Ukraine (以東)
 가 ()
 (33 %), HHLA (33 %), (33 %),
 /
 1991 가 , 1992
 4,800 teu, 2000 55,000 teu,(22%) 2001
 60,000 teu 가 2003 70,000 teu
 1998 9 TRACECA(Transport Corridor Europe -Caucasus -Asia)
 Route 12 1999 4
 Traceca Route Silk Road Express Caucasus

2001 9 23 UN ESCAP Polzug
 Block Train
 2004 10 5 가

(3) _____

【BT】 1. / , 2.door to door, 3.rail & truck, 4.Private terminal, 5.
 , 6. /forwarder/ 가 , 7. / , 8. , 9.BT
 가 , 10. /IT 가 , 11. / /
 /Forwarder

【 】 1. / (), 2.terminal to terminal, 3.rail only, 4.public terminal,
 5. , 6. 가 , 7. , 8. , 9. ()
)가 , 10. 가 , 11. 가

【 】 1. , 2.terminal to terminal, 3.rail only, 4.public(private)
 terminal, 5.terminal , 6. 가 , 7. , 8. , 9.
 가 (가), 10. 가 , 11. 가 (가)

BT

BT

Ocean

Terminal

non-stop

rail & Truck

,
가

Tailor made

One-Stop
system

가

(4) BT
(3, 4)

【BT Operators】

- DB Cargo
- Eurogate Intermodal
- HHCE
- Intercontainer+Interfrigo (ICF) S.C.
- Kombiverkehr
- Metrans
- Polzug
- Transfracht International

BT
Joint Venture

, ,

,
가 .

(5) BT /

BT
가 (, Project Cargo , 가
) , Ferry, ,
.

BT

.
26 %
가 . 70 % BT

, IT , 가 Market Door to door , BT

.

BT
가 .
BT
가
Distribution System
BT
가
(6) UN ESCAP B/T (9), (11 12-17)

