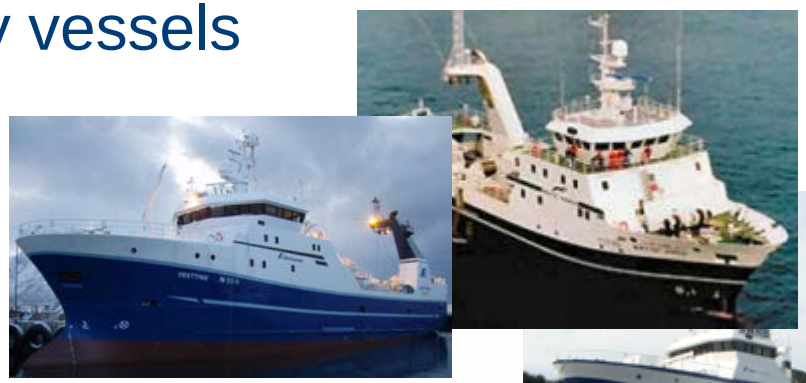
TEKMAR 2009

Fabrikkskip – full pakke på lokalitet det neste?

Trond Williksen, Aker Seafoods ASA

Akers experience in factory vessels

AkerSeafoods™

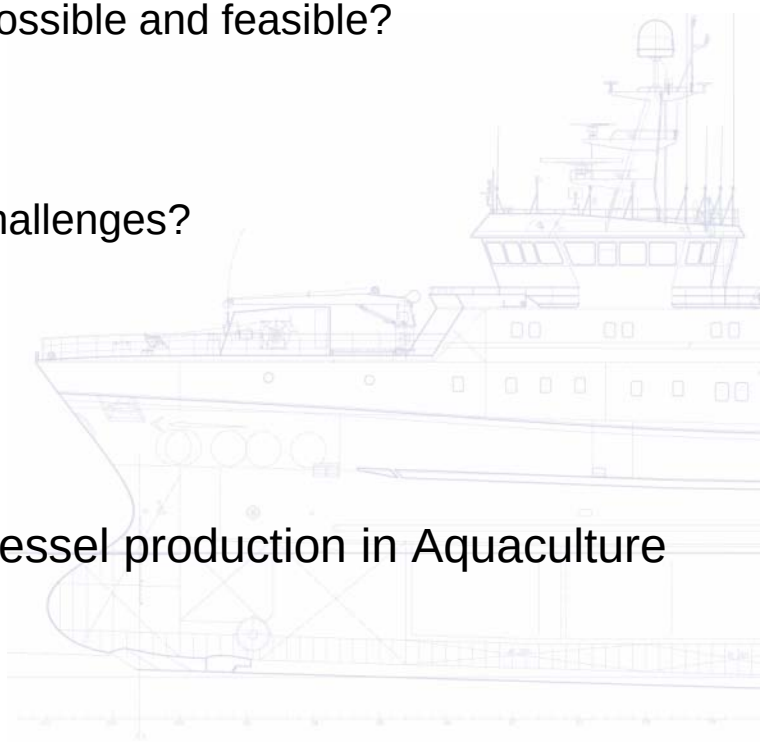


AkerOceanHarvest™

Aker BioMarine

Criteria

- Capacities and capabilities
  - Is large scale production and processing at site possible and feasible?
- Operational feasibility
  - What could be the operational advantages and challenges?
- Financial feasibility
  - Is it likely to be financial feasible?
- Other reasons for pursuing the idea of factory vessel production in Aquaculture



Operational characteristics of factory vessels
- what makes them feasible in the fishing industry?

- Harvesting and processing of large, high seas fish and marine resources
  - Historically factory vessels was developed to enable harvesting on high seas marine resources
  - Distances made (make) in infeasible to bring the resource to land for processing

- Efficient capital utilization
  - Vessel (factory building) is there anyway – adding processing improves capital utilization
  - **In general – factory vessels still implies high CAPEX**

- 24/7
  - Offshore operations could be year round / 24 hours per day / 7 days a week
    Very focused production environment

- Quality
  - Instant processing makes optimal quality possible – very limited lead time from catch to processing

Example of capacities

- High capacity fishing capabilities to ensure steady supply to factory

- 8,200 hp main engine + 4 aux engines to supply vessel and processing plant with necessary energy
- Fresh water production of 600 tons per day

Centurion del Atlantico

- Accommodation for 120 people. High standard living quarters for production and fishing staff.

