Doosan Engine

Investor Relations

1Q13 Operating Results

May 2013
Doosan Engine

Table of Contents

Disclaimer

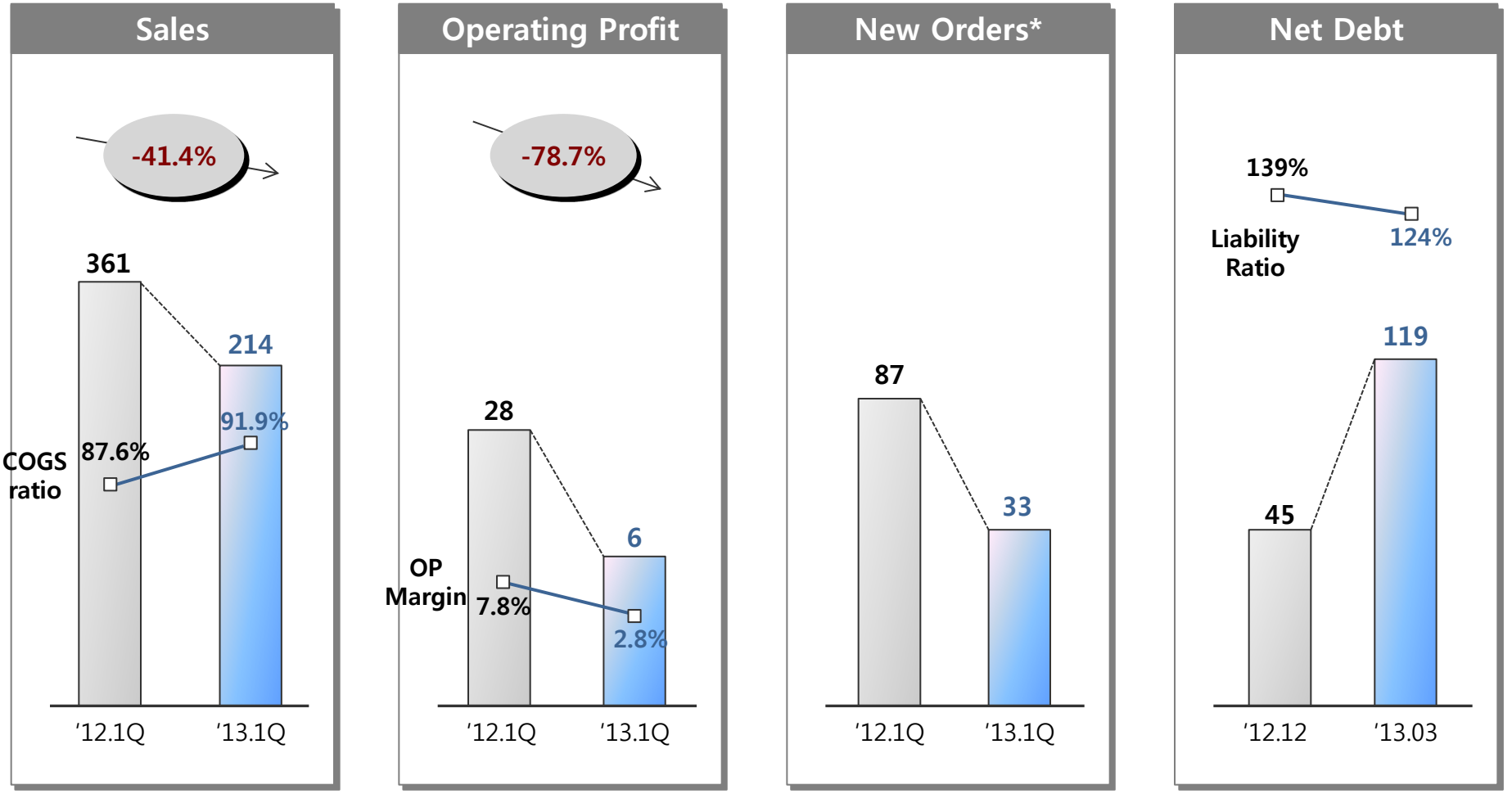
This presentation contains preliminary figures which may be materially different from the final figures.

While the statement in this presentation represent our current assumptions, plans and expectations, and we believe these judgments are reasonable, they are not guarantees of future performance and involve known and unknown risks, uncertainties such as FX & raw material costs, and other factors that may cause actual results to differ materially from the results, performance, achievements or financial position expressed or implied in this presentation.

This presentation is provided only as a reference material. Doosan Engine assumes no responsibility for investment decisions. We trust your decisions will be based on your own independent judgment.

1Q13 Operating Results Summary

(Wbn)



* New Orders : Based on receiving advance receipts

1Q13 Income Statement

✓ Sales W214bn, Operating Profit W6bn(OPM +2.8%)

(Wbn)

	'13.1Q	'12.1Q	YoY	'12.4Q	QoQ
Sales	214 ①	361	-41.4%	318	-32.6%
COGS ratio(%)	(91.9%)	(87.6%)	(+4.3%p)	(96.9%)	(-5.0%p)
Gross Profit	17	45	-61.9%	10	73.0%
SG&A	11	17		32	
Operating Profit	6	28	-78.7%	-22	TB
OP Margin(%) ②	(2.8%)	(7.8%)	(-5.0%p)	(-7.0%)	(+9.8%p)
Other gain & loss*	-2	-1		-4	
Financial income &loss ③	0.8	-0.7		-0.9	
Equity Method gain & loss ④	-6	-0.3		+111	
Pretax Profit	-1	30	TR	85	TR
Tax	0.9	7		-0.7	
Net Profit	-0.2	23	TR	91	TR

- Other gain & loss are classified as non-operating profit and loss according to the new business accounting standard

'13.1Q Main Points

① Sales -41.4%(YoY)

- Decrease in deliveries

② Operating Profit 2.8% (-5.0%p YoY)

- Deteriorated Product Mix
  - GOGS ratio ('12.1Q: 87.6% → '13.1Q: 91.9%)

③ 1Q Financial Income/Expense +W0.8bn

- Interest Income & Loss -W0.6bn
- FX Translation Gain & Loss -W2.7bn
- Forward Hedging Gain & Loss +W3.9bn

④ Equity Method Gain/Loss -W6.1bn

- Equity Method Gain +W2.6bn
- Equity Method Loss -W8.7bn

Balance Sheet

✓ Net Debt W119, Liability Ratio 124%

(Wbn)

	'12.12	'13.03	+/-
Current assets	641	550	① -91
Non-current assets	1,145	1,146	+1
Total assets	1,786	1,696	-90
Current Liabilities	718	623	-95
Advance receipts	394	360	-34
Non-current liabilities	320	316	-4
Total liabilities	1.038	938	② -100
Paid in capital	69.5	69.5	0
Capital Surplus	367	367	0
Retained earnings	333	332	-1
Accumulated other comprehensive incom	-22	-19	+3
Total equities	748	757	+9
Total debt	313	303	-10
Cash & Cash Equivalents	267	184	-83
Net Debt	**+46**	**+119**	③ +73
Liability Ratio	**139%**	**124%**	-15%p

