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TRANSPORTATION RESEARCH INSTITUTE

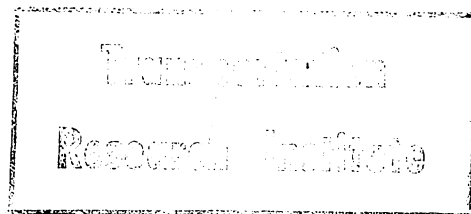
**D T E C H N O L O G Y • T H E U N I V E R S I T Y O F M I C H I G A N  
A N N A R B O R , M I C H I G A N**



Transportation  
Research Institute

**AESA - UNIVERSITY OF MICHIGAN  
MERCHANT SHIP MARKETING SEMINAR**

**THE MARKET  
FACTORS - FORECASTING**

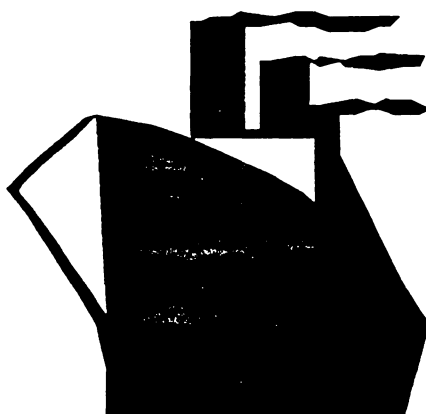


**ANN ARBOR, APRIL 14-15, 1993**

**PC:MI039391**

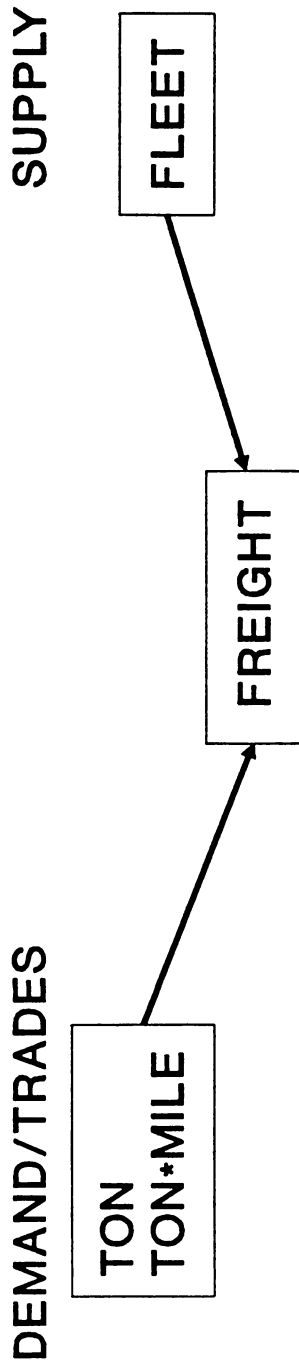


# THE MARKET



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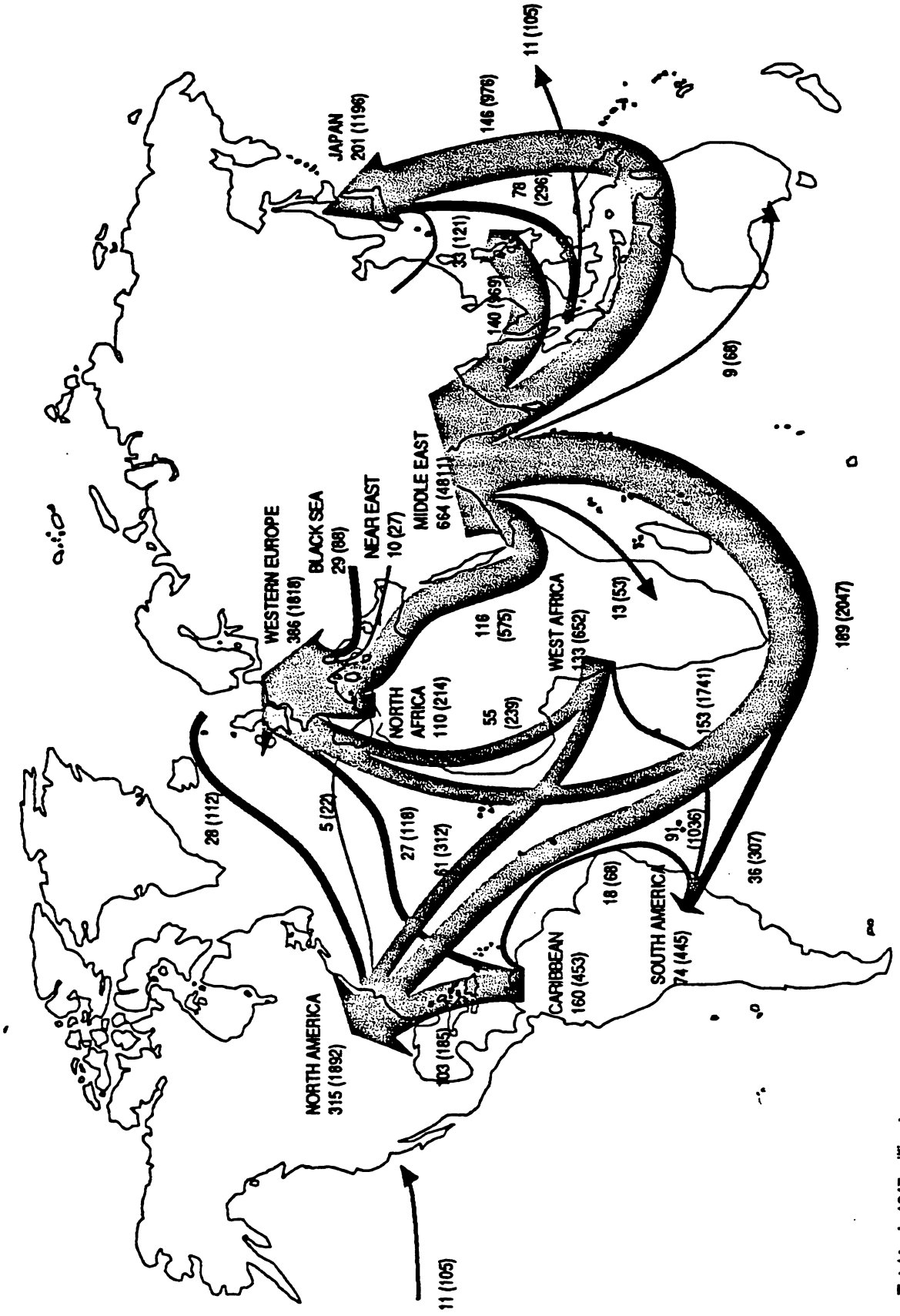
# SEABORNE TRANSPORT



