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established 1979
Company Planning, Marketing
Organisation, Sales
Discussion partner for Executives

established 1982
Technical Analysis, Design, Supply of partial or complete
Concepts and Equipment for Waste Handling on board Ships

established 1985
Cabin Safes, Minibars, Door Locking Systems

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**DEERBERG
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Waste Management

Integrated Solutions for Cargo Vessels

International Offices



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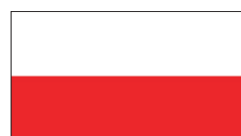
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**Deenberg supplies Quality
in Tradition for 250 years**

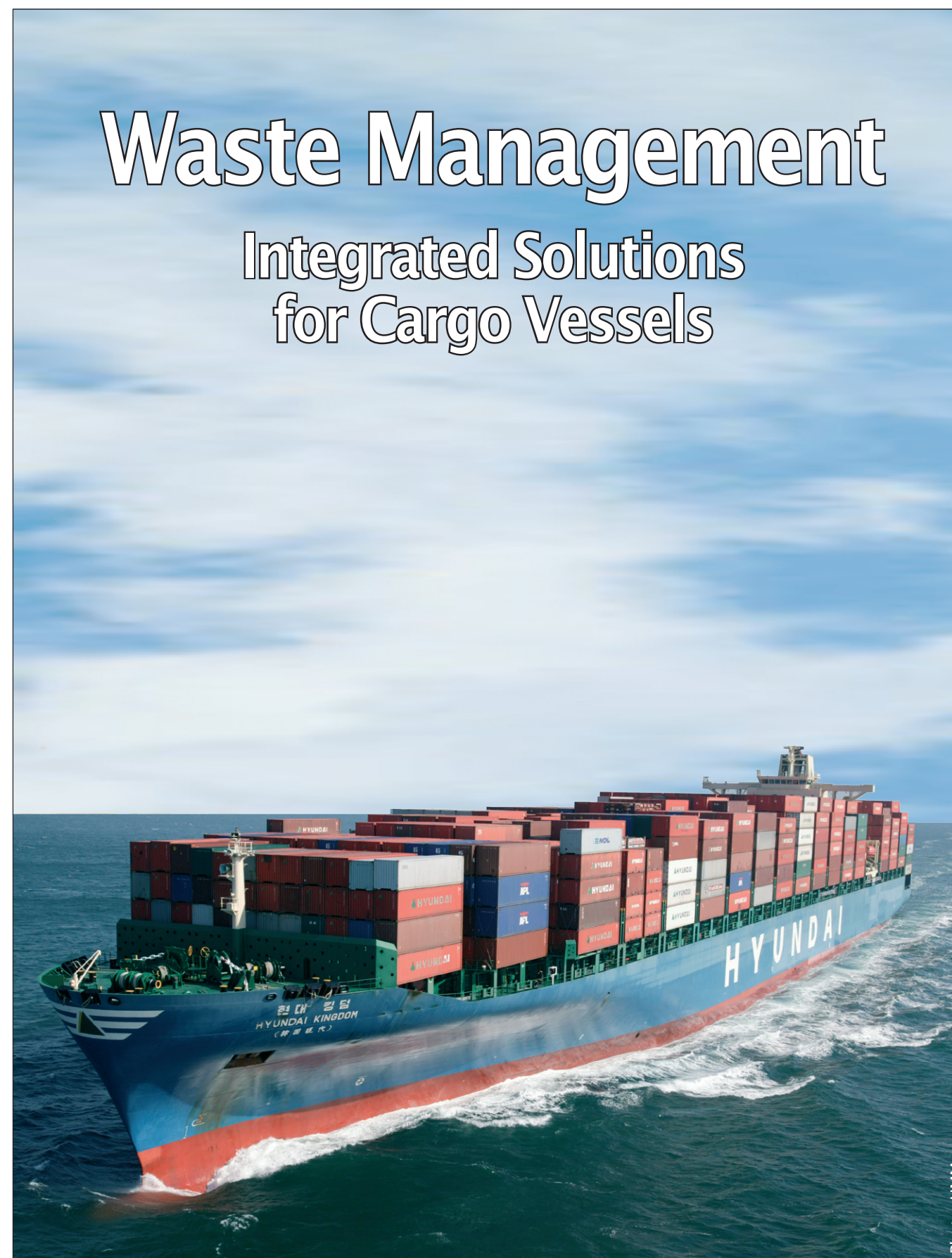


Photo: HMM

Waste Management - Integrated Solutions for Cargo Vessels



Solutions for Solid Waste



Sideview of Deerberg Incinerator IRL 50

General Description
The combustion chamber of the IRL 50 Incinerator is of cylindrical shape refractory. An insulation layer is fitted on the outside of the refractory. The outer shell is made of double steel plates, forming a jacket for air cooling.

The steel plates are screwed (not welded) and allow easy mounting and unmounting (especially suited for retrofitting).



Frontview of the Deerberg Sludge Oil Unit

Sludge Oil Unit
The Sludge Oil Unit stores and prepares sludge oil to be burnt in the Incinerator. Sludge is prepared by heating and homogenizing in a continuous recirculating process.

Exhaust Gas Fan
The Exhaust Gas Fan, which is of centrifugal type, is designed to operate with an exhaust gas temperature of up to 350° C. It is necessary to prepare transition pieces in order to connect the rectangular fan to a circular piping.



Exhaust Gas Fan



Deerberg Junior Incinerator

Purpose

The purpose of the incinerator is to burn on board generated solid and liquid waste (IRL type only), in accordance with Marpol/IMO rules. If there is no incinerator on board, solid waste has to be stored in adequate storage rooms, in order to be unloaded at port facilities. Using an incinerator instead, gives extra flexibility to ship-owners. **All Deerberg incinerators are IMO type certified.**