Key Points

① Current assets –W91bn

- Cash & Cash Equivalents fell W83bn due to the decrease of advance receipts and return of bond

② Total liabilities -W100bn

- Advance receipts dropped W34bn since new orders decreased
- Derivate related liabilities fell W20bn due to the currency surge

③ Net debt +W74bn

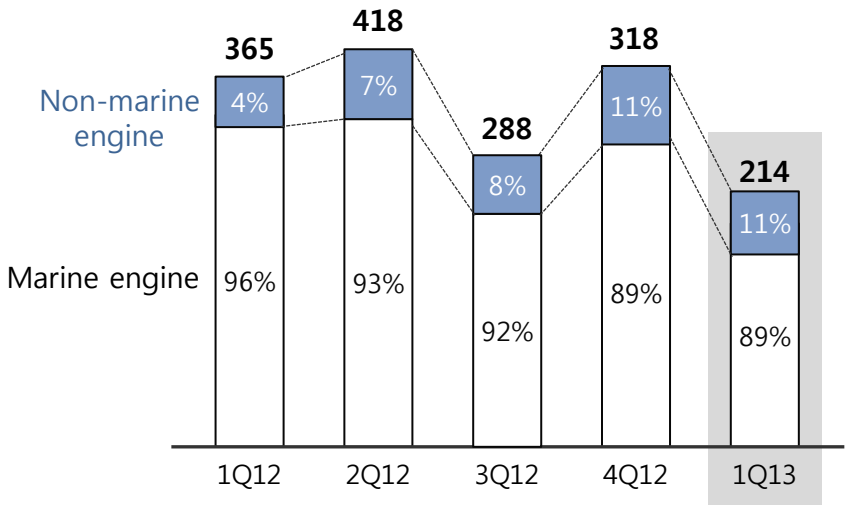
- Cash decreased and return of bond

Quarterly Sales & New Orders

- ✓ **1Q12 Sales : W214bn(-41% YoY)**
- ✓ **Commercial vessel market is showing a sign of recovery, but new orders are still weak due to the time difference in engine order placement**

Quarterly Sales Trend

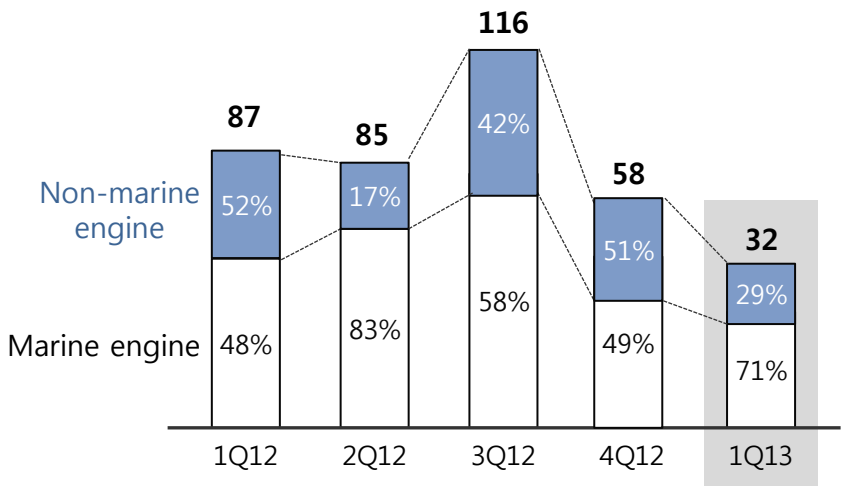
(Wbn, %)



- ▪ Marine engine
  - Sales fell due to decrease in deliveries
- ▪ Non-marine engine
  - Diesel power plant : Sales jumped W6.3bn since completion of progress percentage increase

Quarterly New Orders Trend

(Wbn, %)



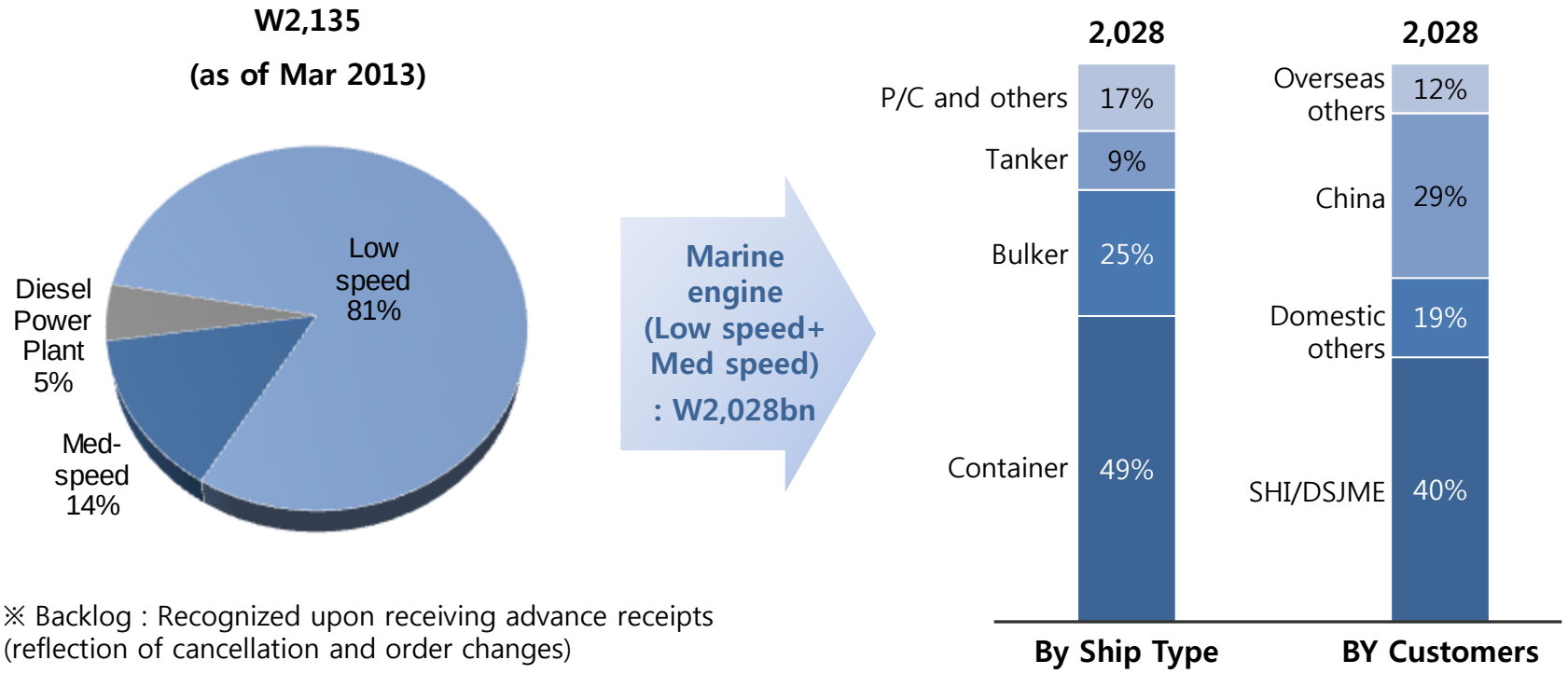
- ▪ Marine engine : W23bn
  - Non-recoginzed order of W25bn not included
- ▪ Non-marine engine : W9bn
  - Diesel power plant struggled, parts W9bn

