The use of a floating quay for container terminals

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- Introduction
- Concept
- Design considerations
- Chosen design
- Stability
- Conclusions and recommendations
Introduction

- Increase of container transport
- Scale increase of vessels
Introduction

- Port expansion to deeper water
- Increasing retaining height quays
Introduction

- Vessels up to 12,500 TEU
- Service time ≤ 24h
Concept

- Based on indented berth principle
- Flexible
Design considerations

- Dedicated versus multi-user system
- Stacking versus no stacking
- Number of cranes
- Placing of cranes

- Increasing dimensions leads to decreasing transportability
- Decisions should be made at strategic level
Design considerations

- Elements
- Connections
- Material
- Positioning
Chosen design

- Multi-user system
- No stacking
- Four cranes working on one side
Chosen design

- Two designs

Cross-section

Overview
Stability

- Static stability
Stability

- Dynamical stability
Stability

- Dynamical stability

The use of a floating quay
Stability

- Operational load
Conclusions and recommendations

• Floating quay offers extra capacity and flexibility
• Several options to design a floating quay
• Both static and dynamic stability important

• Further research is recommended
End of presentation

- Questions?