M1039305

# CRUDE. SEABORNE TRADE 1991

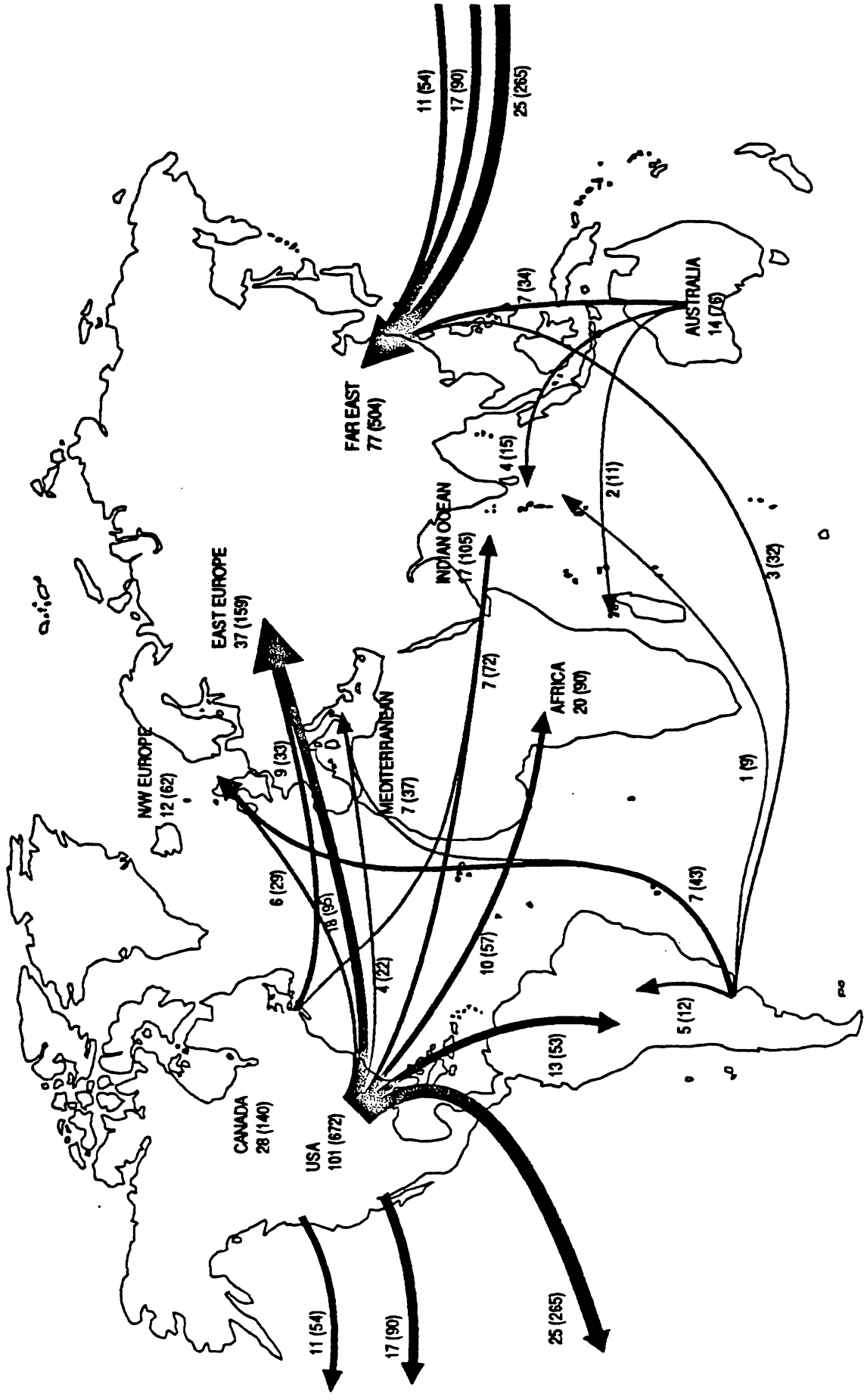
Main inter-area movements in million metric tonnes. (Billion tonne-miles in brackets.) Only main routes are shown. Area figures are totals including smaller routes not shown separately.



Total trade 1247 million tonnes.  
6757 billion tonne-miles.

# GRAIN. SEABORNE TRADE 1991

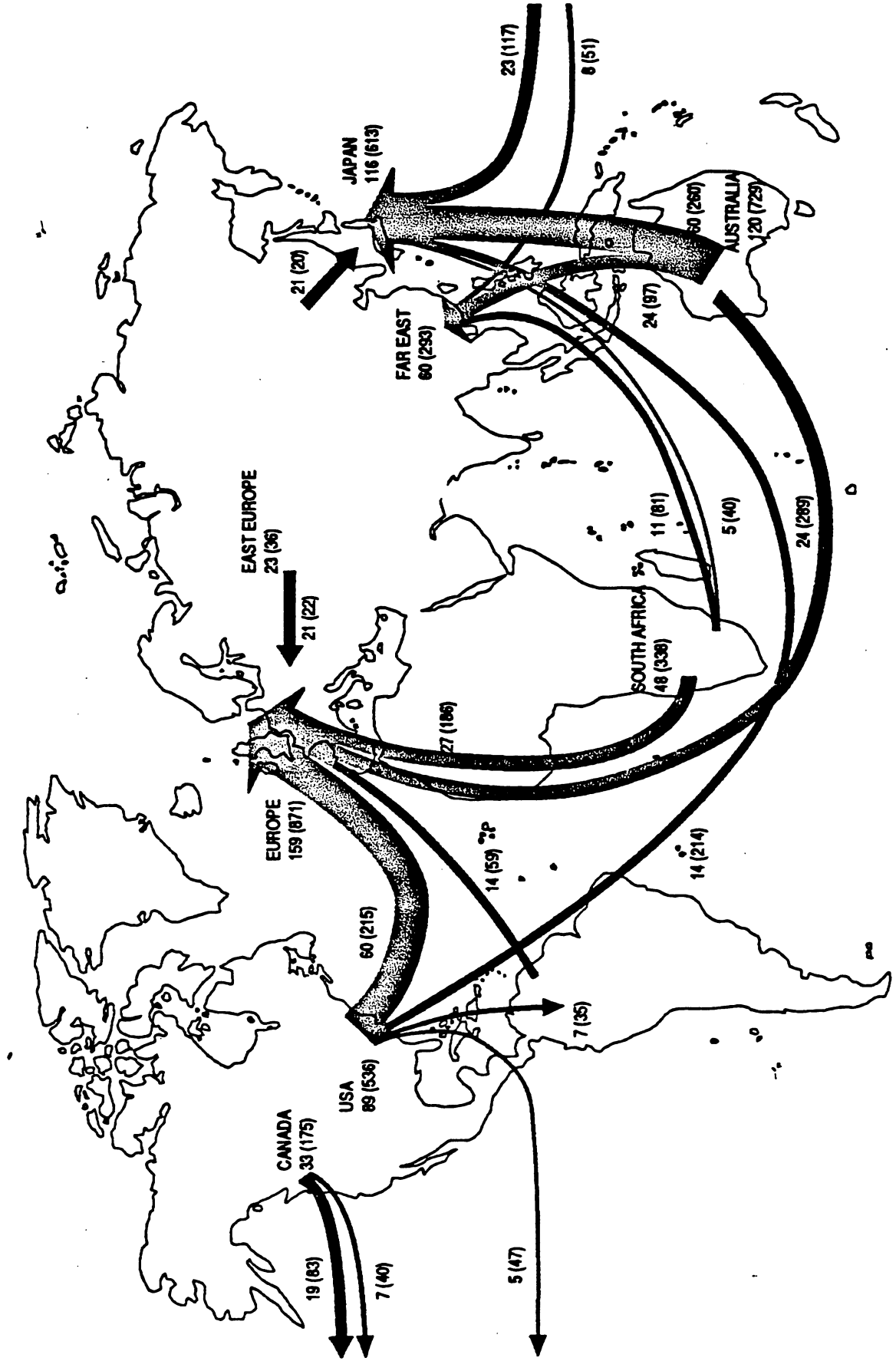
Main inter-area movements in million metric tonnes. (Billion tonne-miles in brackets.) Only main routes are shown. Area figures are totals including smaller routes not shown separately.



Total trade 200 million tonnes.  
1069 billion tonne-miles.