Order backlog

✓ **Order backlog : W2.1tr, marine engine accounts 95%**

Order Backlog Breakdown

(Wbn, %)



※ Backlog : Recognized upon receiving advance receipts
(reflection of cancellation and order changes)

Table of Contents

Mid to Long Term Growth Strategy

✓ Implementing a diverse business portfolio by strengthening diesel power plant and focusing non-shipbuilding business

✓ Strengthening marine engine business by securing cost competitiveness and differentiated order-taking competitiveness

Strategy	'13 Key Strategy	Main Issues
1 Stable Business Portfolio	• Strengthening Diesel Power Plant	• Implementing EPC based system engineering • Expanding new order pool and market intelligence
	• Building a diversified business portfolio by improving non-shipbuilding business	• Developing eco-efficiency ship parts • Developing non-shipbuilding business
2 Strengthen Maine Engine Competitiveness	• Strengthening marine engine business	• Securing cost competitiveness • Strengthening R&D/sales force

Mid-to-long term Vision

✓ **Focus on non-marine engine areas to achieve W3tr sales by 2017**

Mid to long term Financial Aspiration – Sales

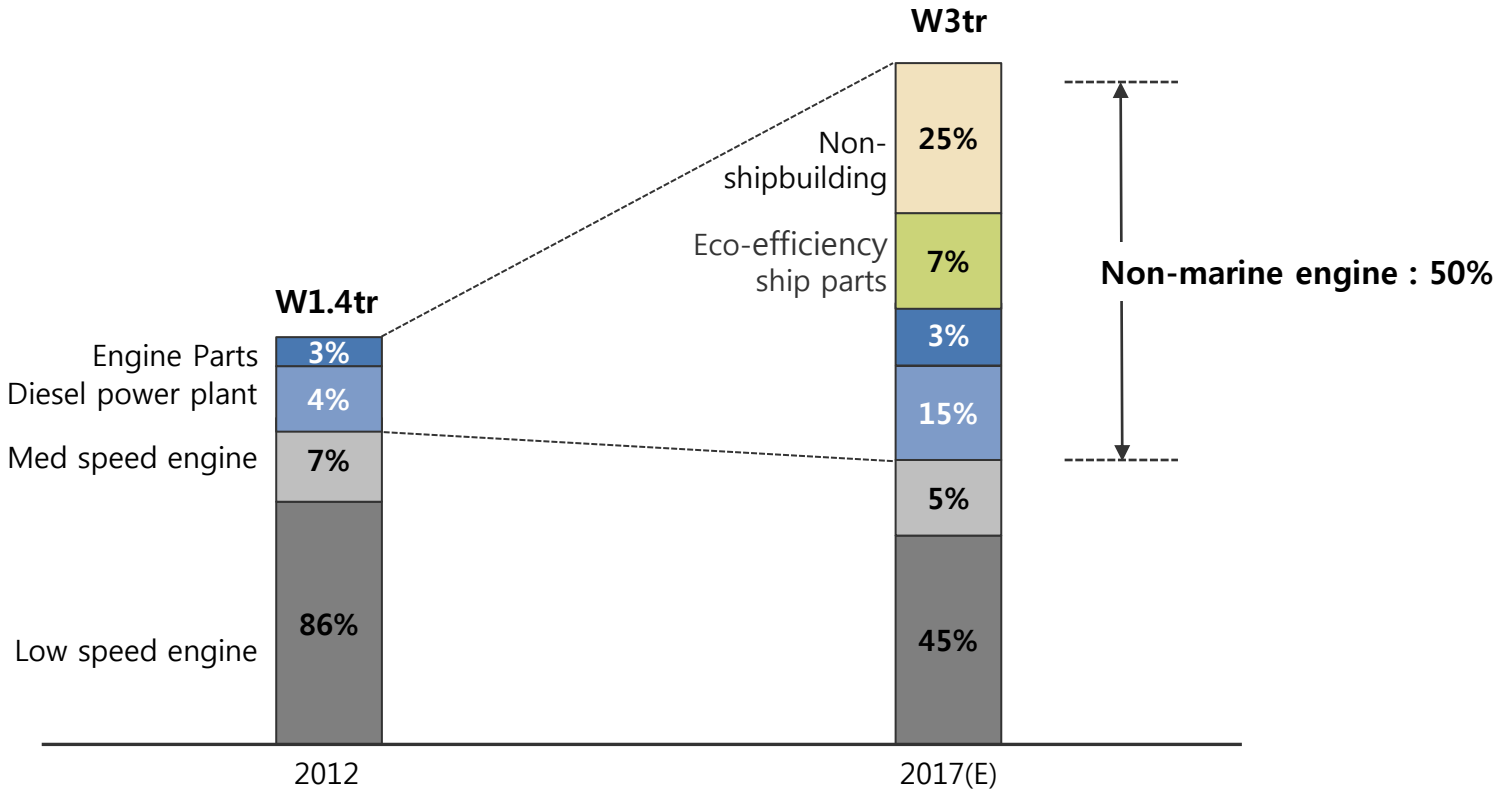
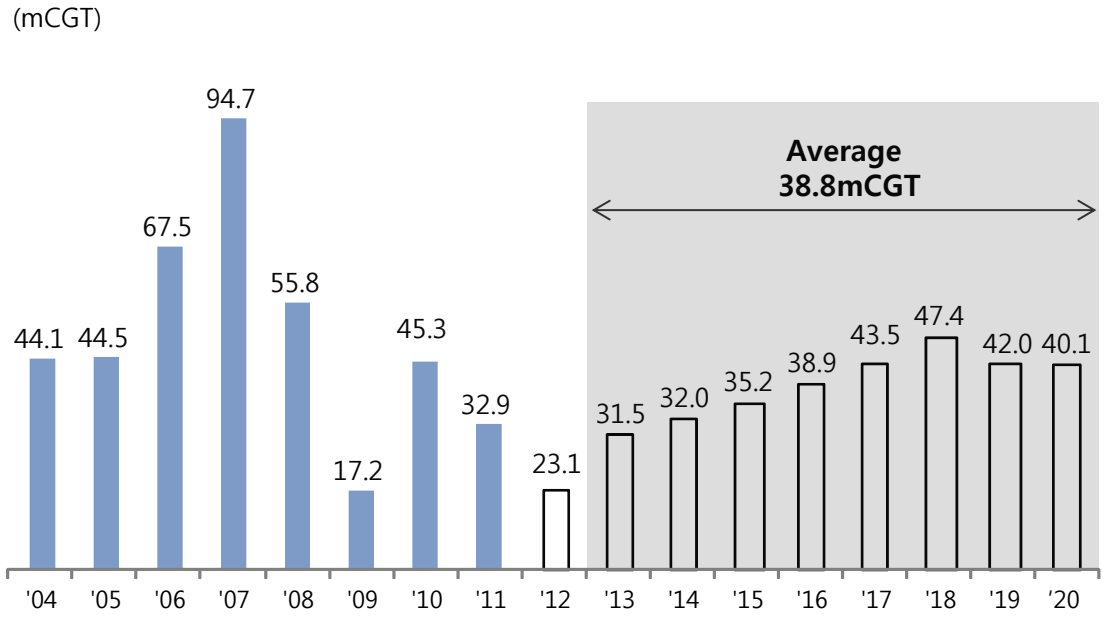