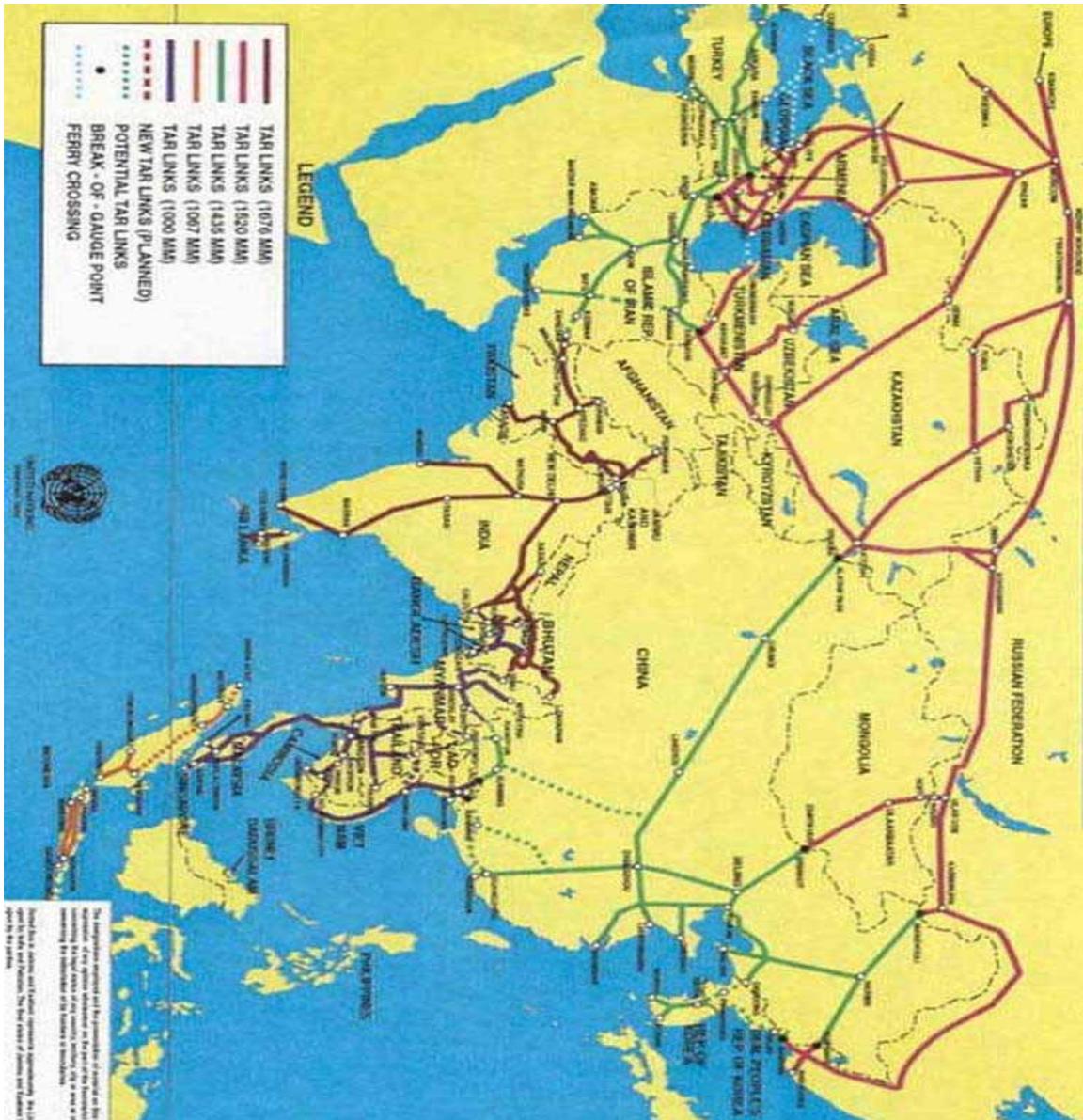
【 5 】

: 3 (, ,)
: 2 (,)
(7) UN ESCAP B/T

3 ()
B/T
