Environmental ES Systems

ESSORP-System

Used Oils Oily Emulsions Sludge Oils

Water ← ***ESSORP*-System** → Solids

treated & cleaned Oils

Treatment of Sludge Oils & Emulsions onboard of ships by means of

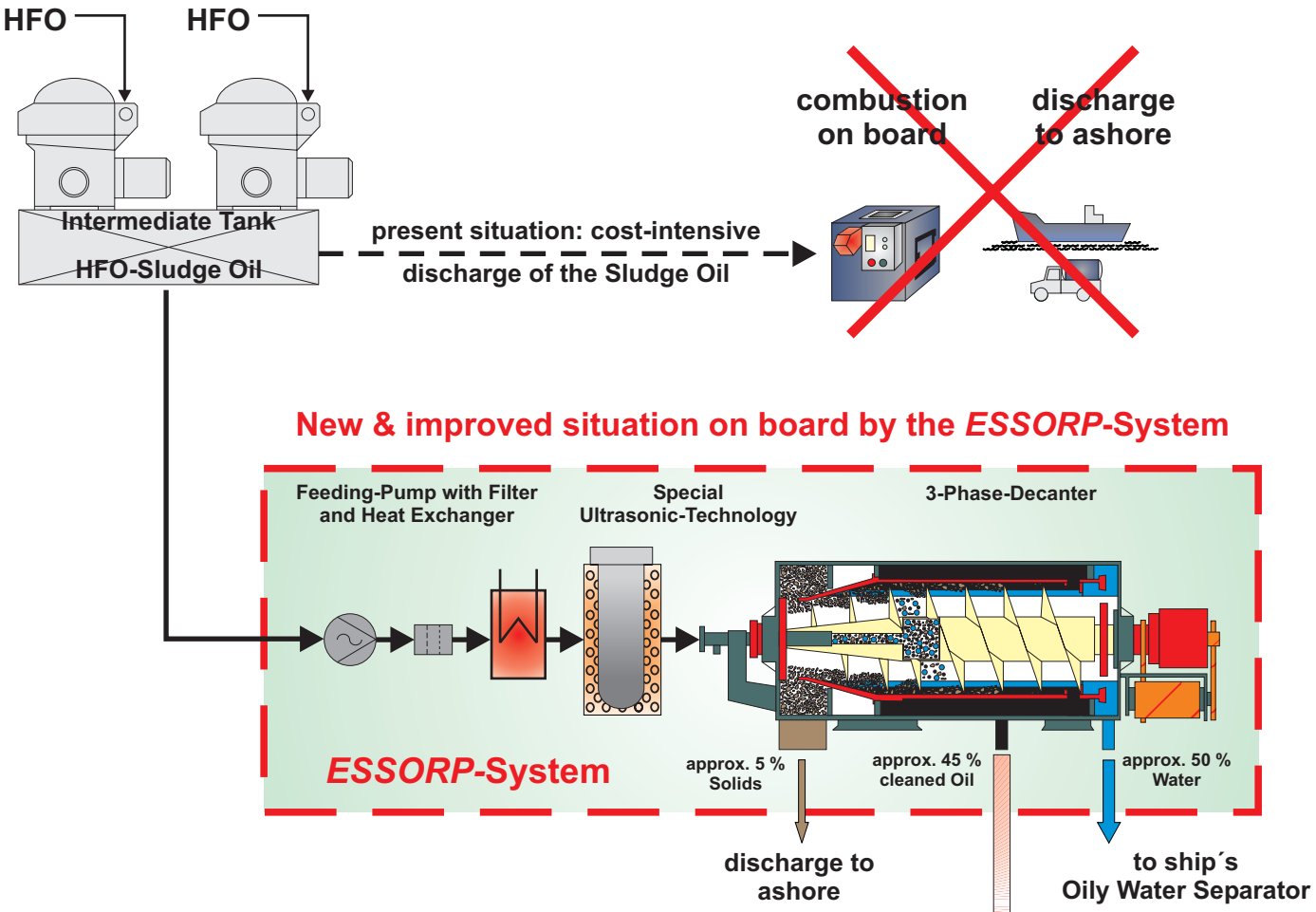
Recovery of the Oil

Separation of the Water

Separation of the Solids

Ultrasonic-Technology + **Separation-Technology** =

Situation 1: Sludge Oil is generated only from the HFO-Separators



Treated & Cleaned Oil from the *ESSORP*-System

Alternative 1

Back to HFO-Settlingtank as high quality Fuel Oil

Benefits:

- Saving of HFO
- Only the solids have to be discharged

Alternative 2

Combustion in ship´s boiler for production of steam

Benefits:

- Reduction of Diesel Oil costs
- Only the solids have to be discharged

Alternative 3

Discharge to ashore

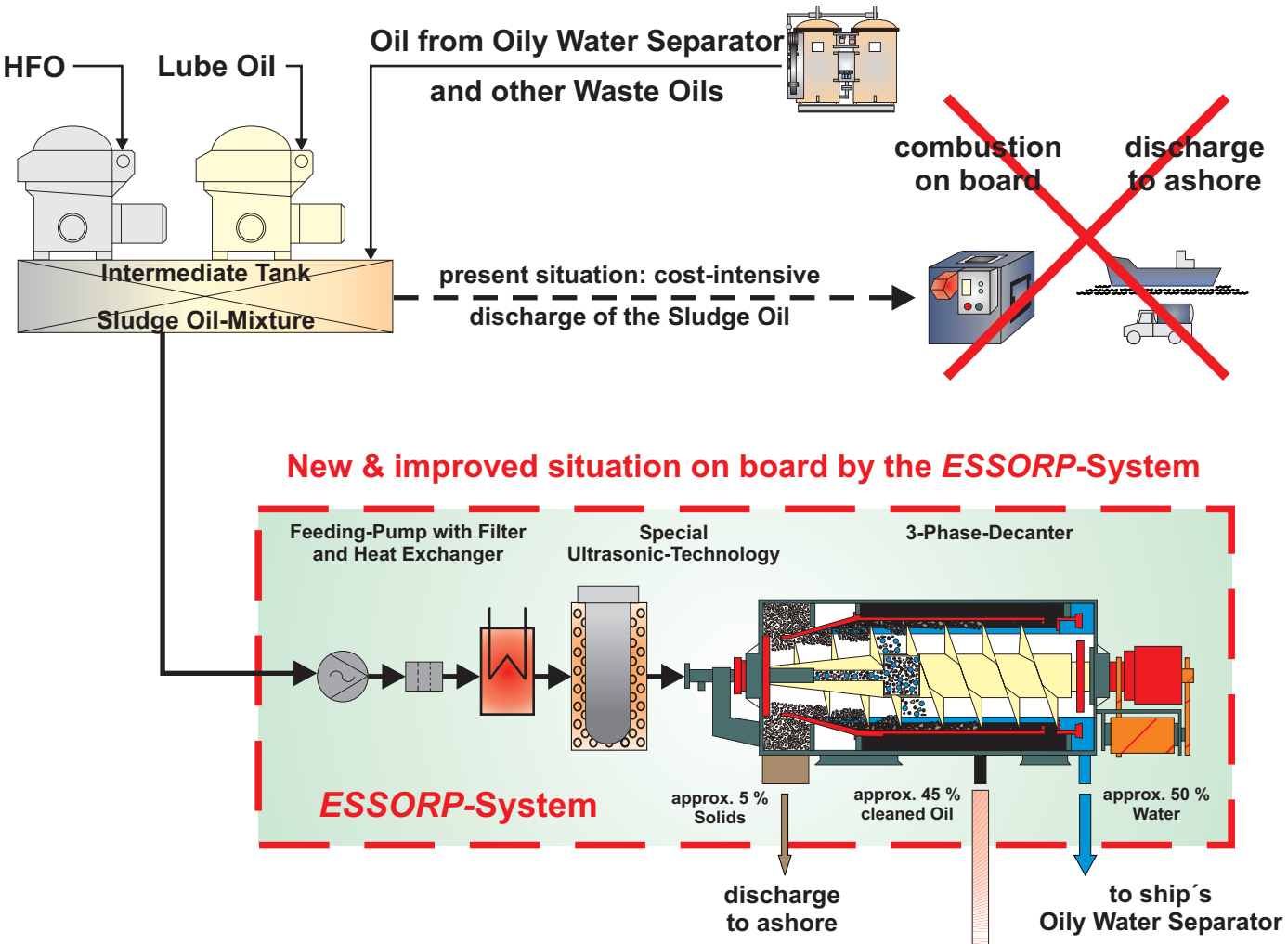
Benefits:

- Rigorous reduction of the discharge costs, because only the oil has to be discharged and not additional the water which was in the Sludge Oil

tal FS Systems

optimal Oil-Treatment = *ESSORP*-Technology

Situation 2: Sludge Oil is a mixture of different types of Waste Oils



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Environmental ES Systems

ESSORP saves money
ESSORP converts your Sludge Oils back to useful Oils
ESSORP makes independent from the Sludge Oil discharge

Advantages of the *ESSORP*-System

- Optimal exploitation of the bunkered Fuel Oils by recovery of the unused Sludge Oils
- Combustion of the Sludge Oil on board not longer necessary. Saving of expensive Diesel Oil needed for the stabilisation of the combustion flame
- Saving of Fuel Oil costs due to recovery of additional high quality Fuel Oil from the Sludge Oils
- Less discarge costs to ashore, because only the solids have to be discharged

Situation without *ESSORP*-System

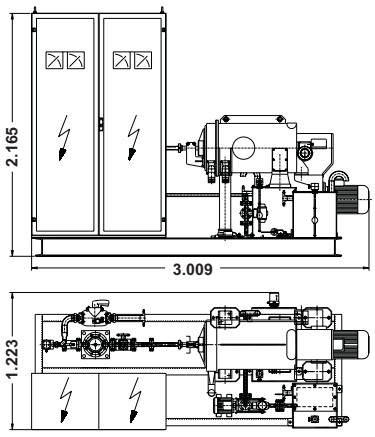
Typical composition of the daily accumulated Sludge Oil on board of ships

- proportion of oil:	approx. 45 %
- proportion of water:	approx. 50 %
- proportion of solids:	approx. 5 %

Situation with *ESSORP*-System

Typical composition of the Sludge Oil after treatment by the *ESSORP*-System

- proportion of oil:	94,9 %
- proportion of water:	5,0 %
- proportion of solids:	0,1 %



Example: *ESSORP*-System for 100 l/h

ESSORP-Systems for the operation on board of ships

- Individual configuration of the single components according to the specification and local situation
- Size of the ***ESSORP*-System** according to application
- Typical sizes of the ***ESSORP*-Systems**
  50 l/h up to 1.000 l/h
  respectively
  0,5 m^3/day bis 10,0 m^3/day
- Modular upgradable

If you have additional questions about our ***ESSORP*-System**, we are pleased to consult you detailed & individually.

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