Introduction to Rickmers-Linie

and

Stowage and Securing of Project Cargoes
General information about Rickmers-Linie and Rickmers Group
1834 Shipyard founded in Bremerhaven

1859 Foundation of Rickmers Shipping Company

1889 Three fields of business: ricemills, shipping and shipbuilding

1912 The company moved to Hamburg

1920 Steamer SOPHIE RICKMERS restarted traffic to the USA after WW I
1948  The shipyard started production again after WW II

1951  SS MAI RICKMERS reopened liner service to China after World War II

1975 Rickmers-Linie and Hapag-Lloyd join forces in the service to Asia, later Rickmers-Linie becomes a subsidiary of Hapag-Lloyd
Rickmers Milestones

2000: Rickmers-Linie returned to family ownership, and started to expand and develop new concepts, a new fleet was ordered.

2006: Opening of Rickmers (Japan) Inc.
Opening of Rickmers Ship-management (Singapore) Pte. Ltd.

2007: Opening of Rickmers (Korea) Inc. in Seoul on 1 November

Rickmers-Linie in joint venture for breakbulk terminal in Antwerp

Rickmers-Linie announces renewal and expansion of fleet with
4 x 24,000 dwt,
6 x 19,000 dwt and
4 x 17,000 dwt vessels.

2009: Rickmers 175 years
Group Structure

RICKMERS GROUP

RICKMERS HOLDING

- Shipowning
  - Rickmers Reederei
- Liner Shipping
  - RICKMERS-LINIE
  - Rickmers-Linie Belgium
  - Rickmers-Linie America
- Services
  - Expert Shipping
  - MCC Marine
  - EVT
- Investments
  - Rickmers Immobilien (Real Estate)
  - ATLANTIC (80%)
  - Harper Petersen (50%)
  - German Lashing (17%)

PACIFIC HOLDINGS

- Shipmanagement / Crewing
  - Global Management (Cyprus)
  - POLARIS (Isle of Man)
  - Rickmers Shipmanagement (Singapore)
  - Rickmers Marine Agency
The Fleet of Rickmers Group

- 70 Container Vessels
  - 8 Conbulker
  - 2 Bulk Carrier
  - 9 Multipurpose Vessels (Superflex)
  - 1 Car Carrier

= 90 Vessels in service

+ ca. 40 vessels on order/under construction

including 8 x 13,100 TEU vessels
Rickmers-Linie in brief

- more than 2.5 million FRT (2007)
- 178 employees worldwide
- 16 offices all over the world
- 18 specialised vessels in permanent operation
- Four permanent liner services, connecting the business areas of the world, and special sailings on demand
RL Position in the Market

- Heavy-Lift Carrier (Tramp)
- Bulkcarrier (Tramp)
- Containercarrier (Linie)

Specialisation: high, low
Schedule Reliability: low, high
Rickmers-Linie Route Network

Round-The-World Pearl String (eastbound)
Connecting services
Europe to Middle East & India & vv.
America to Asia westbound
The Superflex Heavy MPC Fleet
(nine vessels built 2002-2004 + tenth vessel built 2001)

RICKMERS HAMBURG
RICKMERS SHANGHAI
RICKMERS SINGAPORE
RICKMERS TOKYO
RICKMERS NEW ORLEANS
RICKMERS JAKARTA
RICKMERS SEOUL
RICKMERS ANTWERP
RICKMERS DALIAN
** RICKMERS HOUSTON

30,000 dwt
2x 320 to cranes, combinable to 640 to
19.5 knots
flexible tweendecks
** tenth vessel is a near sister with 200 tons lifting capacity, built 2001
Six vessels ordered from Tongfang, China up to **480 tons** lifting capacity

19,000 dwt – 2 x 240 to crane combinable to lift 480 tons
Length 148 m – Breadth 23.4 m
Adjustable tweendecks – Speed 16 knots
Four vessels ordered from Xinshun, China up to **300 tons** lifting capacity

17,000 dwt – 2 x 150 to crane combinable to lift 300 tons, plus one 80 tons crane

Length 144 m – Breadth 22.8 m

Speed 16 knots
Four vessels ordered from Wuhu Xinlian, China up to 700 tons lifting capacity.

24,000 dwt – 2 x 350 to crane combinable to lift 700 tons, plus one 100 tons crane

Length 175 m – Breadth 26.5 m

Speed 18 knots
Stowage and Securing of Project Cargo
Figure 1.2: Six freedoms of motion
150ts x 0.8 = 120ts \Rightarrow \text{weight range 30 tons to 270 tons}!!!
Safe Transport

- Lifting
- Bedding
- Lashing
- Ricosys
Lifting

✓ Center of Gravity

✓ Lifting Angles

✓ Lifting Points/Areas
Bedding

**Permissible Surface Load**

**Rickmers RTW Vessels**

- Tweendeck panels : 4 ts per sqm
- Tanktop hold 2-4 : 22 ts per sqm
- Tanktop hold 1+5 : 13.75 ts per sqm
Bedding

Foot Print

250 ts/sqm
Figure 2.2.1: "Foot print" of a heavy cargo unit
Figure 2.2.3: Extension of gross bedding area (top view)
Lashing

Friction

• wooden dunnage,
  friction coefficient
  wood/steel $> 0.3$
• rubber mats $> 0.7$

For safety reasons RL counts 0.3 on rubber mats
Figure A 3.1: Balance of forces and moments
Lashing

Figure 1.6: "Strong belt" and "strong foot" for lashing and shoring
Rickmers Cargo Operations Simulation System
- Library of lifting equipment: traverse, spreader, chains, slings etc.
- Method Statements
Configuration of Bedding
Securing Arrangement - Overview

RICKMERS Standard for Stowage and Securing of Project Cargo
RICKMERS-LINIE GmbH & Cie. KG

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Ricosys Bedding
RICOSYS Bedding
RICOSYS Lashing

Lashing Arrangement
Isometric drawings of cargo items in 3D are used to simulate loading and discharge of extraordinarily long and heavy pieces.
490 ts Altamira-Labuan
490 ts Altamira-Labuan
Twin Crane Loading
Cylinder Loading
Cylinder Discharging
It's not only a Simulation!
Stowage Planning with RICSTOW
Improving of cargo handling:

- Permanent observing of cargo handling
- Investigation on all damages
- Collecting of all informations of cargo loaded
- Frequent adjusting of our stowage rules
Stowage

No free access to lifting points
Stowage

No free access to cargo
Stowage

Preslinging
Stowage

Cargo stow in hold no. 1 Td, cases on second tier loaded on supports
Stowage
Stowage
Guidance to:
Masters of Rickmers-Linie vessels
Supercargoes
Stevedores
Agencies

Valuable Guideline for:
Shippers
Manufacturers