# OAL SEABORNE TRADE 1991

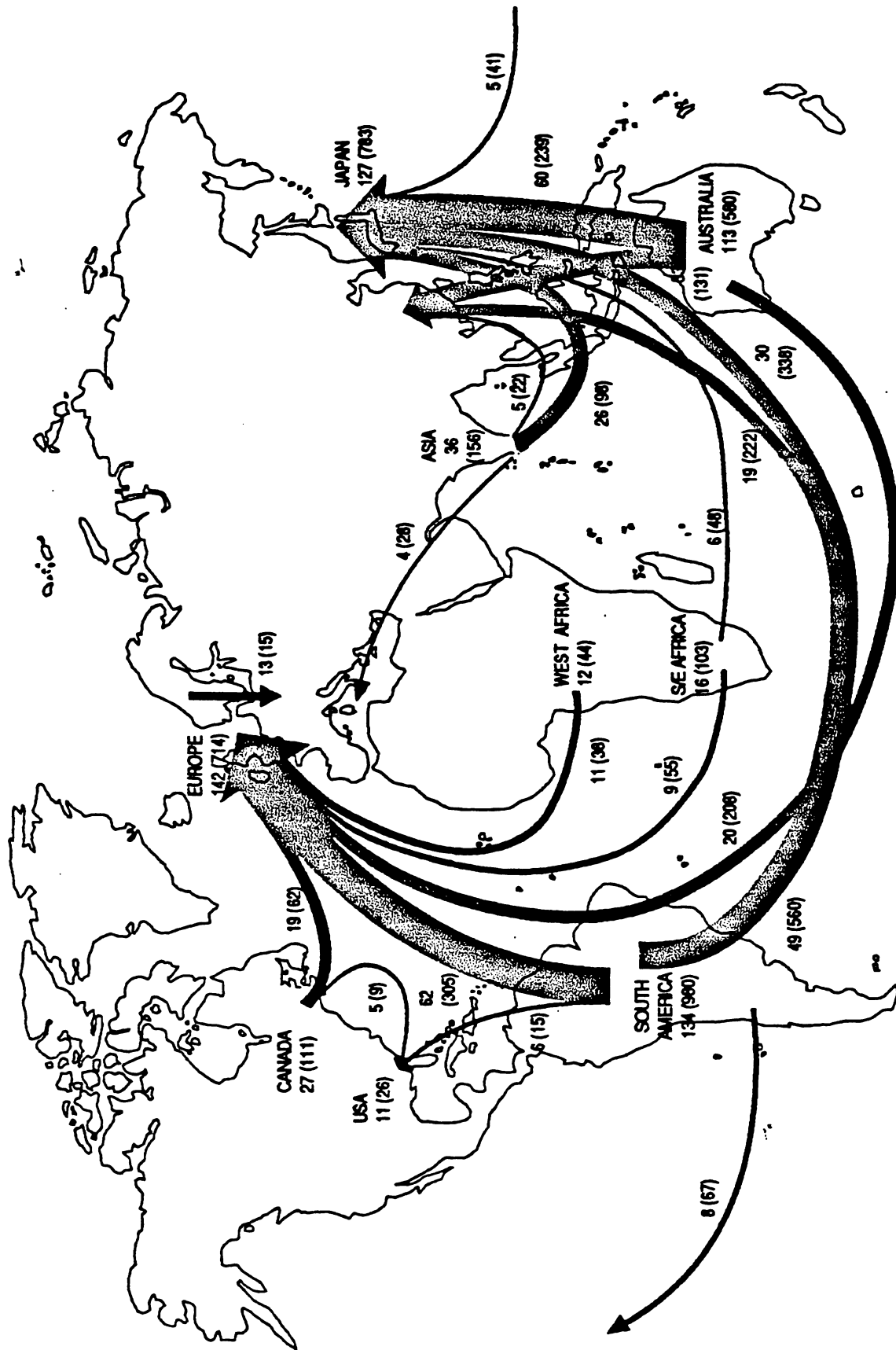
Main inter-area movements in million metric tonnes. (Billion tonne-miles in brackets.) Only main routes are shown. Area figures are totals including smaller routes not shown separately.



Total trade 369 million tonnes.  
1999 billion tonne-miles.

# IRON ORE. SEABORNE TRADE 1991

Main inter-area movements in million metric tonnes. (Billion tonne-miles in brackets.) Only main routes are shown. Area figures are totals including smaller routes not shown separately.



Total trade 358 million tonnes.  
2008 billion tonne-miles.

Prepared by **Feamleys**, Oslo.



# DEMAND

## SHIPPING DEMAND INDICATORS

- \* INDUSTRIAL PRODUCTION
- \* CRUDE OIL PRICES
- \* INFLATION
- \* GNP DEVELOPING COUNTRIES
- \* OTHER
  - INTERNATIONAL CONFLICTS
  - BAD/GOOD CROPS
  - . . .

# SHIPPING MARKET FACTORS

## POSITIVES

- AVERAGE AGE FLEET
  - World: 11 years old
  - Tanker: 16 years old
- NEW SAFETY REGULATIONS
  - Tankers
- SUBSTANDARD VESSELS
  - Public Opinion
  - Government
  - Insurance Companies
- EVOLUTION \$/Pta and \$/Y

## NEGATIVES

- END OF COLD WAR
  - USA-Defense Budget
  - Russian shipyards
- ORDERBOOK NEEDS
- EEC SITUATION
  - Subsidies
  - OECD Credits
- "NEW COMERS"

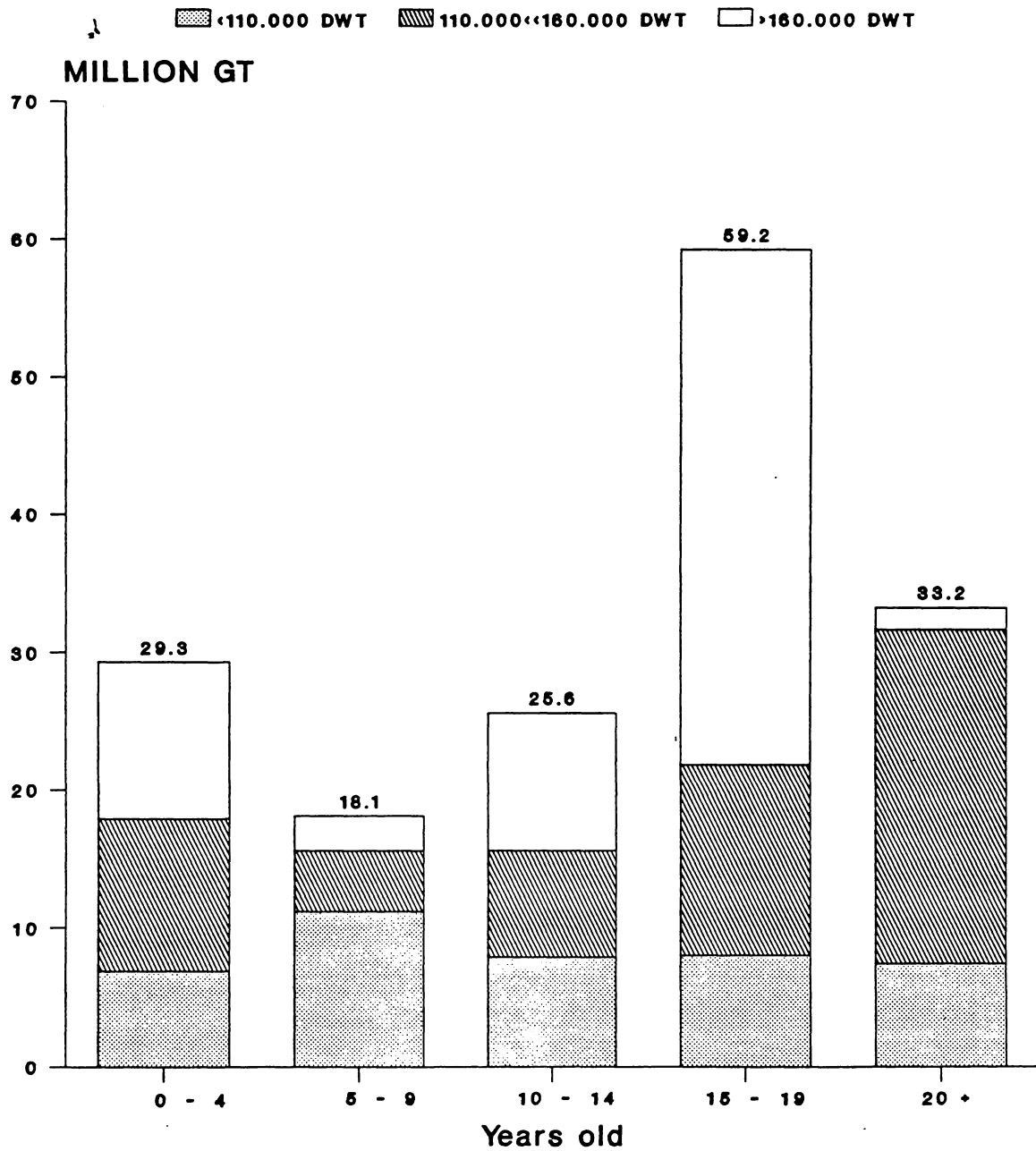
# WORLD FLEET (MERCHANT)