Table of Contents

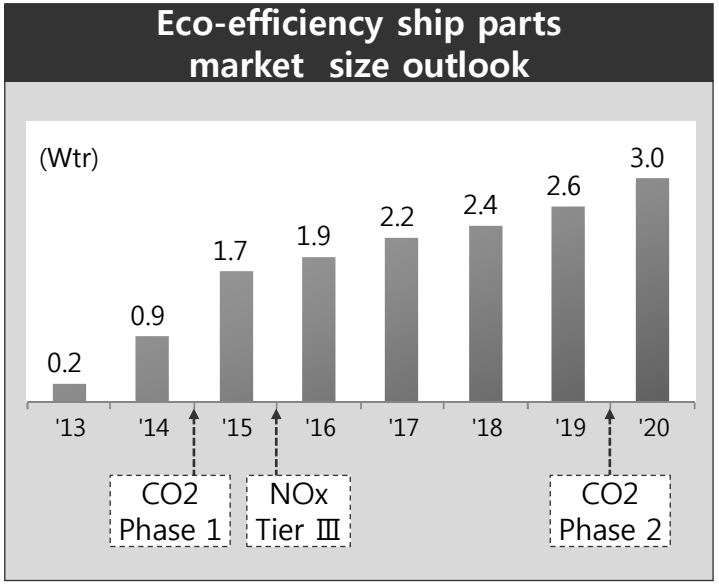
Shipbuilding market outlook

- ✓ **The global new order outlook will start to recover from 2013 and likely to maintain an annual average of 39mCGT level until 2020**
- ✓ **Eco-efficiency ship parts market will significantly grow to W3tr in 2020 after the market develops in 2013**

Global new order outlook



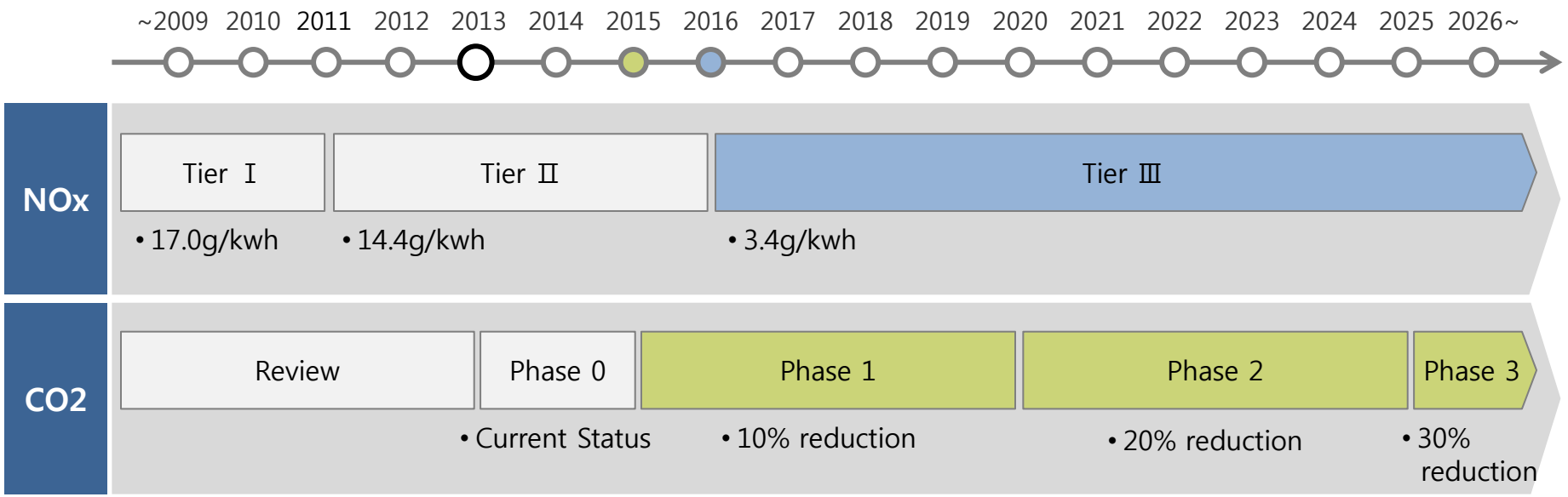
* Source : Clarkson Forecast Report('13.3)



