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Our Company:

We are an innovative company founded in 2003, concentrating on waterway transport.

NEW-LOGISTICS has developed, designed, built and delivered up to now four units of FUTURA CARRIER ships representing three completely novel and different designs. Patents for this novel technology are granted or applied for in Europe and key-countries worldwide.

Detailed design and construction of the ships was under the full responsibility and project management of NEW-LOGISTICS engineers subcontracted to different design and construction partners in Germany and Poland. All four ships are now successful in operation since more than 18 month. Based on the operational results of these prototype ships NEW-LOGISTICS has performed further ongoing developments and has successfully tank-tested already the next generation of FUTURA ships.

Our main product is the FUTURA SYSTEM

The FUTURA SYSTEM developed by NEW-LOGISTICS GmbH with the company's own funds is a highly innovative unit-based inland and/ or coastal waterways transport vessel, built up out of tried and tested robust components and elements.

The basis of the system is flexibility, combined with ecological and economical superiority. The FUTURA SYSTEM can be individually adapted to the available waterways and to the shipping company's requirements with respect to load (container transport, tanker, ferry or support ship) and size, and its performance data is highly competitive. From a technical point of view, the novel aspect of the FUTURA CARRIER is the hull shape, in particular the shape of the bows, with patent rights worldwide granted to NEW-LOGISTICS and aiming for the global market.

The FUTURA concept uses known and proven equipment such as engines, propulsion units, propellers, deckhouse, winches, etc.

The ship itself is built to standard state-of-the-art techniques in steel shipbuilding, as practised every day all over the world. Due to the simple box-like shape, in fact it is easier and less risky to build even by less experienced steel manufacturing companies who do not otherwise build ships or would not be in a position to do so.

Strength of the company

NEW-LOGISTICS GmbH is a small and flexible unit carried by professionals with extensive international experience, used to develop, plan and manage novel shipbuilding projects in the various cultural environments.

Teaming up with selected professional German and foreign partners to tailor and manage a project-organisation with low risk interfaces to the specific project requirements is what we are used to do and have proven to do with success.



THE BASIC IDEA

Dividing the required propulsion power into four identical drives

Arranging the drives aft and forward



FIRST TESTS





FIRST BOWFORM







THE OPERATIONAL DEMONSTRATOR SHIPS

"RMS Kiel"(NL building number FC 001) with ballast trim at Beaufort 7 in the North Sea





The coastal vessel MS "FUTURA CARRIER" (NL building number FC 001)



"Sophia Soraya" (NL building number FC 002) turning backwards from Peute canal into Müggenburger canal





"Kaja Josephine" (NL building number FC 003) on the Elbe river passing Norderelb-Brücke at high water level



Foto: Schiffahrt und Technik, C. Grohmann



"Sophia Soraya" (NL building number FC 002) on the Elbe river at full ahead





TMS "Till Deymann" (NL building number FC 004) on the Ems



Foto: Filmart, D. Schober



TMS "Till Deymann" (NL building number FC 004) leaving a lock





DST CFD RESULTS









DST

Ergebnisse Propulsionsversuch Wassertiefe h = 10 m, Tiefgang T = 2 m M1870 Futura Tanker



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Proven advantages of the FUTURA ships:

- High operational safety due to double hull and four completely independent propulsors
- Unmatched maneuvrebility
 The ship moves easy and controlled at any speed ahead, astern and sideways.
 The ship turns on the spot and provides extreme short stopping distances even from full ahead.

The ship can hold position and heading in wind and current condition.