Capacity

Deerberg offers incinerators with different thermal capacities (for additional technical specification see table below).



Advantages

- ✓ Sludge oil and burnable waste do not have to be landed on shore
- ✗ No costs for discharging sludge oil and burnable waste
- ✓ No additional storage facilities required on board

* with 40 % water content
** for more information see detailed drawing

MAIN TECHNICAL DATA		IR 10	IRL 10	IR 30	IRL 30	IR 50	IRL 50	IR 65	IRL 65	IR 80	IRL 80	IR 100	IRL 100
Maximum thermal capacity	kcal / h	100.000		300.000		500.000		650.000		800.000		1.000.000	
Incineration capacity	Sludge Oil * (l/h)	-	15	-	50	-	80	-	110	-	130	-	160
	Sewage Sludge (l/h)	-	-	-	14	-	26	-	28	-	30	-	35
	Solid Waste (kg/h)	25	25	50	50	80	80	130	130	150	150	175	175
Multi Chamber Design		No		No		No		Yes		Yes		Yes	
Continuous loading door		-		Optional		Optional		Included		Included		Included	
Main Dimensions**	L x W x H (mm)	1255x1015x1959		1780x1280x1820		1780x1280x1820		2530x1855x2190		2350x1855x2190		3458x1771x2261	
Weight	kg	1380		3150		3150		5850		5850		9150	

Solutions for Recycling

For 25 years Deerberg-Systems has gathered valuable experience in Maritime Waste Handling – especially in the area of recycling and incineration of solid waste.

131 large passenger vessels, 64 navy vessels and more than 600 cargo vessels are fitted with Deerberg equipment.



Deerberg Glass Crusher GKF 550 – a reliable small-foot-print-solution

Based on this knowledge, we have selected a range of recycling equipment that is especially suited for Cargo vessels.

It handles glass, tins, and various packaging material in a most efficient way.

Our Solid Waste Treatment System is fully integrated and includes equipment for any type of garbage. There are solutions to simply collect, compact and sterilize waste for later disposal in port, as well as integrated solutions in connection with incineration technology.



Deerberg Bale Compactor 35/45 VL offers efficient volume reduction

Obviously, the combination of an on-board incinerator and recycling equipment will significantly gains extra operational flexibility – a crucial factor for cargo concerns.



Deerberg Densifier TC 14 is a small scale solution for compacting tins