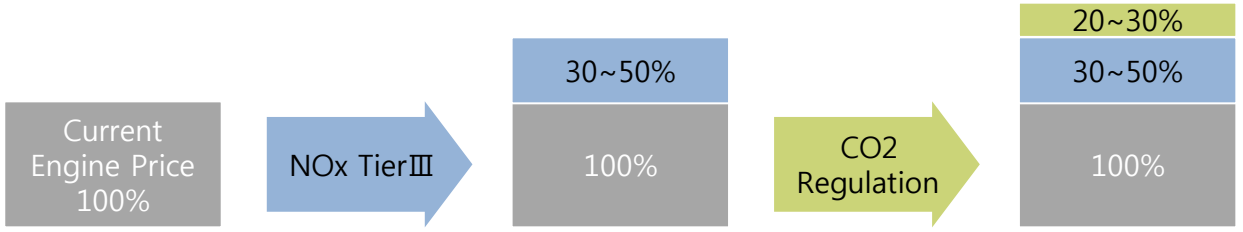
* Source : Doosan Engine Estimates

Investment Point 1. IMO environmental regulation trend

IMO regulation Milestone



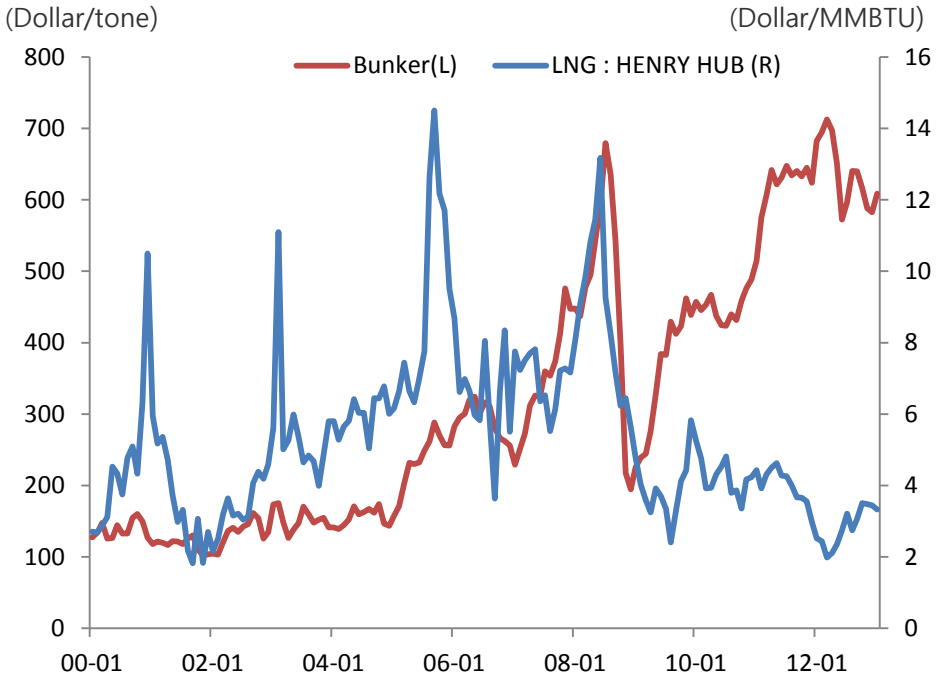
Impact on Engine Price



Investment Point 2 : ME-GI(ELECTRIC DRIVEN - GAS INJECTION) Engine(1/2)

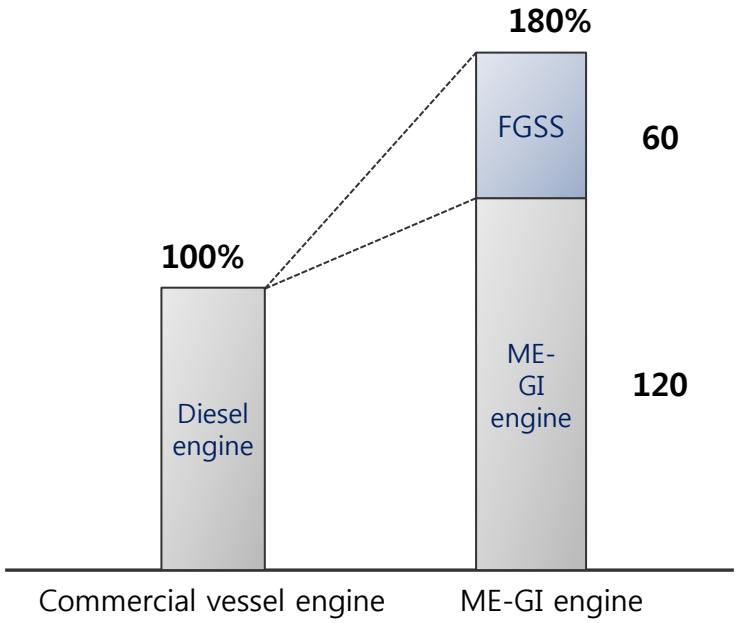
- ✓ **The expansion of shale gas led to the decrease of natural gas price, LNG is environment friendly and secures economic efficiency**
- ✓ **The price of ME-GI engine is higher than the conventional diesel engine, therefore it will create new busines opportunity**

Natural price and bunker price trend after 2000



* Source : Bloomberg

Engine price impact

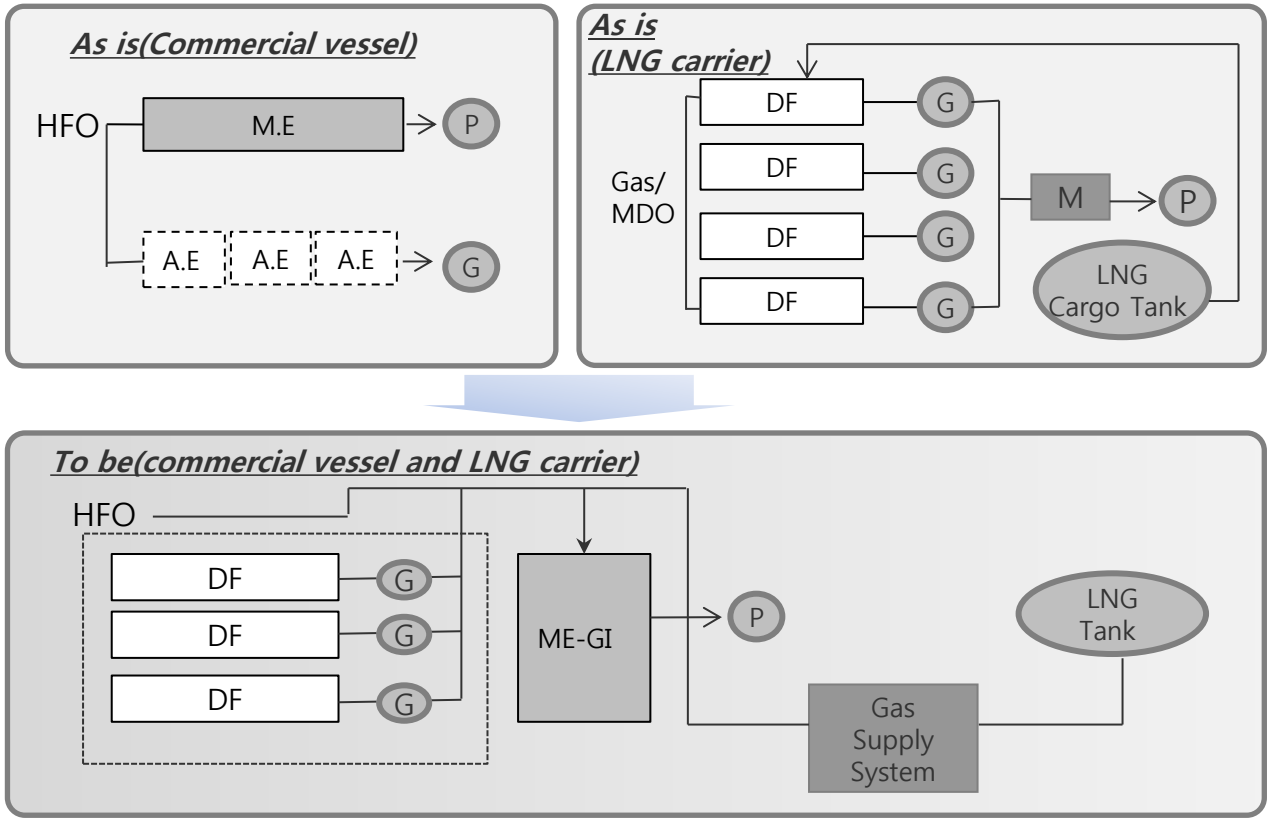


* FGSS : Fuel Gas Supply System, we expect outsource from DSME

Investment Point 2 : ME-GI(ELECTRIC DRIVEN - GAS INJECTION) engine(2/2)

- ✓ **ME-GI engine meets environment regulation issues and easily generates massive output power**
- ✓ **The future engine propulsion system in commercial vessel(diesel engine) and LNG carrier(DF engine) will likely replace to ME-GI engine**

