

(Presentation on 3rd National Marine Industries Forum 2014)

Sharing Experience on Transformation

**SHIPBUILDING
IN MALAYSIA**

Corus Hotel, Kuala Lumpur

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Small talks on

- I . Experience on Transformation.**
- II. Wonderful problem:
Prime mover for Change!**
- III. Wonderful Problems Now-here.**
- IV. Enjoy PROBLEM.
It is the opportunity to be BETTER.**

I . Wonderful Experience on Transformation

[1975-2000]

Fast Growing of Korean Shipbuilding Industry

[1988-1995]

Achievement of VISION 90's* Movement

[1975-2000]

Fast Growing of Korean Shipbuilding Industry

Wonderful Progress for 30 years

[1975-1985]

- **Aggressive** investment
- **Making people**

[1986-2000]

- Develop **Indigenous Design**
- **Productivity Innovation**
- Consistent growing: **10%/year**

$$1.1 \times 1.1 \times 1.1 \times 1.1 \times 1.1 = 1.614$$

$$1.3 \times 1.3 \times 1.3 \times 1.3 \times 1.3 = 3.713$$

Year	Market Share (%)	Increment in 5 years (%)	Rate of Expansion (times)	Major Change
1971	0.0	-	-	-
1975	1.2	1.2	-	Facility [Hardware]
1980	4.0	2.8	x 2.33	
1985	14.4	10.4	x 3.60	
1990	21.8	7.4	x 1.51	Technology Productivity [Software] [Humanware]
1995	27.8	6.0	x 1.28	
2000	39.1	11.3	x 1.41	

National Vision, Strong Leadership, Commitment

Stunning Success[1971-2000: Zero-40% Share]

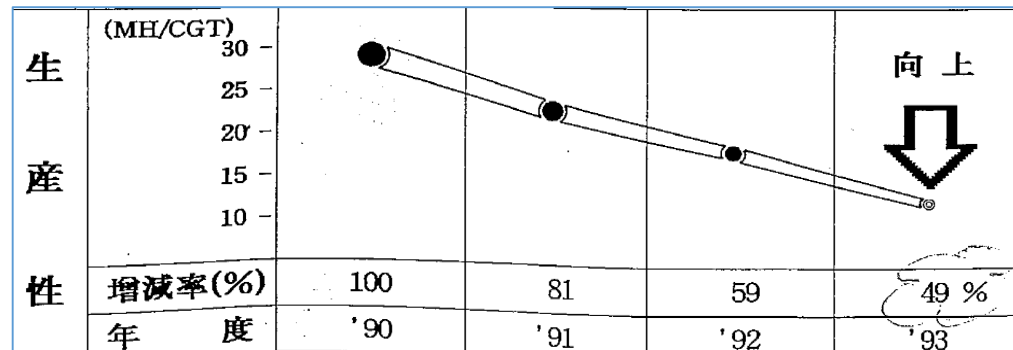
	1970's	1980's	1990's
GENERAL	Quickening period: New Shipyard construction	Growth in Volume	Full Growth
MARKET SHARE	X('70)	1.2('75)	4.0('80)
PRODUCT DEVELOPMENT	• 1971: 10K B/C(KSEC) • 1973: 230K VLCC(HHI) • 1975: SS Drilling Rig(KSEC)	• 1980: Chemical Tanker(DSME) • 1980: Barge-mounted Plant • 1985: R & D of LNGC • 1987: Submarine	• 1992, 1st LNGC
DESIGN CAPABILITY	Poor Design capability	Building-up In-house Design Capability	• Develop Design Technology • Design for Production
VENDOR DEVELOPMENT	Importation of Design	Simple fittings	Major Equipment.
	Localization Ratio:	10%	30%
PRODUCTION PLANNING	Technology Importation	System Settlement	Innovation
	Develop Own system		
	Production efficiency:	1/3,	1/2 of Japanese
SHIPS BUILT/year	In Number of ships delivered/year	20	100
	In Mil. GT(year):	1.1('81)	2.8('85)
EMPLOYEES	.000 persons(year):	51('81)	76('84)
		50('89)	78('95)

[1988-1995]