Block Train 가
(2)
BT
(2006 , 2002
- BT)



1:



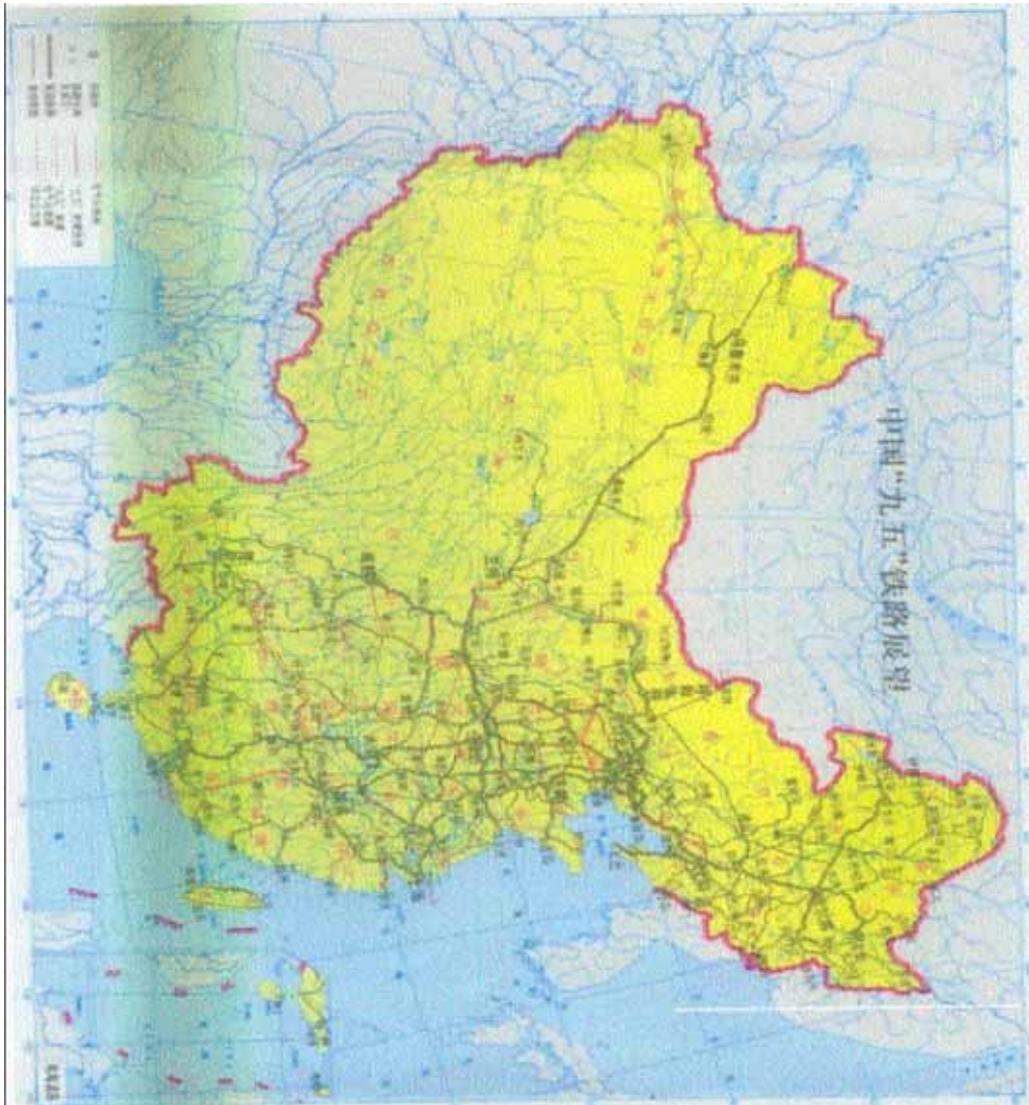
2:

5

7

, 8

8



3 : Hamburg Block Train (1)



ITALY	Milan, Verona, La Spezia, Genoa, Turin and other inland hubs	Europac Intermodal	no-h shuttle	Landskron, Bf/Lux CIA
ITALY	Milano, Bergamo, Bologna, Bergamo, Olginò, Padova, Pinerolo	Intercontinental Interfrigo-ICI	no-h (daily)	all terminals
ITALY	Bari, Brindisi, Bari-Ancora, Bari, Maddaloni, Palermo and other inland terminals	Kombiverkehr	no-h	Edwards
ITALY	Trieste	Kombiverkehr	no-h - A, U	Edwards (Halle)
LUXEMBOURG	Bettendorf	Kombiverkehr	no-h	Edwards (Halle)
MAZEDONIA	Skopje, Struga, via Sopron	Intercontinental Interfrigo-ICI	no-h (daily)	all terminals
NETHERLAND	Rotterdam	Intercontinental Interfrigo-ICI	regular	all terminals
NETHERLAND	Rotterdam	Kombiverkehr	no-h	Edwards
NORWAY	Ålesund	Intercontinental Interfrigo-ICI	no-h (daily)	all terminals
NORWAY	Oslo	Intercontinental Interfrigo-ICI	no-h (daily)	all terminals
POLAND	(Relais) Intermodal services to all inland places via terminals: Poznan/Gdansk, Gdansk, Poznan/Warsaw, Lodz, Wroclaw, Gliwice, Silesia or direct rail	Kombiverkehr	no-h	Edwards
PORTUGAL	Estoril, Leiria, Lisboa, Beja	Polzug GmbH	minimum 4 times / week both directions	Berchard, CR, Europac, DWT, RT-Schwarz, Doka Bus, Rona Terminal and Brantenham
ROMANIA	Arad, Oradea etc.	Kombiverkehr	no-h	Edwards
ROMANIA	Braila, Bucharest, Buzau de Sus and other inland hubs via Sopron	Europac Intermodal	regular	Landskron, Bf/Lux CIA
SERBIA AND MONTENEGRO	Belgrad	Intercontinental Interfrigo-ICI	no-h (daily)	all terminals
SLOVAC REPUBLIC	Via DE and via Donauja Sremska	Kombiverkehr	no-h	Berchard / Landskron / Hamburg Ltd / Edwards
SLOVAC REPUBLIC	Bratislava, Bystec	Polzug, Prag	daily	service covers the whole port
SLOVAC REPUBLIC	Lipcova, Koper	Europac Intermodal	no-h (daily)	Landskron, Bf/Lux CIA
SLOVAC REPUBLIC	Koper Luka, Lipcova RT, via Sopron	Europac Intermodal	regular	Landskron, Bf/Lux CIA
SLOVAC REPUBLIC	Bratislava	Intercontinental Interfrigo-ICI	regular	all terminals
SLOVAC REPUBLIC	Bratislava, Serec	Europac Rail Shuttle B.T	regular	all terminals
SLOVAC REPUBLIC	Koper, Lipcova	Kombiverkehr	1 times/week	Berchard / CR
SPAIN	via Lux (Germany) and Quilinyer (Belg)	Kombiverkehr	no-h	Berchard / Landskron / Hamburg Ltd
SPAIN	Alicante, Bilbao, Giron, Girona, Madrid, Silla, Tarazona and other inland terminals	Kombiverkehr	no-h	Edwards
SWEDEN	Årva (Stockholm), Gäddede, Göteborg, Kungälv, Bollnäs, Kungälv, Jönköping, Norrköping, Kalmar, Söderköping, Malmö	Intercontinental Interfrigo-ICI	no-h (daily)	all terminals
SWEDEN	Årva (Stockholm), Gäddede, Göteborg, Örebro, Söderköping, Smedje and other inland terminals via Bari	Kombiverkehr	no-h	Edwards
SWITZERLAND	Basel Bad, Basel, Niederflur, respectively to all other inland stations	THG Transfracht Intermodal	regular	service covers the whole port
SWITZERLAND	Basel, Basel/Wild, A. Bern, Olten	Intercontinental Interfrigo-ICI	regular	all terminals
SWITZERLAND	Basel, Olten, Sion, Yverdon, Lausanne, Bern, via Sopron	Kombiverkehr	no-h	Edwards
TURKEY	Intermodal services via Terminal Bari to all inland places or direct rail	Intercontinental Interfrigo-ICI	no-h	Waldhof
UKRAINE	UJ-Schwarz, Doka, Bus, Rona	Polzug GmbH	minimum 4 times / week both directions	Berchard, CR, Europac, DWT,
YUGOSLAVIA	Terminal and Brantenham	Intercontinental Interfrigo-ICI	regular	all terminals