The change of engine propulsion system



Engine efficiency/ Environment regulation

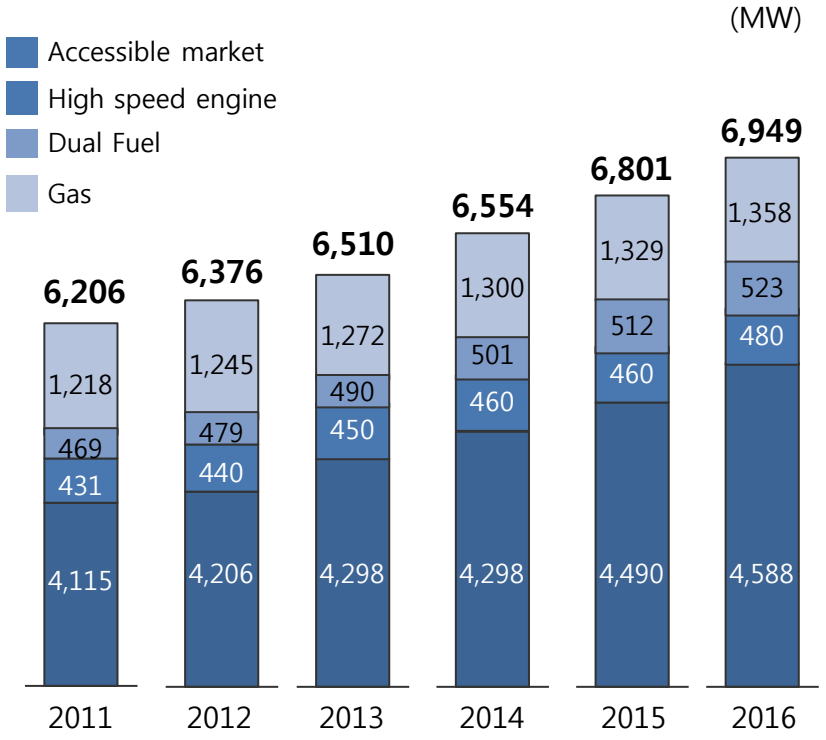
	Engine efficiency	Environment regulation
Diesel engine	46%	X
Med speed DF engine	40%	O
ME-GI engine	**46%**	△

- M/E= Main Engine A/E= Auxiliary Engine, DF=Dual Fuel, P=Propeller G=Generator HFO=Heavy Fuel Oil MDO= Marine Diesel Oil, M=Motor

Investment Points 3. Diesel Power Plant Market

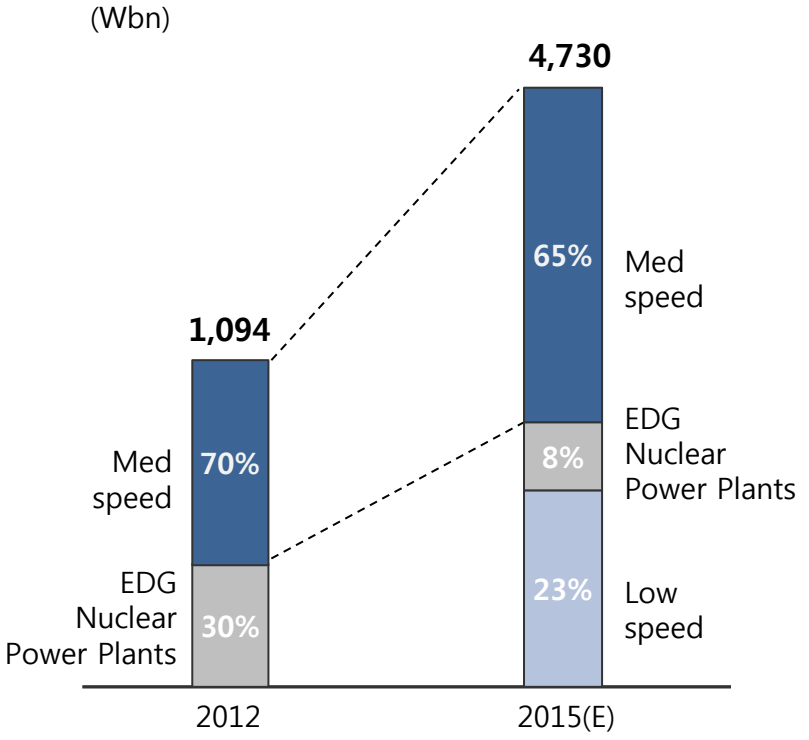
- ✓ **The diesel power plant market will grow an average of 6,585MW per year since the increasing demand of small to mid sized electricity, our accessible market is around 4,348MW(W4tr)**
- ✓ **Improvement in EPC based system engineering will strengthen the diesel power plant business in the long term**

Diesel power plant market outlook



* Source : IEA, World Energy Outlook 2010

Mid to long-term new order outlook

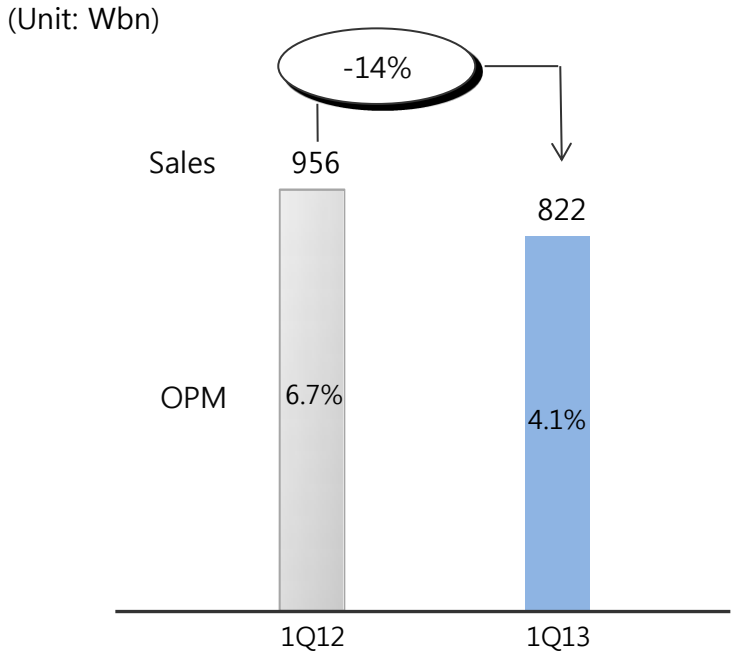


Investment Points 4. Bobcat Earnings

✓ **1Q13 Sales W822bn(-14% YoY), Sales declined due to the temporary weakness in North America**

✓ **The weak performance in Europe resulted 1Q13 equity method gain of Bobcat –W6bn**

Bobcat Sales and Operating Profit Trend



* Source : Doosan Infracore IR Material ('13. 5)

Bobcat Operating Results

(Wbn, %)

	'12.1Q	'13.1Q	YoY
Sales	956	**822**	-14.0%
OP	62	**34**	-45.7%
OPM(%)	(6.6%)	**(4.1%)**	(-2.5%p)

Equity Method Gain/Loss

(Wbn, %)