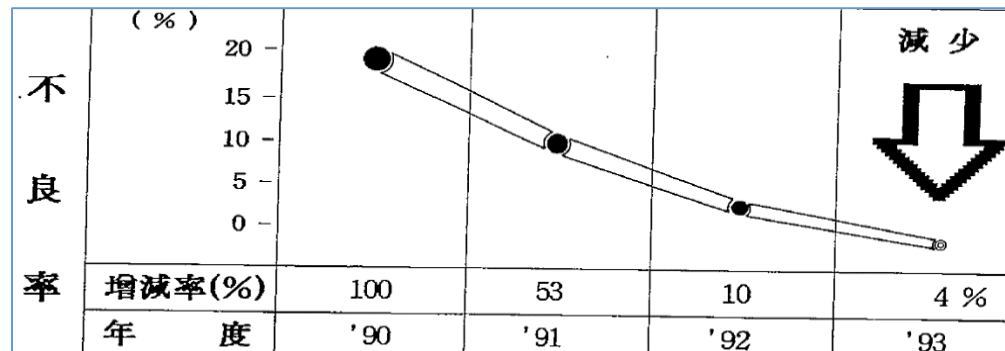
Achievement of VISION 90's* Movement

■ Productivity Increase

Man-hour demand → 51% reduced

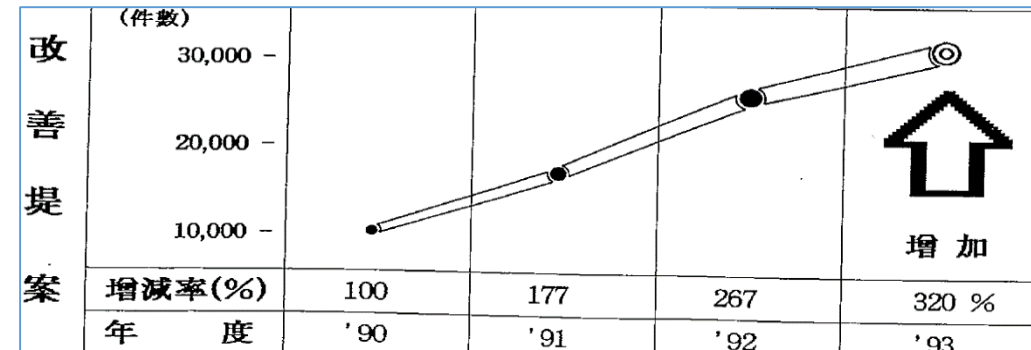


■ Defect Ratio: 96% eliminated (20% → 0.8%)