- High and flexible cargo capacity
- Energy saving operation Proven in tank propulsion tests for the comming generation of FUTURA ships.
- Environmentally friendly operation River beds, canals and air pollution
- Easy maintenence and repair



FIELDS OF SPEZIFIC DEVELOPMENT AND EXPERIENCE



DRIVE CONFIGURATION FUTURA – SYSTEM

- DIRECT DRIVE DIESEL MECHANIC
- DRIVE SYSTEM DIESEL ELECTRIC
- DRIVE SYSTEM DIESEL HYDRAULIC



NEW-LOGISTICS[®] GmbH





DRIVE SYSTEM DIESEL HYDRAULIC PROPULSOR FLOW CONTOLLER PROPULSOR HYD. HYD. POWER POWER . FORWARD MOTOR MOTOR HYD. HYD. PUMP PUMP THRUST DIRECT. FORWARD DIESEL DIESEL RPM ENGINE ENGINE SPEED MAIN AND WHEELHOUSE CONTROL CROSSOVER COURSE AFT DIESEL THRUST DIRECT. DIESEL ENGINE ENGINE RPM HYD. HYD. PUMP PUMP HYD. HYD. POWER POWER MOTOR MOTOR FLOW CONTOLLER PROPULSOR PROPULSOR AFT





EXHAUST GAS TREATMENT

• Two different systems installed and operated

- MS "FUTURA CARRIER" allowed sulphur content for fuel: < 2.000 ppm Max. Values clean Gas: PM 0,06 g/ KWh; Nox 3 g/ KWh
- TMS "TILL DEYMANN" allowed sulphur content for fuel: < 50 ppm Max. Values clean Gas: PM 0,06 g/ KWh; Nox 3 g/ KWh

• Experience after a couple of month in on board operation:

- The installed systems where rather sensitive with respect to day to day operation by normal edjucated crew.
- Core problem was a relative fast clogging of particular filters if not operated and watched carefully.
- On board "TILL DEYMANN" the backpressure of the system could not match the rather low allowed back pressure level of the engine manufacturer.
- On MS "FUTURA CARRIER" (Ex "RMS Kiel") the crew did not mix adequate additive to the fuel which resulted in sulphur ash clogging of PM-filters.

Decission was made to change to a more robust system



- Risk for clogging should be eliminated completely independent from fuel burnt.
- Backpressure in the exhaust gas line should be reliable constant without bypass arrangements
- Maintenance should be reduced to a minimum, dismantling off large parts for inspection and cleaning has to be avoided completely.
- The system must have future potential for general application not just for inland waterway shipping.



GREEN nox PLUS SYSTEM

-		overa	ll max. length 24	00mm —		•
INLET MODUL	OXICAT	HYDROLYSIS CAT	PM REDUCT.	SCR	SLIPCAT	OUTLET MODUL

- COMPACT SYSTEM
- NO BACKPRESSURE CHANGE
- MINIMUM MAINTENANCE
- ► WORKING TEMPERATURE EXHAUST GAS 250°C
- ► BETTER NOISE REDUCTION
- LOW WEIGHT
- MINIMUM LIFETIME COSTS
- NO CLOGGING

PERFORMANCE

NOX	< 2g/kwh
PM	< 0,04g/KWH
co	at detection limit
HC	at detection limit

THE NEW EXHAUST GAS CLEANING SYSTEM FOR "TILL DEYMANN" READY TO GO









Research and Development in three basic fields:

- Micro Air bubbles
- Air films
- Air cavities

NEW-LOGISTICS is concentrating activities in the field of:

- Micro bubbles, small air bubbles using "of the shelf" material and equipment
- Installed systems on
 - MS "FUTURA CARRIER"
 - TMS "TILL DEYMANN"

SMOOTH



OBJECTIVES and POTENTIAL IMPACT

The SMOOTH project is an **innovative solution** which uses cutting edge technologies with the aim of introducing **air-lubrication into inland and coastal shipping**.

- 1. Provide validated computational tools for a real ship design
- 2. Validate scale effects of air-lubrication
- 3. Evaluate the economy of air-lubrication in practice
- 4. Prepare the safe introduction of air-lubricated ships in practice

Insulating the ship from the water by providing an **air-layer** between the hull and the water is a promising means to **decrease the frictional resistance** and so to further reduce the required propulsive power, fuel consumption and CO_2 emissions.