	'12.1Q	'13.1Q
Stake(%)	18.4%	**15.5%**
Acquisition Cost	738	**738**
Book Value	329	**451**
Gain(Loss) on Equity Method of Bobcat	0.9	**-6**

Appendix

I. Company overview

II. History

III. Plants

IV. Production infrastructure

V. Business area

Appendix 1. Company Overview

Overview

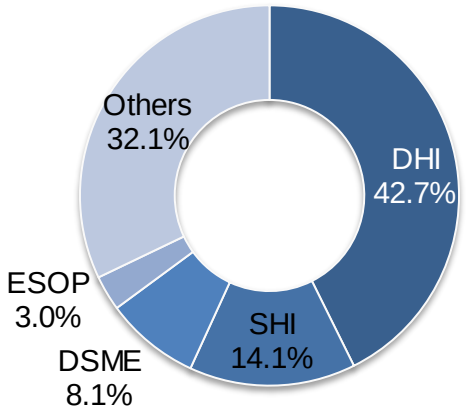
Company	Doosan Engine Co., Ltd
Date of Foundation	Dec 30, 1999
Address	Sinchon-dong 69-3, Seongsan-gu, Changwon-si, Gyeongnam
Business	Marine diesel engines / Diesel engines for power plants
Exports	Local/direct Exports(96%), Domestic (4%)
Capital	W69.5bn
No. of Employees	1,005 [As of Dec 2012]
Subsidiary	Doosan Marine Industrial (DMI) Dalian Co., Ltd (100% owned)

Business Areas

Business Areas	Sales (2012)	% of sales
Low-speed engine	W1,183bn	86%
Med-speed engine	W92bn	7%
Diesel power plant	W59bn	4%
Engine parts and C/S	W45bn	3%
Total	W1,379bn	100%

Shareholders

[As of 2012.12.31]



Appendix 2. History

1983

- **Doosan Heavy Industries launches engine business**

1994

- Samsung Heavy Industries(SHI) launches engine business

1999

- Doosan Heavy Industries(DHI) and SHI agree to establish a JV, **HSD Engine**

2000

- HSD Engine establishes R&D center
- Equity placement of W25bn (Daewoo Shipbuilding & Marine Engineering(DSME) participates)

2001

- Signs business transfer agreement with DHI, on internal combustion generators

2002

- **Receives WCP (world class product) award from the Ministry of Commerce, Industry & Energy for its large diesel engines**

2005

- Changes company name to Doosan Engine Co., Ltd

2006

- Establishes DMI in China, and builds plants

2007

- **Receives US$1bn Export Tower Award**

2008

- Constructs assembly line 4 and medium-speed engine production line (capacity : low-speed (12mn HP) and medium-speed (500 units p.a.)

2009

- Raises ₩33bn of equity (offering, ESOP, and rights, public offering)

2011

- **IPO listing in KRX (2011. 1. 4)**

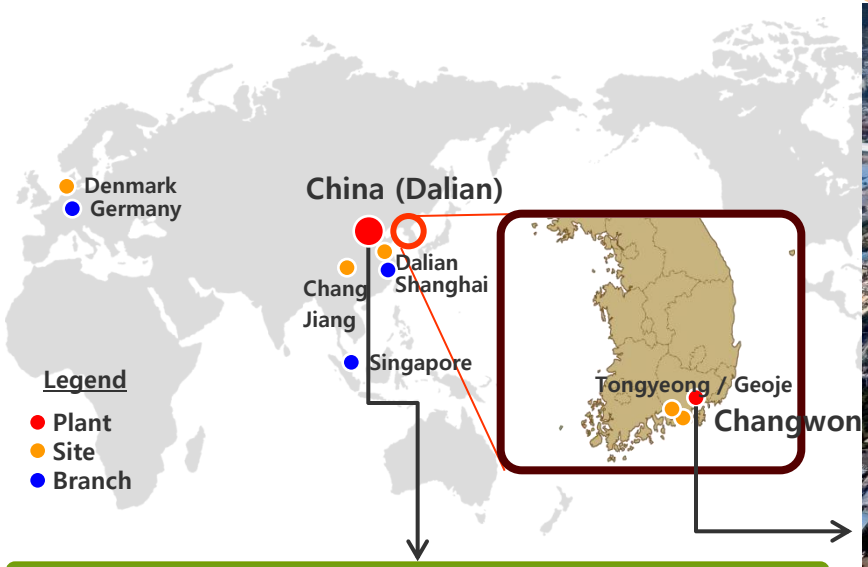
2012

- Achieves cumulative production of 80mn HP within shortest period (2012.1.31)

2013

- **Commercialization of ME-GI engine (2013. 3)**

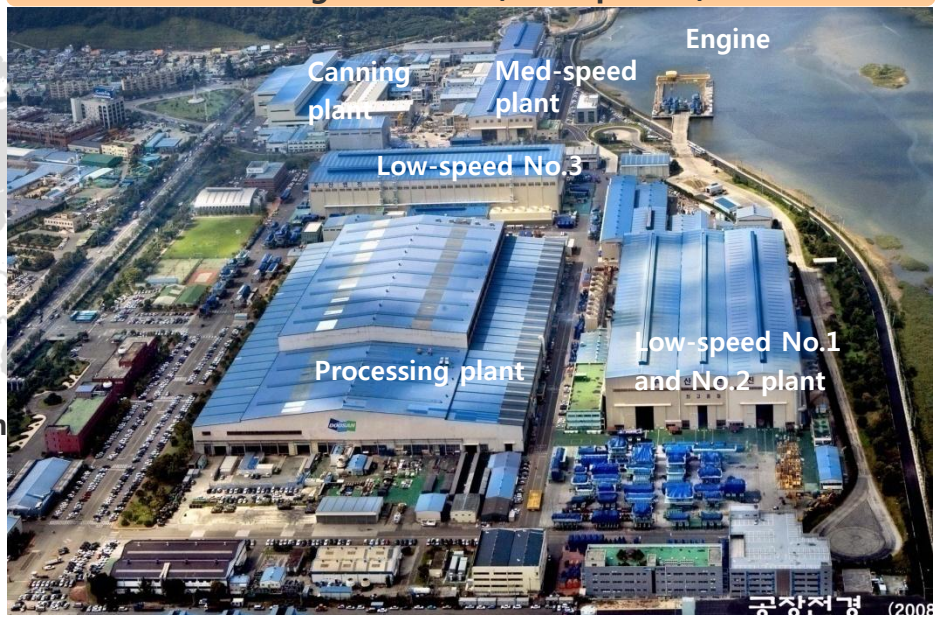
Appendix 3. Plants



Dalian, China plant

- Size : 57,904㎡ (17,500 pyeong)
- Product line-up : Diesel engine parts
- Production capacity : 250 blocks of engine canning parts

Changwon Plant (Headquarter)