BLOCK TRAIN OPERATORS

BTT, Mainz Mainz Tel: +49-3661-794410 Fax: +49-3661-794429 info@BTT-GmbH.de http://www.BTT-GmbH.de	European Rail Shuttle B.V. Kilblessdamm 50-21129 Hamburg Tel: +49-40-34057914/1 Fax: +49-40-34057914 t.schmann@ersl.de http://www.ersl.com	IMS, Wien Döblingstr. 171/100A - 1220 Wien Tel: +43-1-20148-22 Fax: +43-1-20148-8822 g.wald@imz.net http://www.imz-containeroperator.com	Kombiverkehr Deutsche Gesellschaft für kombinierten Güterverkehr GmbH & Co KG Kilblessdamm 5, 21129 Hamburg Tel: +49-40-30789930 Fax: +49-40-30789939 info@kombiverkehr.de www.kombiverkehr.de	NTT 2000 GmbH Neumlander Strasse 150 - 20119 Bremen Tel: +49-421-59815-179 Fax: +49-421-59815-179 l.meyer@ntt-2.com	Welt, Salzburg Bachstraße 71A - 5023 Salzburg Tel: +43-642-8185-210 Fax: +43-642-8185-199 rainald.klopp@welt.at http://www.welt.at
CSKD-INTRANS A. S. Jermolova 113/34C - 130 99 Praha 1 - Dolní Tel: +420-220-195-711 Fax: +420-220-195-212 info@cskdhobers@intrans.cz	HCTO Hanseatic Container & Train Operators GmbH I.G Krohweg 200-20457 Hamburg Tel: +49 (0)40 - 35 48 113 Fax: +49-40-75481245 info@hcta.de www.hcta.de	Intercontainer - Interfrigo (ICF) SA Head Office: Margaretenstr. 18C - 4008 Basel Tel: +41-61-2782525 Fax: +41-61-2782445 icf@icfswiss.com http://www.icfswiss.com	METRANS, a.s. Pudova 5162 - 104 00 Praha 10 - Uhřetín Tel: +420-2-4771-0425 Fax: +420-2-4771-0424 zelenk@metrans.cz info@metrans.cz http://www.metrans.cz	POLZUG GmbH Lantainer Terminal Berchardka Berchardka (Building 10) - 21129 Hamburg Tel: +49-40-7411045 Fax: +49-40-7411045 info@polzug.de http://www.polzug.de	rail4chem Eisenbahnverkehrsogesellschaft mbH Bachstr. Platz 6-8C 45127 Essen Tel: +49-201-1884-415 Fax: +49-201-1884-199 info@rail4chem.com http://www.rail4chem.de
EURDGATE Intermodal GmbH Karl-Edelmann-Str. 10 - 21129 Hamburg Tel: +49-40-3405-7130 Fax: +49-40-3405-2184 intermodal@eurgate.de http://www.eurgate.de	Hupac GmbH Zum Beschlagbühlchen 10 - 78126 Sigmaringen Tel: +49-7131-879250 Fax: +49-7131-879255 info@hupac.de http://www.hupac.de	Kali-Transport Ges.m.b.H Kf. Beschlagbühlchen 10 - 78126 Sigmaringen Tel: +49-40-30994-140 Fax: +49-40-30994-113 h.kali.hesse@k-t-transport.com http://www.k-t-transport.de	Necess GmbH Neumlander Strasse 150 - 20119 Bremen Tel: +49-421-59815-179 Fax: +49-421-59815-179 l.meyer@ntt-2.com	TFG - Transfracht Internationale Ges. f. kombinierten Güterverkehr Branch Hamburg Spaldingstr. 77a0 - 20017 Hamburg Tel: +49-40-341305-0 Fax: +49-40-341305-29 katz-werner@transfracht.de http://www.transfracht.de	

Feeder Lines from Hamburg

FEEDER	AGENT	UK/IRELAND/VELO	NORWAY	DEN./SWE	FINLAND	RUSS.FED.	EST/LAT/LIT	POLAND	GERMANY	OTHER
Baltic	Unifeeder		4 x weekly	20 x weekly	5 x weekly	2 x weekly	2 x weekly			
Team Lines	Team Lines		2 x weekly	1 x weekly (Su)	6 x weekly	3 x weekly	2 x weekly	3 x weekly		
Baltic Container Line	Range						2 x weekly	2 x weekly		
MD-Line	Stockin				3 x weekly					
OOCL (SRI/SEK/SEK)	OOCL	weekly				weekly				
Comanorline Oy	Comanorline CG					weekly	2 x weekly	weekly		
DMA-CGM French Baltic Line	DMA-CGM					2 x weekly				
DMA-CGM Feeder ass. system	DMA-CGM	weekly			weekly			weekly		
ESL Eumshipping & Forwarding	Menzies					weekly	weekly			
IME Line	Geostar			weekly						
SE-Feeder (ex Polar Line)	Geostar				weekly			2 x weekly		
Bremen-Milano BML	Scan Transport Mgmt			weekly						
Lithuanian Shipping	Wiking						weekly			
Estonian Shipping	WIA						weekly			
Karusi Line	Timokip					2 x weekly +	2 x weekly			
Landskip	Landskip	weekly	weekly	weekly		every 12 days	weekly			
Star Feeder	Dangul			weekly				weekly		
North Sea Container Line	Lampin		2 x weekly							
Calder Line	Benhamar			weekly						
Palm	Palm Shipping		weekly	weekly	weekly					
Timokip	Timokip	weekly	weekly	weekly	weekly					Faroe
Monte Carlo	WIA		weekly	weekly						
Lyf Line	Lyf-Line (Germ.)	weekly	weekly							
Seawheel	Seawheel	4 x weekly								
WSC Ancharpil	Lampin					monthly				
IC Maritime Shipping	Geostar				weekly					
K-Line (Banco Service)	K-Line	weekly		weekly						Portugal
MaerskSealand	MaerskSealand			weekly			weekly			
Brean Container Line	Dibis						weekly			
Starbalt SPS	Range						weekly			
Number of weekly departures	120	58	16	21	20	16	14	11		
Joint service with DMA-CGM	→ Kalaogrud	→ Bremen								

