



A LIFETIME IN KOREA (1988 – 2021)



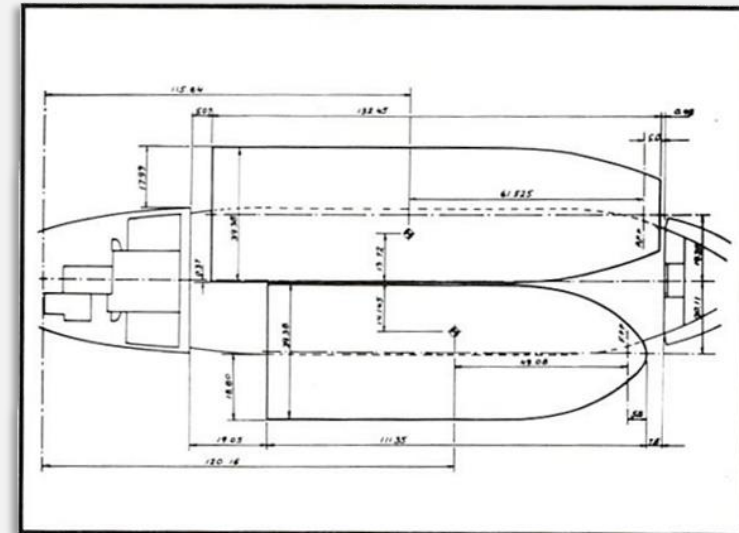
THE FIRST MAJOR PROJECT

- Severing, transporting, reconstructing M/T Marianna II

<i>September 1988</i>	Exploded, almost cut in 2, declared as CTL
<i>December 1989</i>	Departed from Piraeus as heavy lift cargo (24100 mt)
<i>February 1989</i>	Arrived at Hyundai Mipo Dockyard in Korea
<i>June 1989</i>	Redelivered to her owners



The dry tow heavy lift ship



Final positioning of Marianna II on the deck of Sibig Venture

THE FIRST MAJOR PROJECT

	<i>Hyundai</i>	<i>Sembawang</i>	<i>Gdansk</i>	<i>Hellenic</i>	<i>Blohm & Voss</i>
Midbody	553	601	667	1141	1088
Steel repairs	87	87	107	155	126
Cut and join	64	82		135	178
Piping	138	135		200	223
Hydraulics	24	24		15	30
Electrics	13	10	424 *	10	16
Heating coils	16	16		18	18
Painting	11	11		11	17
Outfitting	61	64		44	75
Various	33	32		48	51
Total	1000	1062	1238	1777	1822
Time (days)	120	165	unspecified	180	70

*Items 3 to 10 inclusive.

Cost comparison for repairs in various yards

Cost of wreck	65
Salvage works	58
Insurance and legal fees	30
Port expenses	7
Underwater cutting	4
Transport including Suez and dues	121
Tank cleaning	12
Hyundai fees	520
Upgrading works	13
Engine modification	11
Spare parts	12
Various repairs	13
Paints	13
Crew's wages	17
Survey fees	2
Management fees	6
Interest for downpayments	19
Various	77
Total	1000

Project cost breakdown



At full speed to Korea



Completion of loading

CONSTRUCTION RECORD AT KOREAN YARDS

- First delivery 1992
- Last delivery 2022

Vessel Type	YARD				Sum per Vessel Type
	DSME	HHI	STX	DAEHAN	
BULKERS	20	8	6	-	34
TANKERS	48	14	-	4	66
LPG CARRIERS	4	-	-	-	4
LNG CARRIERS	38	10	-	-	48
Sum per Yard	110	32	6	4	TOTAL 152

APPROXIMATE VALUE 16.5 billion USD

THE NEWBUILDING PROJECTS

- Higher deadweight Aframax ships with a beam of 43 m. The first Double Hull Aframax in DSME.
- Double hull Suezmaxes with the prototype MAN-BW 6S70MC-C engines (one turbocharger and one air cooler in the original version). Later modified to slide type Fuel injectors.
- 58 meters VLCCs with the prototype S690MC-C engines and Alpha lubricators (first vessels with the complete Alpha lubricators systems).
- VLCCs with increased beam to 60 meters to enhance the cargo carrying capacity through the Strait of Malacca.



THE NEWBUILDING PROJECTS

- Double hull Capesize bulk carriers. Best design from a steel structure point of view with enhanced operability.
- Large cargo capacity steam driven LNGcs. The “Maran Gas Asclepius” was the largest LNGc in operation for a period of four months.
- 21 Diesel Electric LNGcs, many of them with optimized engine configuration. Improved cargo handling equipment. Reduced Boil-off, rate for the MK III Flex CCS ships.



THE NEWBUILDING PROJECTS

- First generation 174K LNGcs provided with high pressure slow speed engines with full reliquifaction system. New Hull Form.
- A few low pressure slow speed ships to keep in line with the charterers demand at that time.
- New generation ME-GI ships provided with Air Lubrication Systems, Shaft Generators and improved Hull Form.
- One sophisticated 174K m³ FSRU ship with a lot of redundancy built in.

Conversions

- Discussed FSU and FSRU conversions



POINTS OF VIEW

- Greek Owners want their ships to be the best in the market. We may complain a lot, but nobody can deny that the ships delivered by Korean Yards are top of their class.
- Even the standard ship designs proposed by Korean Yards are standing at a class of their own.
- Some of the Korean Yards are more flexible than others.
- They all love repeat orders, but enhancements are normally advisable.
- Yards encourage their loyal clients.
- Korean mentality has approached the Western mentality.



NEW ISSUES FACED BY THE KOREAN YARDS

- Increase of material costs.
- Lower salaries in the shipbuilding industry have led to many qualified engineers leaving or changing employer.
- Less money spent for technical innovation despite support from the Korean government funding.
- Construction cost is the king of the period.
- Several well established Vendors have disappeared from the Market.
- Issues faced with new technology not fully tested equipment. Yards are paying the price of failures caused by hastily introduced new equipment.



BECOMING SENTIMENTAL

- Some of my best friends are Korean. I believe that I have established lifetime long relationships.
- Have managed to listen, to understand and to respect each other and work as a team.
- Always having dinner at least once a week in an Athens Korean restaurant.
The food is nice!





THANK YOU
감사합니다