- High capacity factory for fish processing from live fish to finished surimi (fish paste) as well as fish meal and oil.
- Input capacity of 600 Mt fish a day
- Freezing capacity of 160 tons a day finished product + 30 tons of fish meal / oil

Key data
Length: 118 meters
Cargo hold: 2,025 mt (3,115m3)
Typical trip: 50 – 60 days

How it looks on a factory vessel

The preferred partner

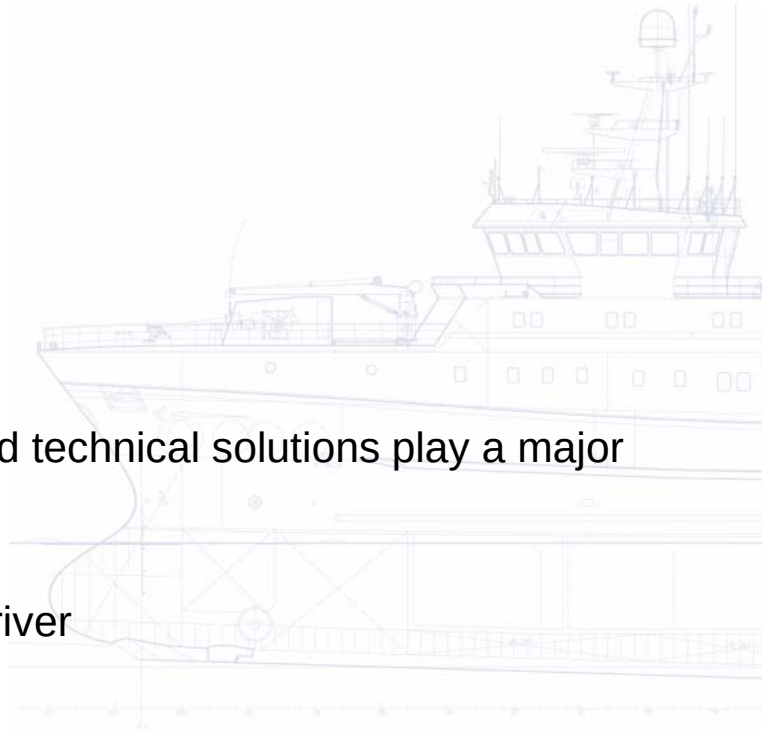
How it looks on a factory vessel

AkerSeafoods™

part of the Aker group

Experiences and challenges with factory vessels

- Efficient operations
  - Demanding setup – however very efficient when it works
  - 24/7 is the norm - not the abnormality
  - Offshore operations is focused – few distractions
- Crew / manning and logistics manageable
- Very few technical limitations
  - Most technical solutions can be done offshore
- Space is a limited resource – design of processes and technical solutions play a major role
- Energy is a limitation – as well as a significant cost driver
  - Offshore energy more expensive than available onshore
- A vessel is a expensive “factory building”
  - Needs to have a combined purpose