	1990	1992
SHIPS:	78,336	79,845
GT:	423,627,198	444,304,919
DWT:	666,827,021	694,559,701
	%(GT)	%(GT)
CRUDE OIL TANKERS	30.4	30.7
DRY BULK	26.8	26.4
GENERAL CARGO	11.9	11.0
CONTAINER	5.6	6.3
OBO	4.7	4.4
GAS CARRIERS	2.5	2.5
PRODUCT CARRIERS	1.5	1.5
CHEMICAL CARRIERS	0.8	0.9

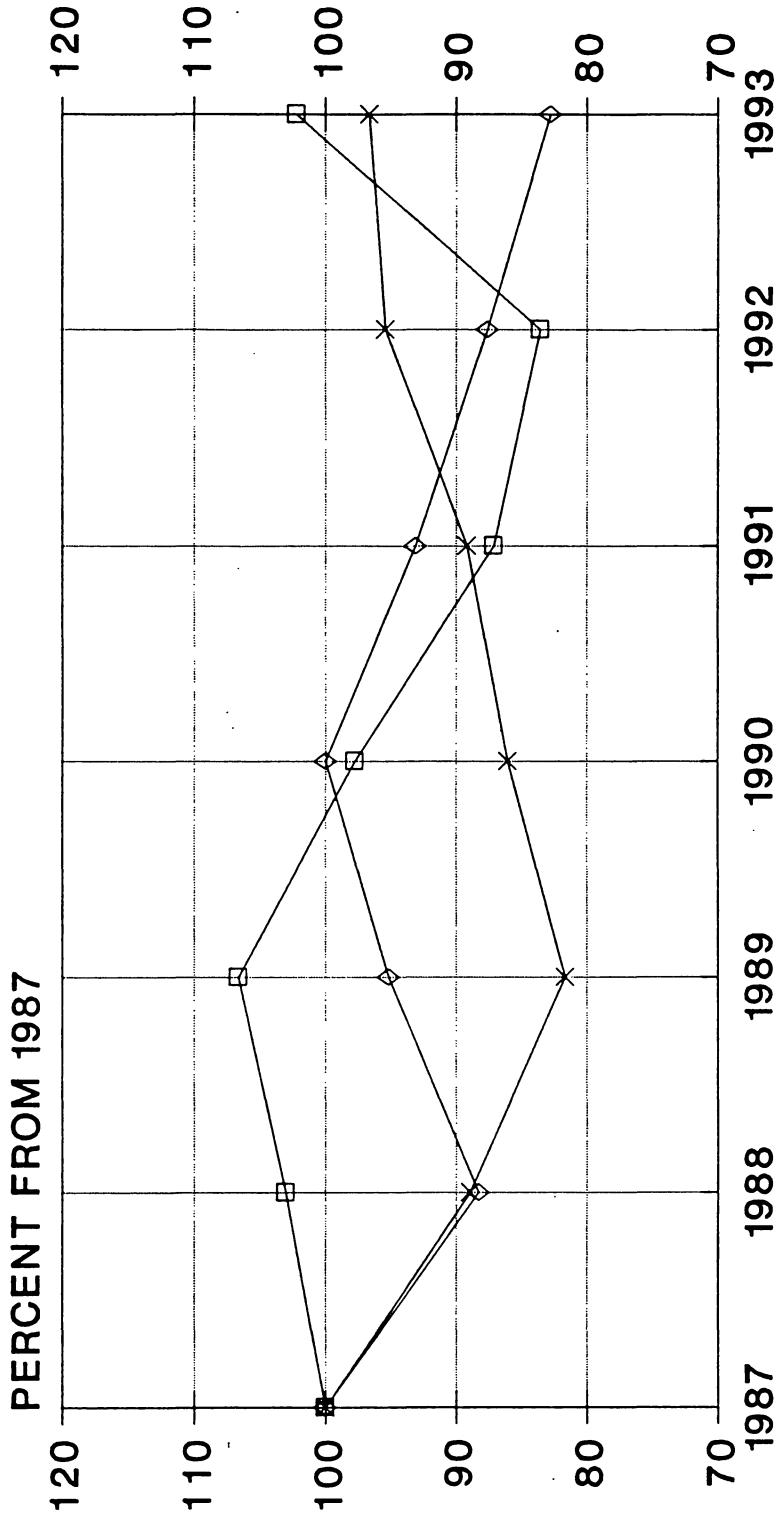
SOURCE: LLOYD'S STATISTICAL TABLES

PC:MI039320

# TANKER FLEET BY AGE AND SIZE



# RELATIVE CURRENCY EXCHANGE RATES EVOLUTION 1987-1993

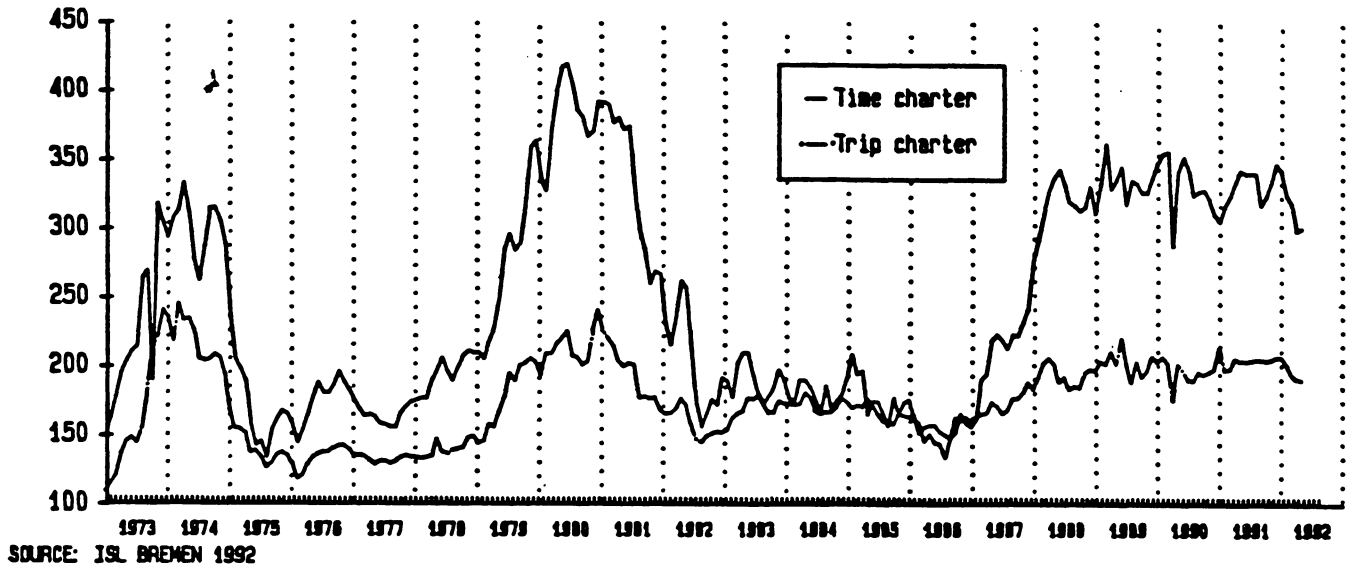


PTS/\$ (%)    
  WON/\$ (%)    
  YEN/\$ (%)