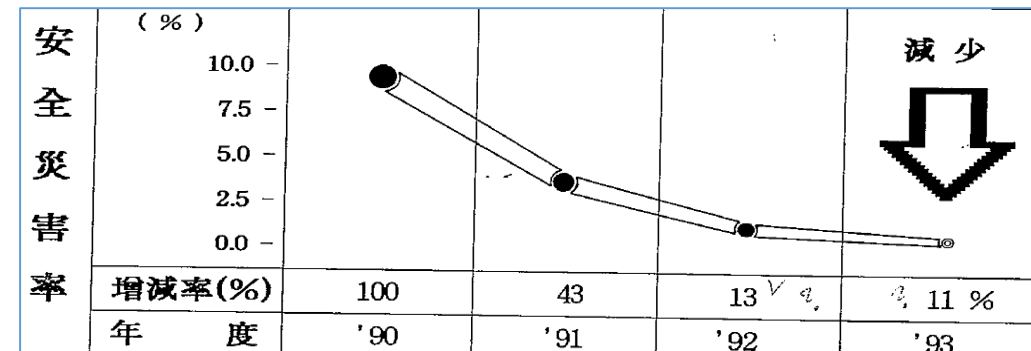


■ Suggestions for improvement

220% increased

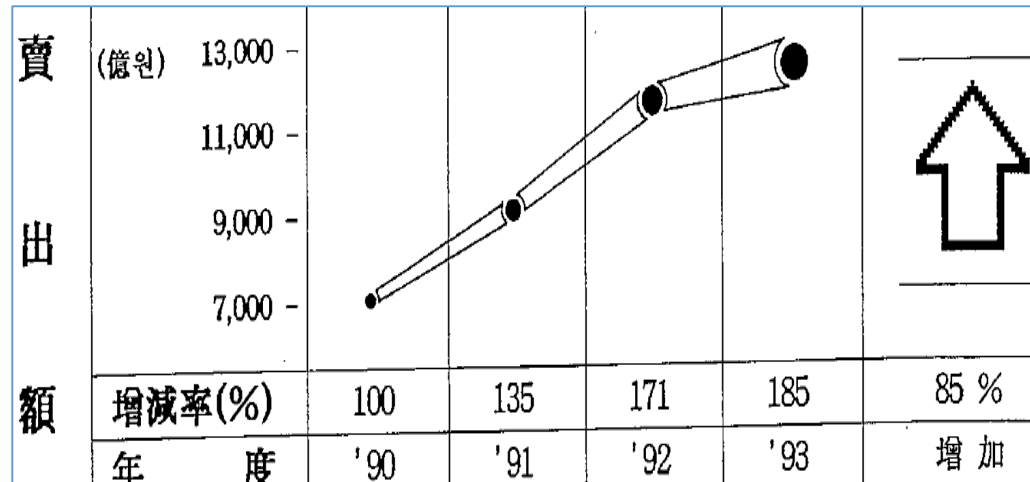


■ Accident: 89% eliminated

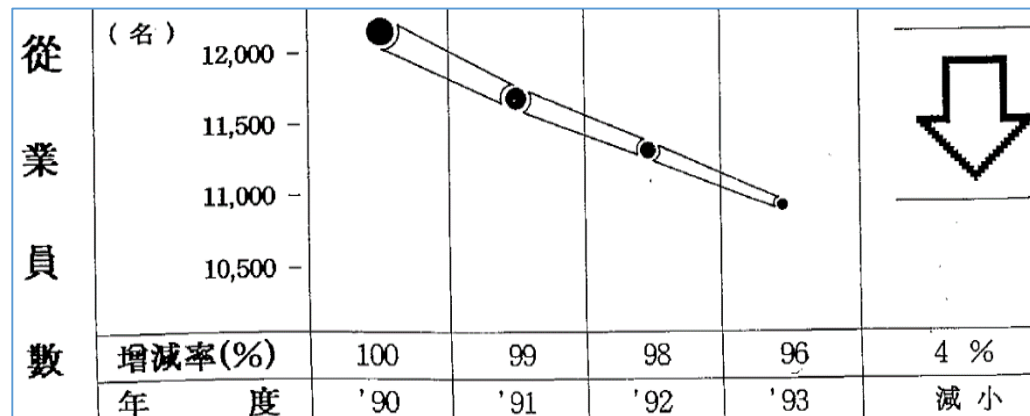


* Daewoo Rebirth Program. Daewoo won the Grand Prize for Company Innovation on 1993 from Korea Management Association.

▪ **Total Sales: 85% increased**



▪ **Number of Employees: 4% reduced**



**'Productivity is not everything,
but it is almost everything
in the long run.'**
<Paul Krugman>

**'Productivity is
a state of mind,
knowing that
what you do today is
an improvement of yesterday, and
striving to make it
tomorrow still better.'**
<European Productivity Agency, 1956>

Ⅱ. Wonderful problem. Prime mover for Change!

- **Series of Wonderful Problems made Korean shipyard excellent**
- **Serious problems, Sincere anxiety and.....
Successful Transformation of Daewoo in 5 years**

Series of Wonderful Problems made Korean shipyard excellent.

Year	Wonderful problems	<u>Wild Challenge?</u> <u>No alternative.</u> - Market: No domestic needs <u>Global→ Major→ Premier</u> - Standard: Beyond local to <u>International level</u> → Improving → Leading - Wonderful Problems good for making people. 1985: 100% In-house Design 1990: High Productivity
1971	10k DWT Bulk Carrier for Korean GLC [KSEC]	
1973	230k DWT VLCC for Greece [1 st Project of HYUNDAI]	
1975	Semi-submersible Drilling Rig for Denmark [KSEC]	
1980	Sophisticated Chemical Tanker for Norway [1 st Project of DSME]	
1985	R & D of LNG Carrier [DSME]	

Serious problems, Sincere anxiety and..... Successful Transformation of DSME in 5 years

- **Serious Disease**
 - Worst in QCDSM
 - Serious Labor-union dispute
 - On the verge of bankruptcy
- **VISION 90's Movement**
Starting on 1988
Companywide Transformation
- **All employees participation**
 - + Top at the front
 - + Middle-line working hard with
 - + Front-line workers

- **5-year intensive program**
 - ① **Hard-learning**
Bench-marking, Training
 - ② **Change:**
Behavior, Mind, Thinking
 - ③ **Building-up Strength:**
Organization, Technology
Operation System.
- **Perfect Transformation**
 - People, Method, System.
 - Culture→ Autonomous Improving
 - Company Sales→ 85% Increase.

III. Wonderful Problems Now-Here

- **OSV Market**
- **NEEDS-based Design**
- **Production efficiency**
- **Domestic Needs:
Springboard to Global market!**

Wonderful problems

[1] OSV Market

- **Market disturbance**

- **New Needs**

- **Replacement**

Very high rate of Older tonnages
[Average age: 19.4 years]
(Ocean Shipping consultants, 2011)

- **Domestic market and
Good neighbors**

+ Offshore Southeast Asia

Break for Restructuring

→ High Performance

→ Larger Multipurpose

Vessels older than 25 years

1,200 AHTS, 1,100 PSV

→ Offshore Middle East

→ Offshore West Africa

And beyond!

Wonderful problems

[2] NEEDS-based Design

- **Needs-based Design in advance to create project**

- Investigating Needs:
Unsatisfied, New, Hidden needs
(Customer-centric)
- Initial Design earlier than others

- **Design for Production to reduce costs a minimum**

- ※ **Aggressive marketing**

Serious and earnest fulfillment to customer needs

- **Designer has the greatest influence on the cost of vessel**

during the earliest design stages when primary parts, materials and equipment and the basic configuration are being decided.