Within SMOOTH three techniques are surveyed: micro bubbles; air cavities; and air films. The focus of SMOOTH is on **air film techniques**.



"Reducing fuel consumption and CO2 discharge by up to 20%"



Air-lubrication may, in theory, **reduce net energy demand** by up to 20%. Measures currently in service are already providing a fall in the range of 5-7%.

SMOOTH is aiming to bridge this gap by applying optimisation techniques.

CONSORTIUM MEMBERS IN SMOOTH









Air bubble lubrication of bottom area









EXEMPLATORY FUTURA DESIGNS

FUTURA CARRIER- CC-CG-1350

Ship type: Container Ship for Inland Service

Container Cargoes in all Holds (No Hatch Covers!)

134,60	m
20,80	m
6,00	m
1,00	m
4,00	m
9.800	t
7.450	t
5.000	t
3.770	t
2.550	t
	134,60 20,80 6,00 1,00 4,00 9.800 7.450 5.000 3.770 2.550

The hold is subdivided in three compartments		
Container capacity:	533	TEU
Container capacity - 14t/TEU and Draught=3,0m:	357	TEU
Container capacity - 14t/TEU and Draught=2,5m:	269	TEU
Container capacity - 14t/TEU and Draught=2,0m:	182	TEU

Propulsion system:	4 ruo	4 rudder propellers		
Propulsion power aft:	abt.	2 x 600	kW	
Propulsion power forward:		2 x 600	kW	
Speed :		20	km/h	
Crew Accommodation	for	5 Persons		
Tank capacity fuel:	abt.	200	m ³	
Tank capacity potable water	abt.	35	m ³	
Tank capacity grey-/blackwater	abt.	35	m ³	
Tank capacity ballast water	abt.	3200	m ³	











FUTURA CARRIER- CC-KV-1700

Ship type: Coupled Container Ship for Inland Service

Container Cargoes in all Holds (No Hatch Covers!)

Length:	2 x 85 m		170,00	m
Beam: Mavidad danth	to uppin deals		11,45	m
Noulded depth	to main deck:		4,00	m
Draught max.:			2,50	m
Draught in Balla	ist:		1,55	m
Deplacement :			4.300	t
DWT at 2,50 m:			3.080	t
DWT at 2,00 m:			2.220	t
DWT at 1,50 m:			1.355	t
DWT at 1,00 m:			500	t
Container capa	city in 3 Layer:		206	TEU
Container capa	city in 2 Layer:		166	TEU
Propulsion syste	em:	4 rud	lder propell	ers
Propulsion powe	er aft:		2 x 450	kW
Propulsion powe	er forward:		2 x 450	kW
Speed :		abt.	20	km/h
Crew Accommo	dation	for	5 Persons	
Tank capacity fu	uel:	abt.	160	m³
Tank capacity p	otable water	abt.	20	m³
Tank capacity o	rey-/blackwater	abt.	20	m³
Tank capacity b	allast water	abt.	1.430	m³





















PERSONALLY IMPRESSIONS

"It is an absolutely silent cruise, like being on a sailing ship!"

M. Grohmann, Journalist for "Schiffahrt und Technik" on board of "Sophia Soraya" after shifting propulsion from aft to forward.

"The MS "FUTURA CARRIER" was one of the largest ships ever sailing the Rhone river to Arles/ France and piers upstream of the harbour of Sevilla/ Spain. The river voyage took a minimum of time and we had a lot of praise from pilots and harbour authorities."

H. Mussehl, owner of Sprante Schifffahrts Kontor and operator of MS "FUTURA CARRIER"

"Our decision for FUTURA CARRIER ships was governed by economics. Two of these ships perform in our ore-logistic-chain the equivalent of three standard ships."

A. Schröder, Manager Technics and Operation for "Sophia Soraya" and "Kaja Josephine"

"I believe in the potential of these innovative ships and I am proud to be on board!"

A. Borkenhagen, Master on board of "Sophia Soraya", after his first year in command of the vessel.