Dry cargo

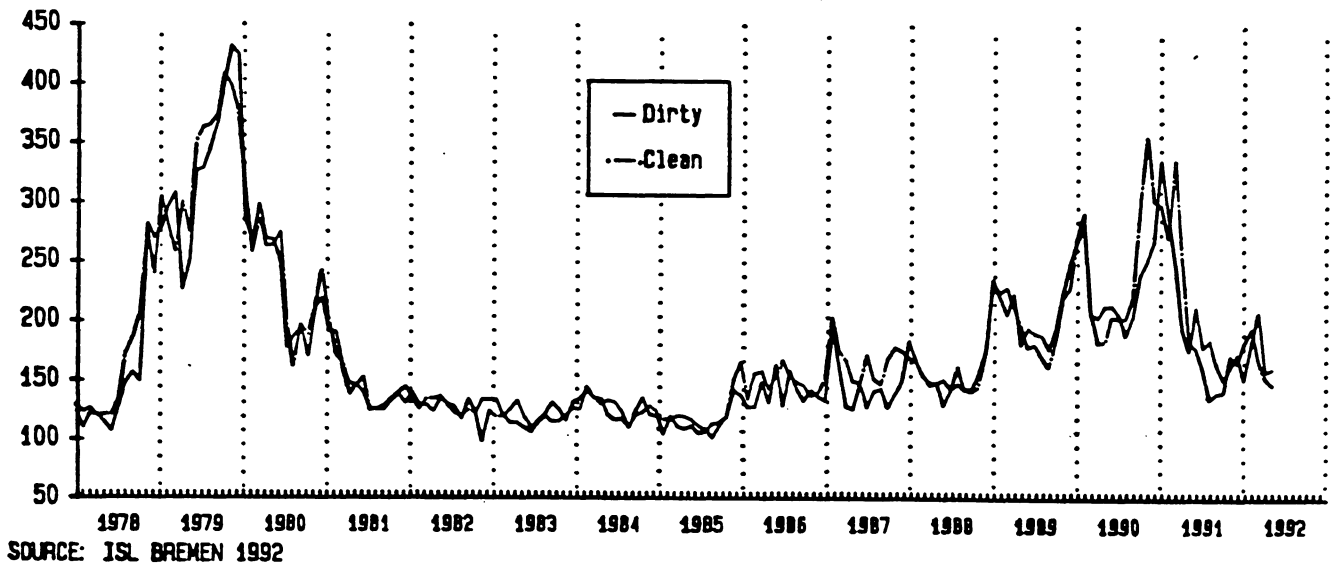
Time charter 1971=100

Trip charter July 65 to June 66=100



Small crude and products carriers, 30000 - 70000 dwt

Worldscale=100



MERCHANT SHIPBUILDING

REPAIRS

RELATED  
INDUSTRIES

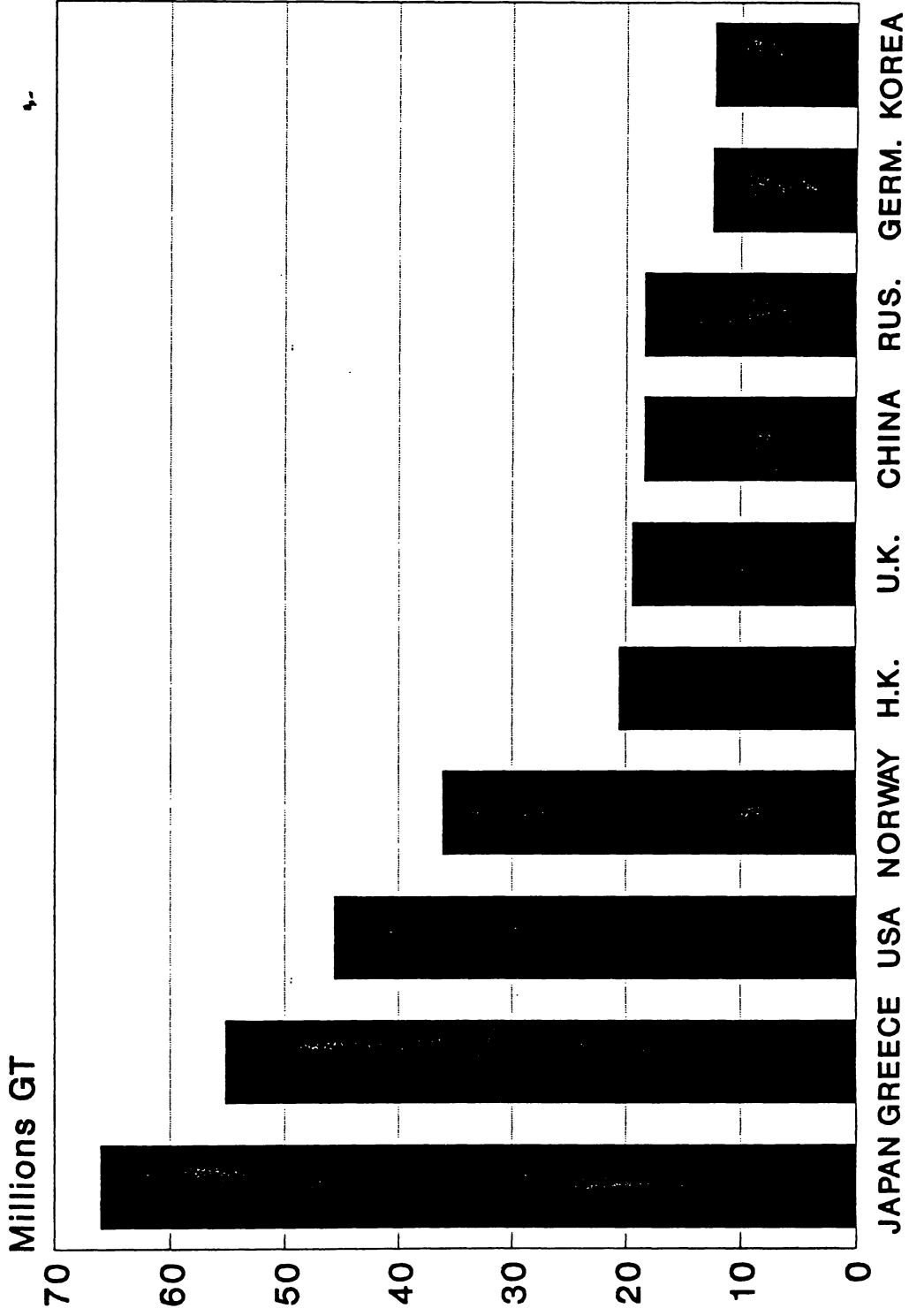
NEWBUILDING

SEABORNE  
TRANSPORT

WORLD  
ECONOMY

- CRUDE/PRODUCTS
- DRY BULK
- GAS
- GENERAL CARGOES
- M/P
- REEFERS
- RO/RO
- CONTAINERS
- PASSENGER

# WORLD MERCHANT FLEET



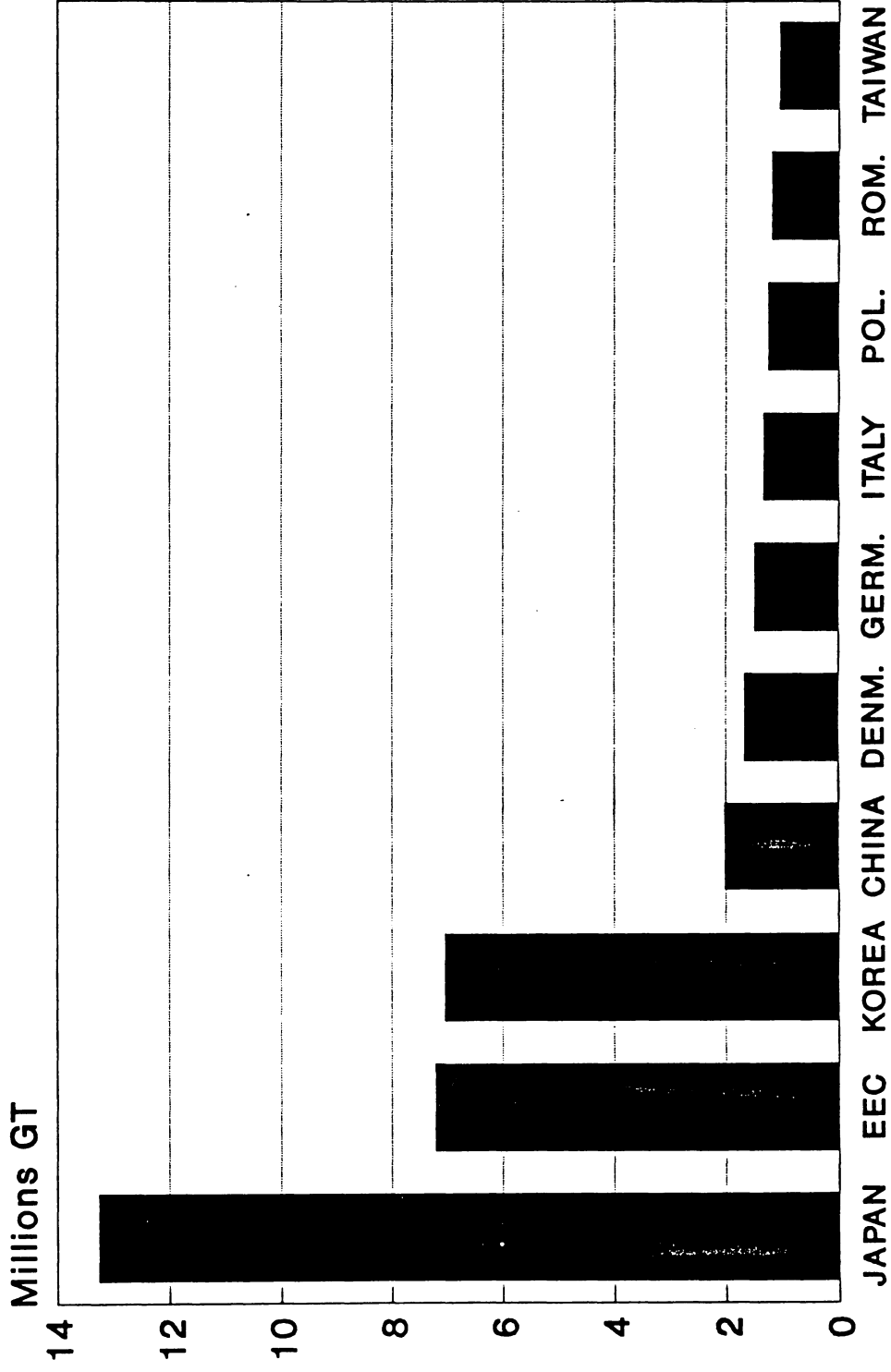
PC:MI039317