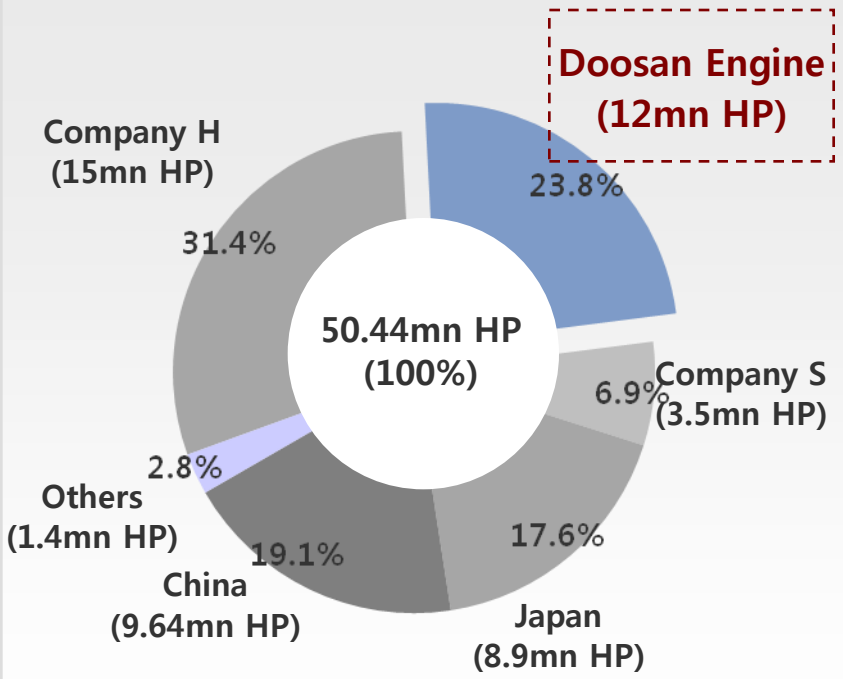


- Products : Diesel engines
- Size : 328,000㎡(99,500 pyeong)
- Overview

Classification	Size(㎡)	Production CAPA (per year)
Low-speed engine plants	42,720 (12,922 pyeong)	12,000,000 HP
Med-speed engine plant	17,010(5,145 pyeong)	2,000,000 HP
Processing plant	27,100(8,197 pyeong)	
Canning plant	4,894(1,480 pyeong)	
Total Capcity		**14,000,000 HP**

Second largest diesel engine production facility in the world

Low-speed diesel engine production Capacity



Note : Estimates based on each company's 2010 annual report

Production facilities and infrastructure

1. Large low-speed diesel engine plant
   - Production capacity : 12mn HP
     (Operating in 9mn HP)
   - Assembly and testing plants
   - Processing plant (7 Plano Millers, 8 Boring)
   - Canning plant(250 blocks/year)
2. Medium-speed diesel engine plant
   - Production capacity : 500units
   - Assembly and testing plants
   - Processing plant (5 Plano Millers, 4 Mill-Turns)
3. Top-of-line production infrastructure
   - High-quality supply chain
     (Quality/stable procurement and joint R&D)
   - Cutting-edge production system
     ("Flow production", "fool-proof" system)
   - Skilled design and production workforce

Appendix 5. Business area : Low-speed diesel engines

Low-speed diesel engines

- Main Business(2012 Sales- 86% of total sales)
- Uses : Large vessels

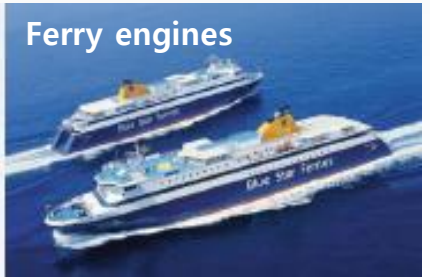
  (e.g. containerships, crude tankers, LNG carriers)
- Market position : No.2 globally, with 24% m/s
- Customers : SHI, DSME, Yangzijiang(China)

  Sinopacific(China), COSCO(China)

Appendix 5. Business area : Med-speed diesel engines

Medium-speed diesel engines

- New growth business
  (Sales : 7% of total sales in '12)
- Uses : Auxiliary engines in large ship engines,
  Propulsion engines in small to mid-sized ships
- Customers : SHI, DSME, China, Brazil



Appendix 5. Business area : Power plants (Low-speed & Medium-speed)

Diesel Power Plant

Med-speed Diesel Power Plant

- Med-speed diesel power plant engine
- Generates 1~25MW power suited for small capacity power plant
- Installed in small islands or remote areas and used for emergency purpose

  (Philippines, Fujairah, Bangladesh)

Emergency Generators for Nuclear Power Plants

No.1 supplier of emergency generators for nuclear power plants

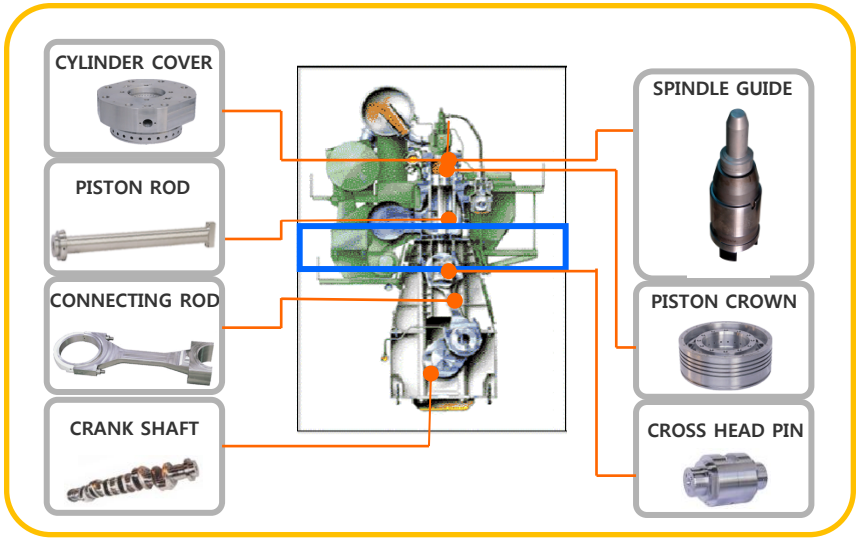
- Exclusive supplier of emergency generators for nuclear power plants in Korea; Orders to grow from rise in nuclear power plant exports
- Generates power capacity of 3,500 ~ 9,000KW
- Supplied to the major nuclear power plants in Korea

※ DPP (Diesel Power Plant) : Power plant with small capacity that is used in a place where construction is difficult (e.g. islands)

EDG (Emergency Diesel Generator) : EDG is a diesel-powered emergency backup systems for nuclear power plants

Appendix 5. Business area : Parts & C/S

Main engine parts



- Uses : Ship engines, Retrofit
- Customers :
  - 14 agencies (12 domestic, 2 overseas)
  - Ship owners: A.P.Moller(Denmark), CSCL(China), NOVO Ship(Russia)
- Market size : ₩600bn(as of 2012)
- Business overview
  - Domestic production of engine parts
  - Developing paid A/S items

CYLINDER COVER

ROD(CON/PISTON)

ALPHA RETROFIT

CROSS HEAD PIN