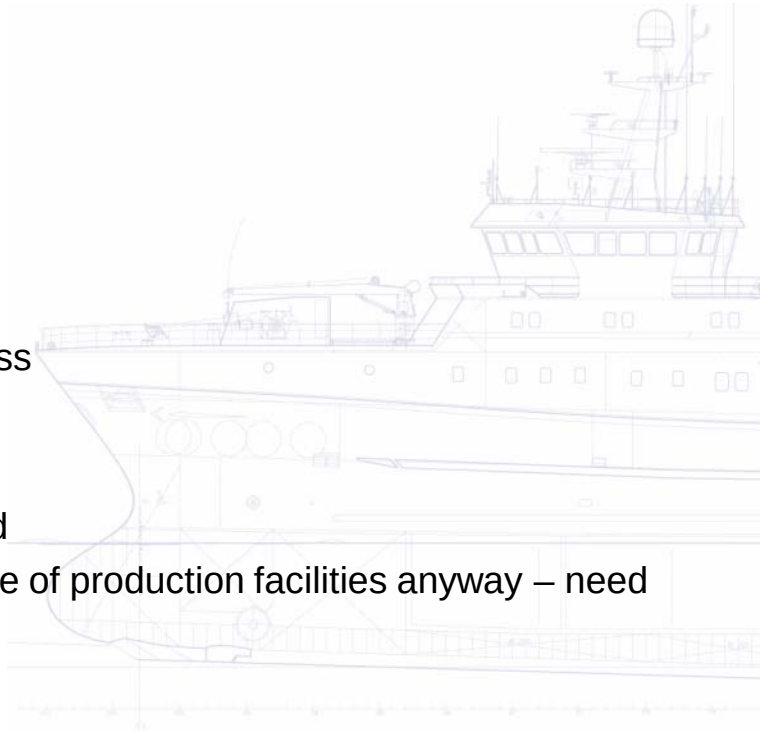


Factory vessels as alternative processing facilities in aquaculture

- No technical limitations moving processing facilities offshore
  - Basic large scale processing, including filleting, chilling and freezing are proven to work offshore
- Close to shore aquaculture production does not fill the main criteria making factory vessels feasible as production platforms:
  - Live fish, easy to access, close to shore where it could be processed in onshore facilities
- Combined purpose might be present - handling and transport activities – however not likely to justify additional Capex of a offshore production facility
  - Onshore buildings will have lower Capex that an vessel as a platform for processing
- Energy costs, a main cost driver, will likely be lower onshore
- 24/7 – focused production environment offshore, as well as other strong reasons might make offshore processing (factory vessels) feasible over time

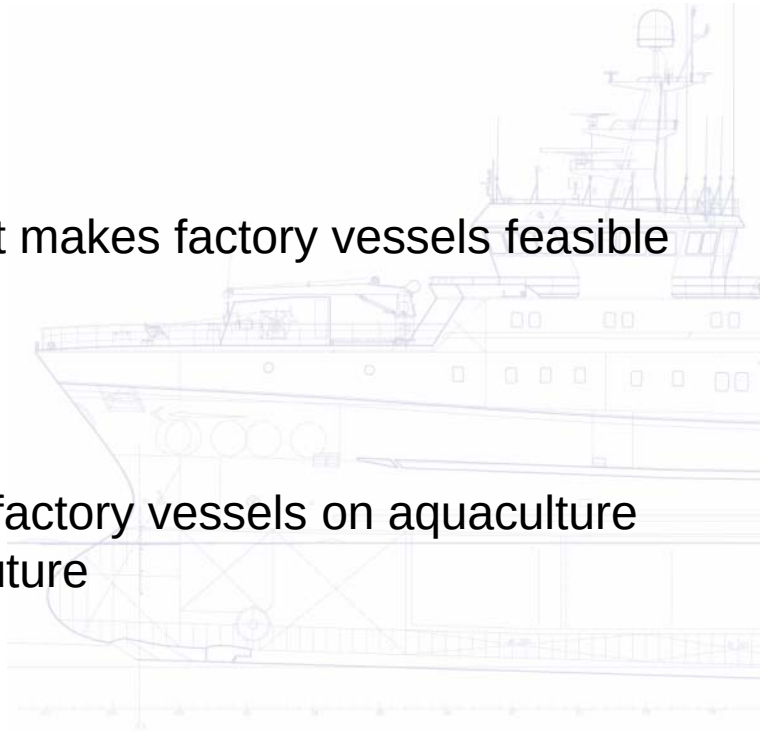
Factory vessels – alternative reasons

- 24/7 – focused production environment
  - Easier to achieve 24/7 offshore
- Environment
  - Contains all production onsite
  - No transport through zones – spread of diseases
- Quality
  - Instant production with no transport and limitation of stress
- Flexibility of CAPEX
  - Factory vessel can be used on many sites and be moved
  - Current production regimes requires continuous presence of production facilities anyway – need for flexible movement not likely
- Transport and handling
  - Products shipped directly to transport HUBS or market – less transport on land
  - Likely that onshore facilities gives more flexibility



Factory vessels as platform for aquaculture production - Conclusions

- Technically and capacity wise – few limitations
- Aquaculture does not fulfill the main criteria that makes factory vessels feasible
- Might be other reasons why – BUT….. at least factory vessels on aquaculture still part of what might become feasible in the future



TEKMAR 2009

Fabrikkskip – full pakke på lokalitet det neste?

Trond Williksen, Aker Seafoods ASA