# ORDER BOOK AT 12/31/92

## COUNTRY OF BUILD

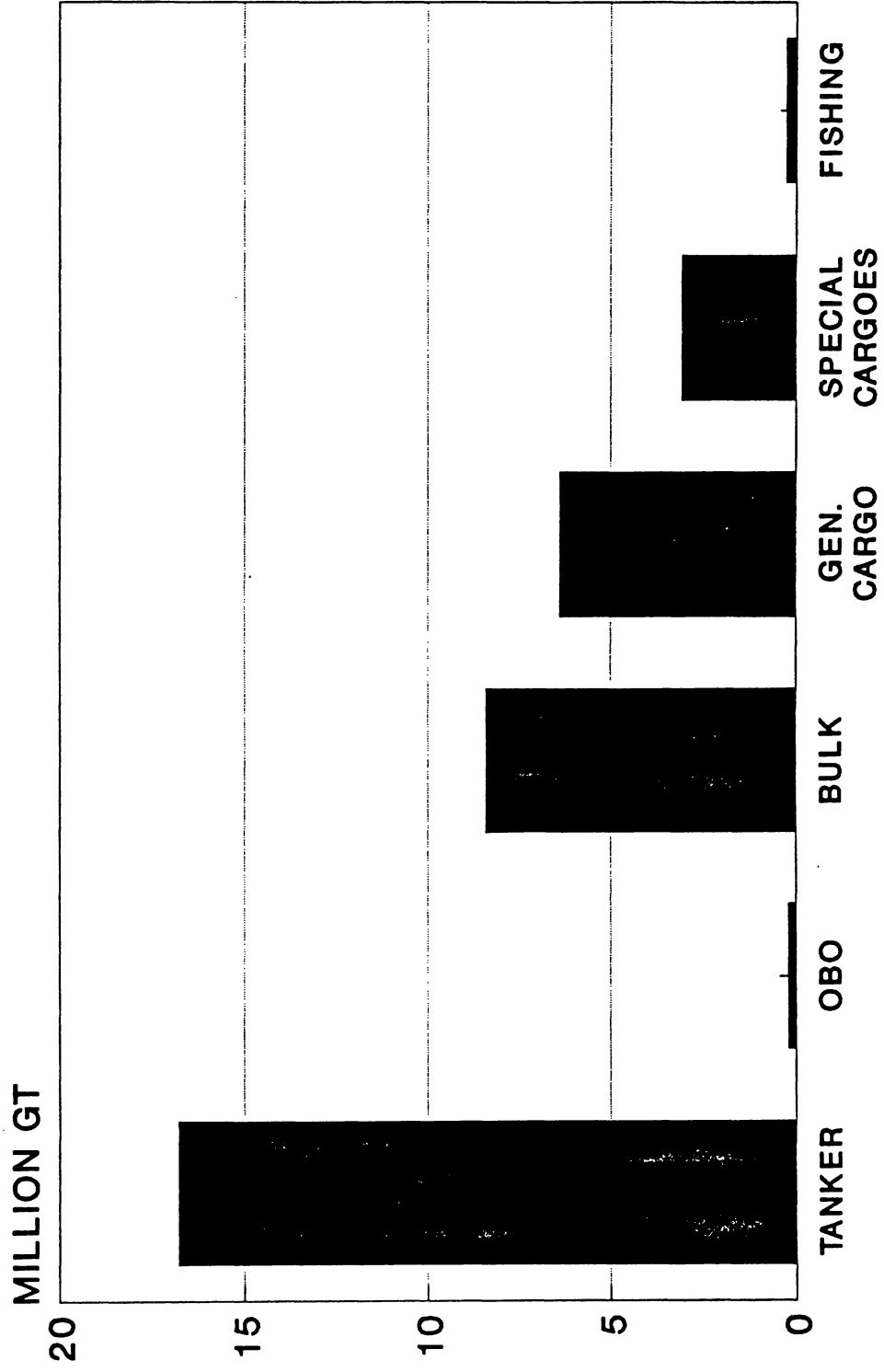
4-



PC: M1039315

# ORDER BOOK AT 12/31/92

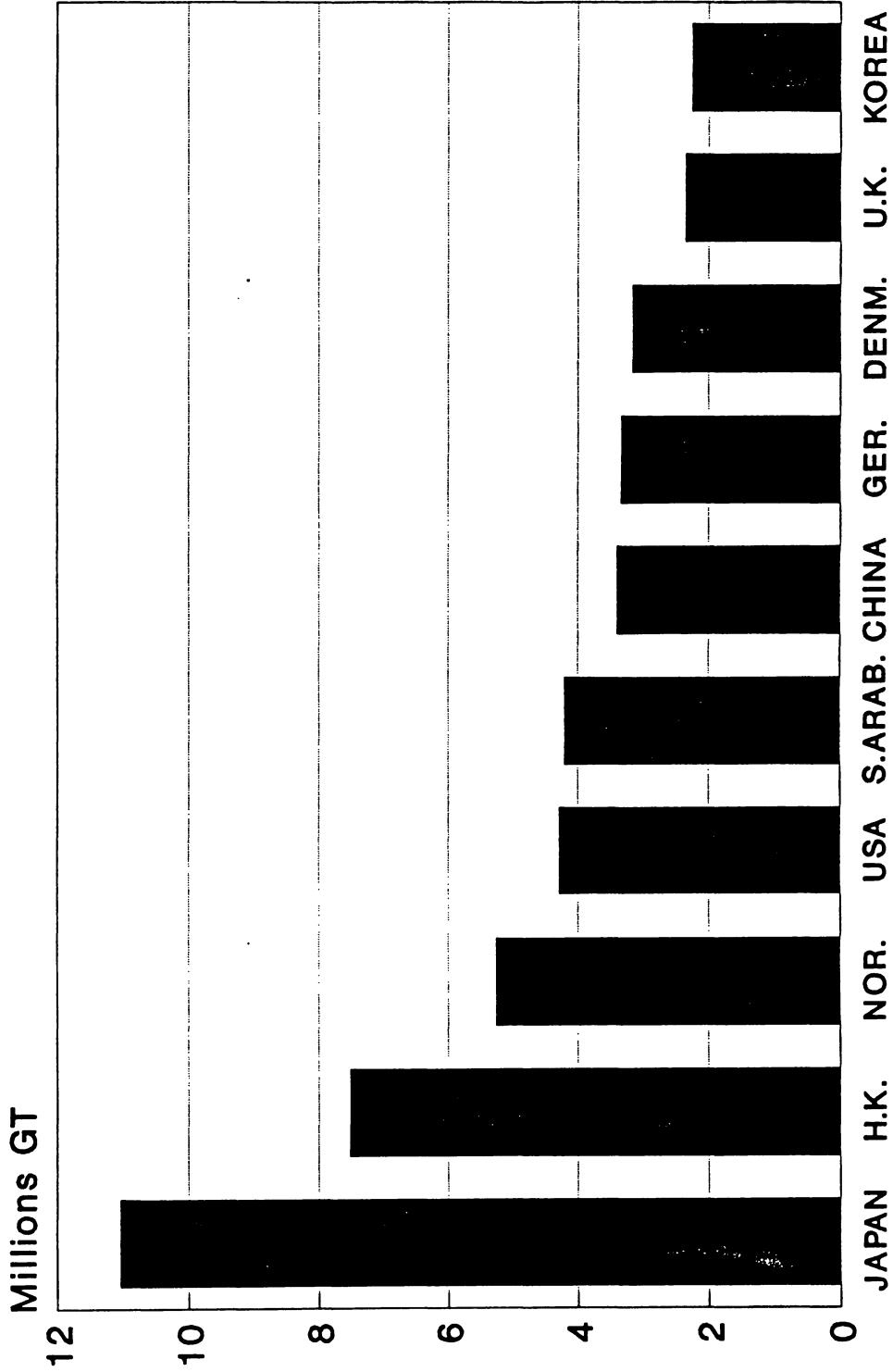
## TYPES



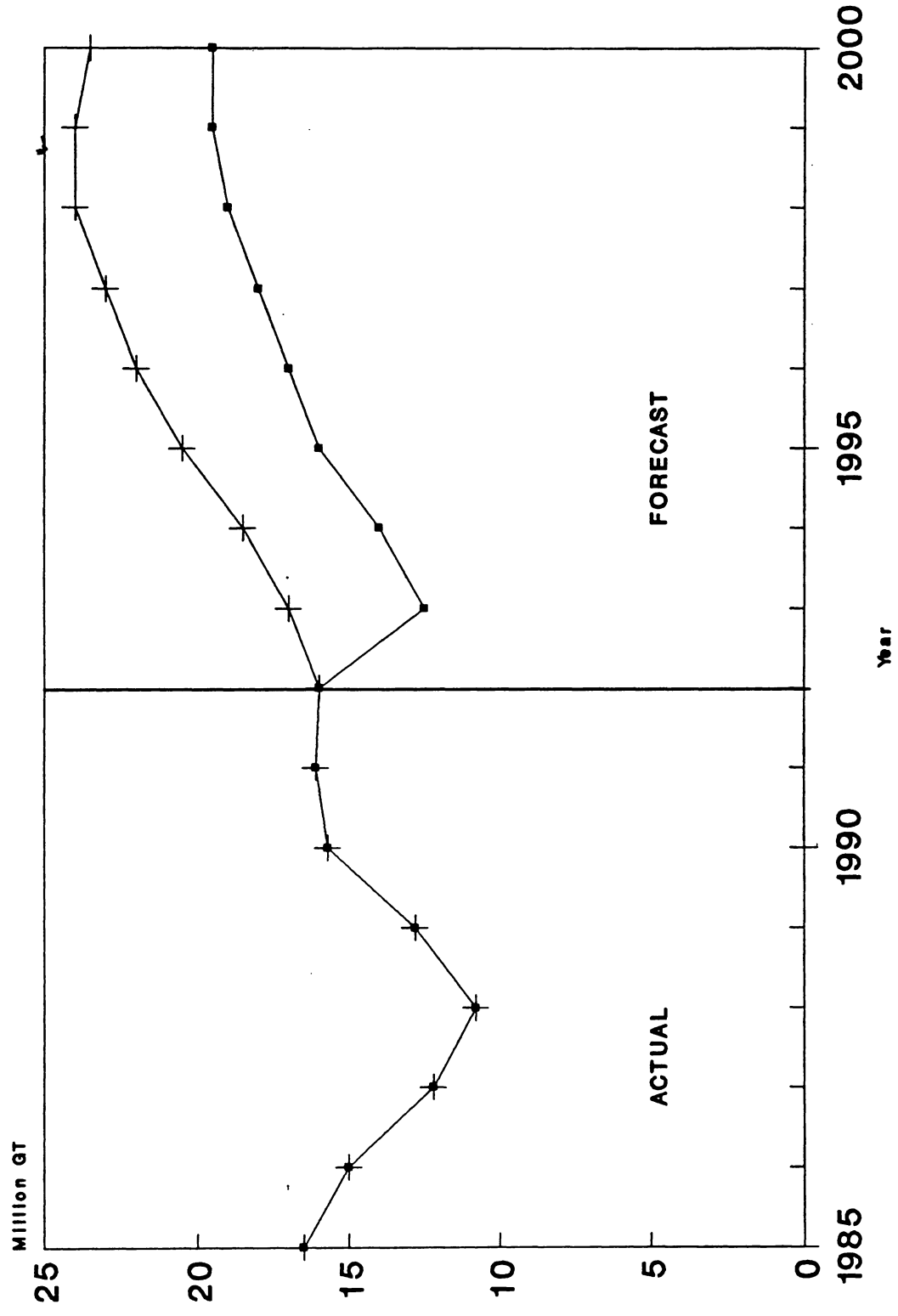
PC: M1039312

# ORDER BOOK AT 12/31/92

## COUNTRY OF DOMICILE

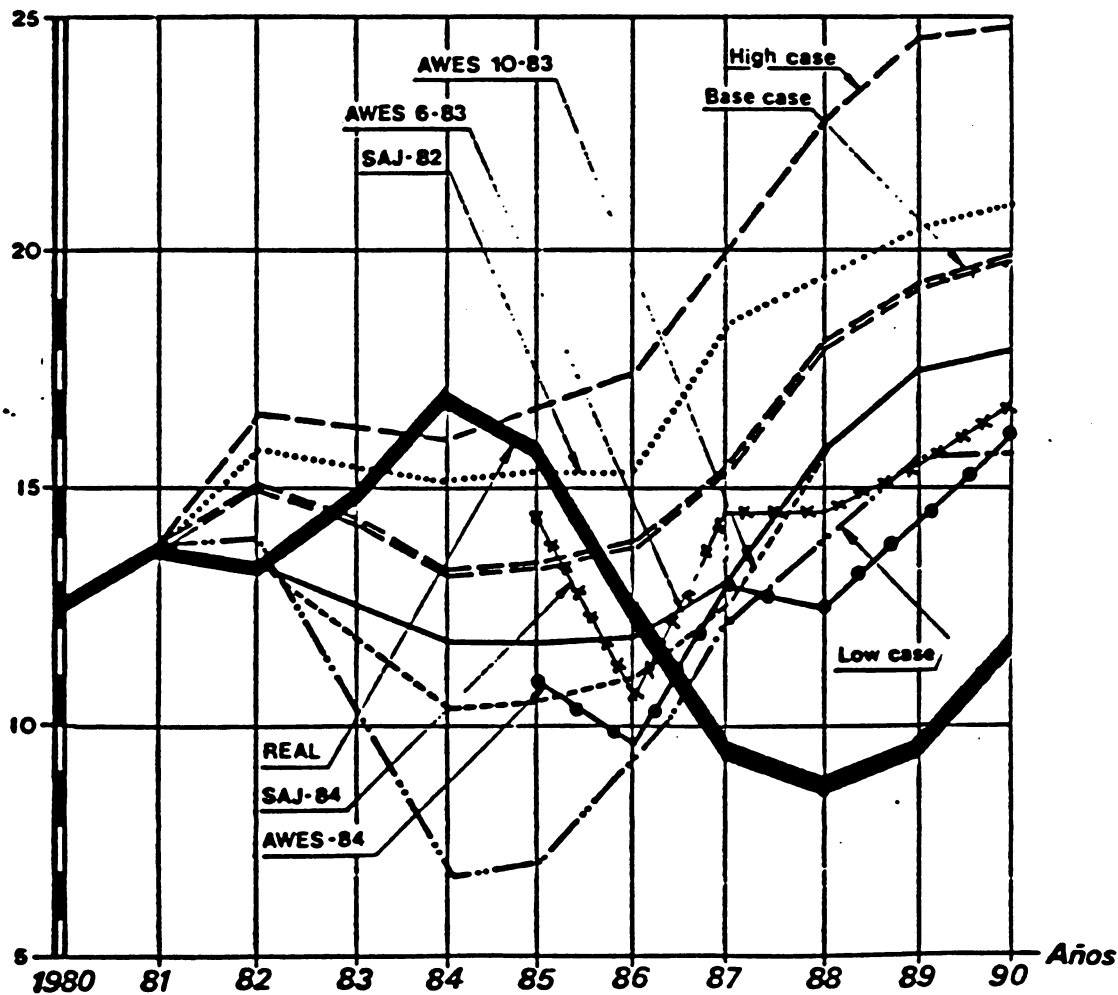


# SHIPBUILDING FORECAST



## AWES-SAJ NEWBUILDING REQUIREMENT FORECAST

M. CGRT



UMTRI



3 9015 07529 5215

Transportation  
Research Institute



**Transportation  
Research Institute**