- **Design represents an acceptable compromise**

between the demands of performance and production efficiency.

Wonderful problems

[3] Production efficiency

▪ **Short Delivery**[70m+long AHTS]

- Present: 18M, 16M, 14M
- 1st Target: 10M
- Standard: 8M
- **Ultimate Target: 6M**

▪ **High Productivity**[99m PSV]

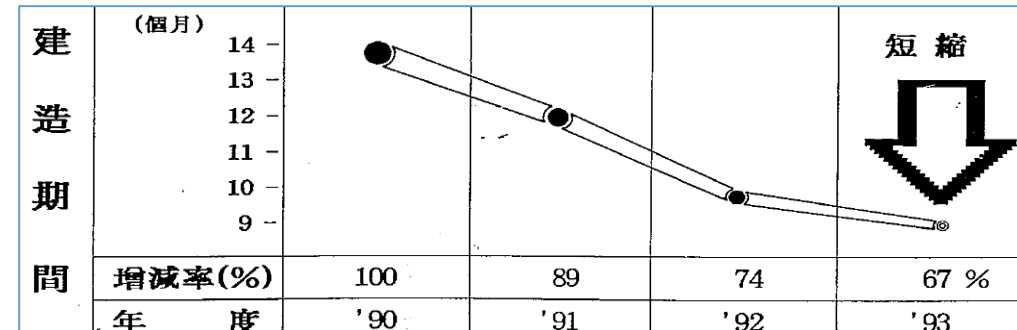
- Budget MH: 150,000(KBP)
- MH of Malaysian shipyard?

※ **Basic and Orthodox Principles**

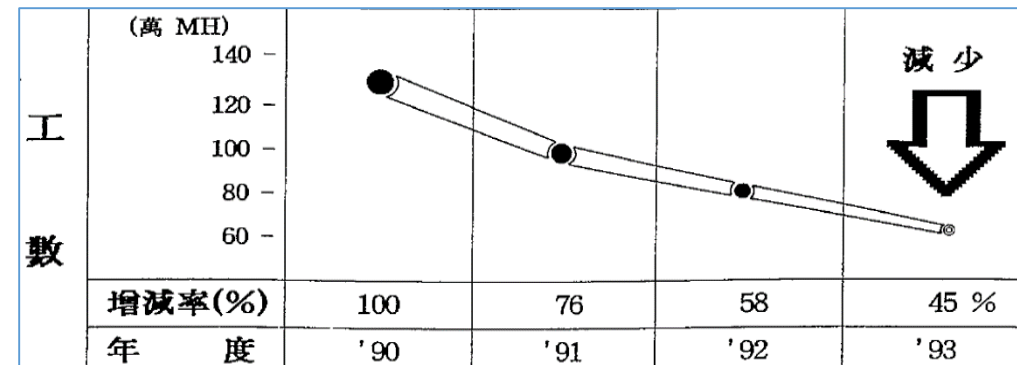
- Minimize Wasting resources
- Maximize Resources Utilization

Excellent experience in building VLCC

- **Production period: 33% shortened**



- **Man Hour consumption: 55% reduced**



Wonderful Problems

[4] Domestic Needs!

Domestic needs, Springboard to Global Market, suggest,

- Leveraging on Technology
- Complementing each other

- **Transportation cost efficiency**

- High capacity
- High speed

- **Improving Vessel Uptime**

- Min. Non-productive time
- Better managed HSE risk
- All-weather support vessel

- **Green Energy vessel**

Shipbuilders to be at front
to transform to
the Best Solution provider

- **Domestic Market**

- **Priming water** to make Malaysian shipbuilder Best in the World
- **'Maritime roles in Oil and Gas** is greater than ever.'

- ① Anchor Handling
- ② Supply Vessels
- ③ Fast Crew Boats
- ④ Accommodation vessels
- ⑤ Other special marine & floaters

IV. Enjoy PROBLEM

It is the opportunity to be BETTER

- **Are you serious?**
'Worry is a waste. Just do it!'
- **Working together is success.**

Are you serious?

Worry is a waste. Just do it!

- **Design in advance**

Needs-survey

Needs-based Design Development

Design for Production

- **Vendor Development**

Vendor sourcing & development

Localization

- **Production efficiency**

6M Delivery

High Productivity

One-year experience in
Malaysia tells us.

You 'CAN-DO'

- Burning Platform
- Unfolding potential
- Remarkable achievement
- Many Unusual record

'An action speaks louder than a
thousand works.'

Challenge!

Working together is success.

- **TOP Management**
- **Middle Management**
- **Front-line Supervisor**

→ **Wonderful problems creator**

Vision, Target, Objectives

→ **Solution-provider, Method developer**

Centerfielder's extra one-step achieves GOAL.
Leadership by Example!

→ **Product realizer**

Confronting the often chaotic realities.

Let's enjoy problems!