6 :

북중국 주요 항만 컨테이너 수급전망

북중국 주요 항만별 컨테이너 수급 전망

단위 : 백만TEU

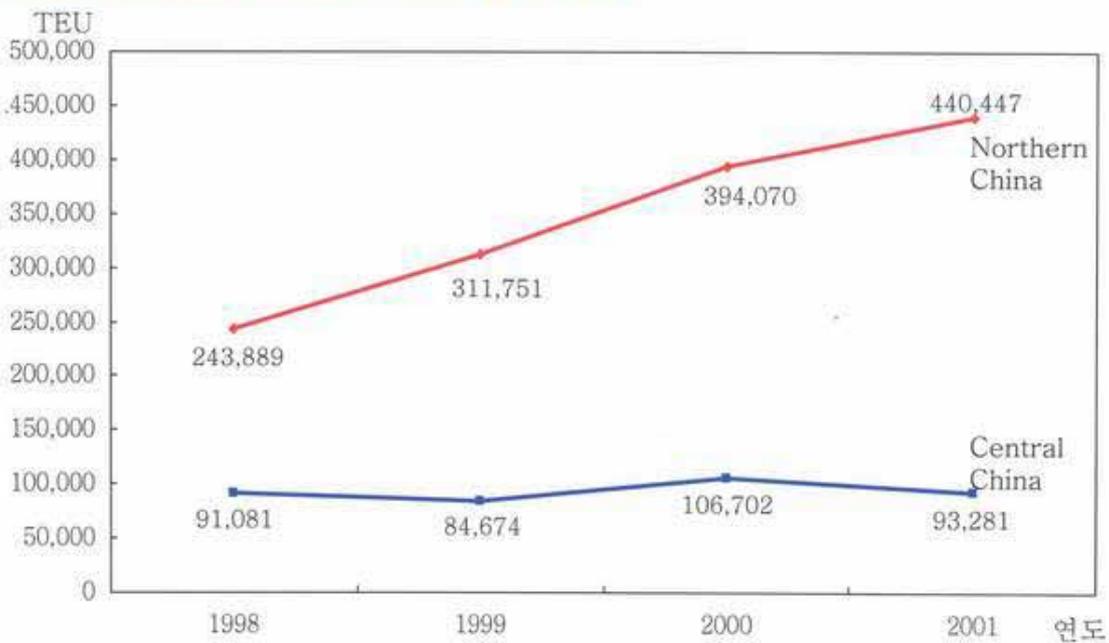
	항만	2002	2005	2010	2015
북동량(A)	소계	15.77	23.89~24.48	37.83~40.40	50.24~56.46
	대련	1.35	1.98~2.02	2.97~3.17	3.97~4.46
	천진	2.41	3.58~3.67	5.51~5.88	7.06~7.92
	청도	3.40	5.12~5.25	8.13~8.70	11.04~12.47
	상해	8.61	13.21~13.54	21.22~22.65	28.17~31.61
처리능력(B)	소계	15.80	23.325	35.56	40.96
	대련	1.80	3.30	3.30	3.30
	천진	2.40	3.525	5.26	5.26
	청도	3.60	5.60	9.00	9.00
	상해	8.00	11.90	18.00	23.40
과부족(A-B)	소계	0.03	0.435~▲0.155	▲2.27~▲4.84	▲9.28~▲15.50
	대련	0.45	1.28~1.32	0.13~0.33	▲0.67~▲1.16
	천진	▲0.01	▲0.055~▲0.145	▲0.25~▲0.62	▲1.80~▲2.66
	청도	0.20	0.35~0.48	0.30~0.87	▲2.04~▲3.47
	상해	▲0.61	▲1.31~▲1.64	▲3.22~▲4.65	▲4.77~▲8.21

자료 : Ocean Shipping Consultants(2003), 중국 각 항만자료에서 정리.

7 :

중국화물의 환적 추이

국내 환적 화물 중 중국의 환적 추이



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