# AIIM SCANNER TEST CHART # 2

## Spectra

4 PT ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz;"/?0123456789  
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## Times Roman

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## Century Schoolbook Bold

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## News Gothic Bold Reversed

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## Bodoni Italic

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## Greek and Math Symbols

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 6 PT ΑΒΓΔΕΕΘΗΙΚΑΜΝΟΠΦΡΣΤΥΩΧΨΖαβγδεξθηικλμνοπφρστνωχψζ≥≠", / ≤ ± = ≠ > < > < > < ≡  
 8 PT ΑΒΓΔΕΕΘΗΙΚΑΜΝΟΠΦΡΣΤΥΩΧΨΖαβγδεξθηικλμνοπφρστνωχψζ≥≠", / ≤ ± = ≠ > < > < > < ≡  
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White



Black



Isolated Characters

e	m	1	2	3	a
4	5	6	7	o	-
8	9	0	h	l	B

## MESH HALFTONE WEDGES

65

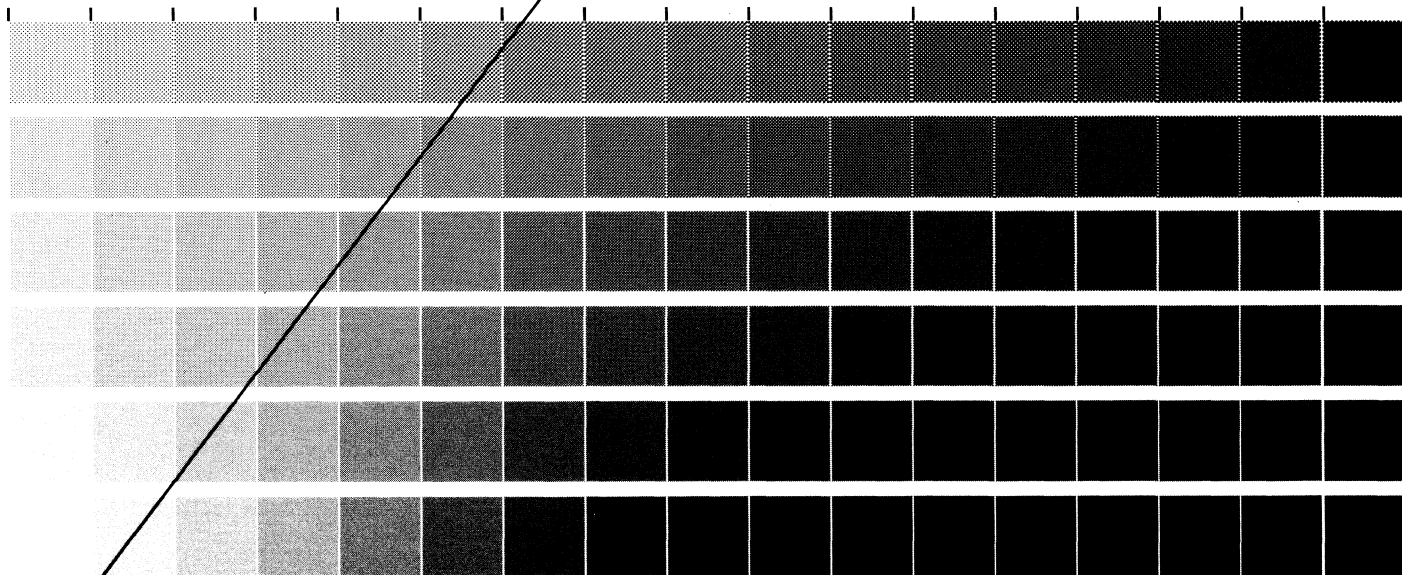
85

100

110

133

150



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RIT ALPHANUMERIC RESOLUTION TEST OBJECT, RT-171

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