



Doosan Engine

Investor Relations  
**2011 Operating Results &  
2012 Guidance**



Feb. 2012  
Doosan Engine

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### **Disclaimer**

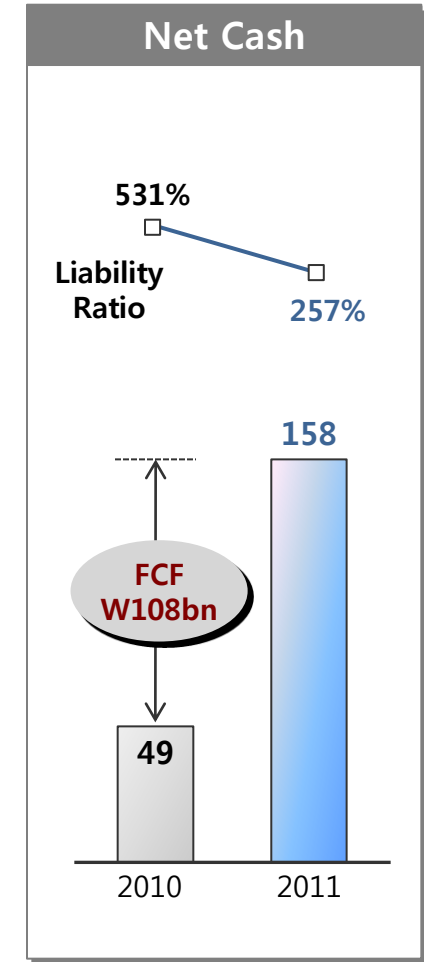
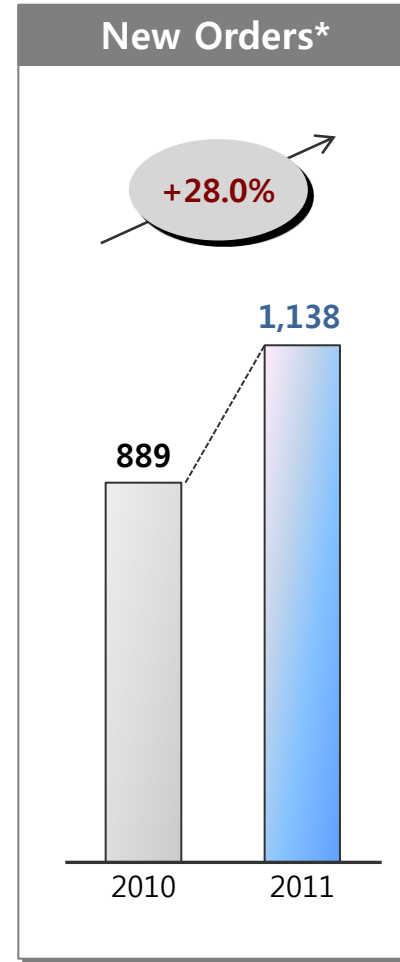
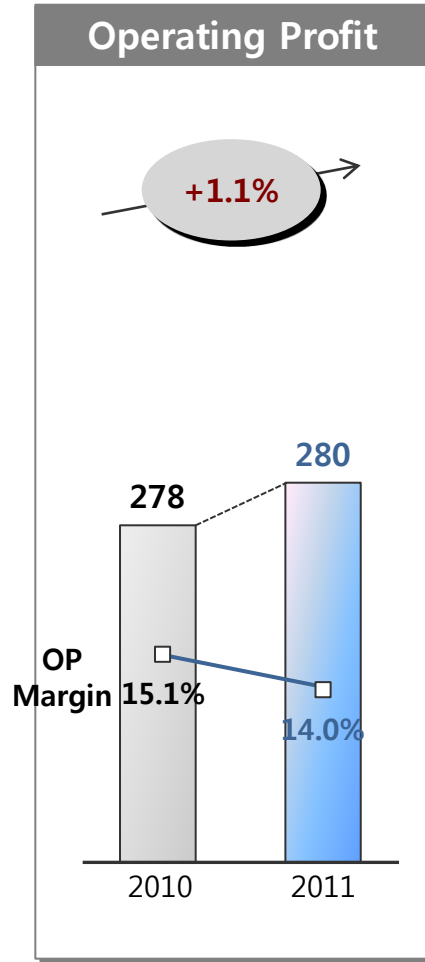
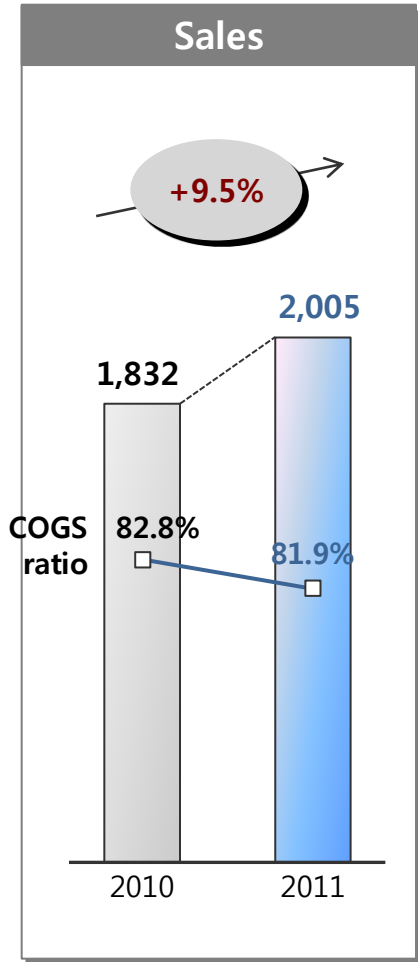
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# 2011 Operating Results Summary

(W bn)



\* New Orders : Based on Receiving Prepayment Deposit

# 4Q Income Statement

✓ Sales W532bn, Operating Profit W41bn(OPM 7.8%)

(W bn)

	'11.4Q	'11.3Q	QoQ	'10.4Q	YoY
Sales	<b>532</b> <sup>1</sup>	462	+15.2%	486	+9.6%
COGS ratio(%)	<b>(86.5%)</b>	(79.2%)	(7.3%p)	(81.3%)	(5.2%p)
Gross Profit	<b>72</b>	96	-25.2%	91	-21.0%
SG&A	<b>21</b>	18		18	
Other gain & loss	<b>-10</b>	-5		9	
Operating Profit	<b>41</b> <sup>2</sup>	73	-43.2%	82	-49.6%
OP Margin(%)	<b>(7.8%)</b> <sup>3</sup>	(15.8%)	(-8.0%p)	(17.0%)	(-9.2%p)
Financial income & loss	<b>4</b> <sup>4</sup>	-1		-12	
Equity Method gain & loss	<b>0.9</b>	-3		67	
Pretax Profit	<b>47</b>	69	-31.5%	138	-65.9%
Tax	<b>18</b>	18		33	
Net Profit	<b>29</b>	51	-42.0%	105	-71.7%

## 4Q Key Points

- 1 Sales +15.2%(QoQ)**
  - Increase in deliveries(deferred from 3Q)

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- 2 OP Margin 7.8% (-8.0%p QoQ)**
  - Deteriorated Product Mix
  - Other gain & loss : -W10bn

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- 3 4Q Financial Income/Expense +W4bn**
  - Interest income & expense : +W2bn
  - FX translation gain & loss : +W7bn
  - Forward hedging gain & loss : -W5bn

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- 4 Gain/Loss Equity Method +W0.9bn**
  - 4Q11 Gain on equity method of Bobcat +W0.9bn  
(Gain on equity method of Bobcat : W13bn in '11 )

# 2011 Income Statement

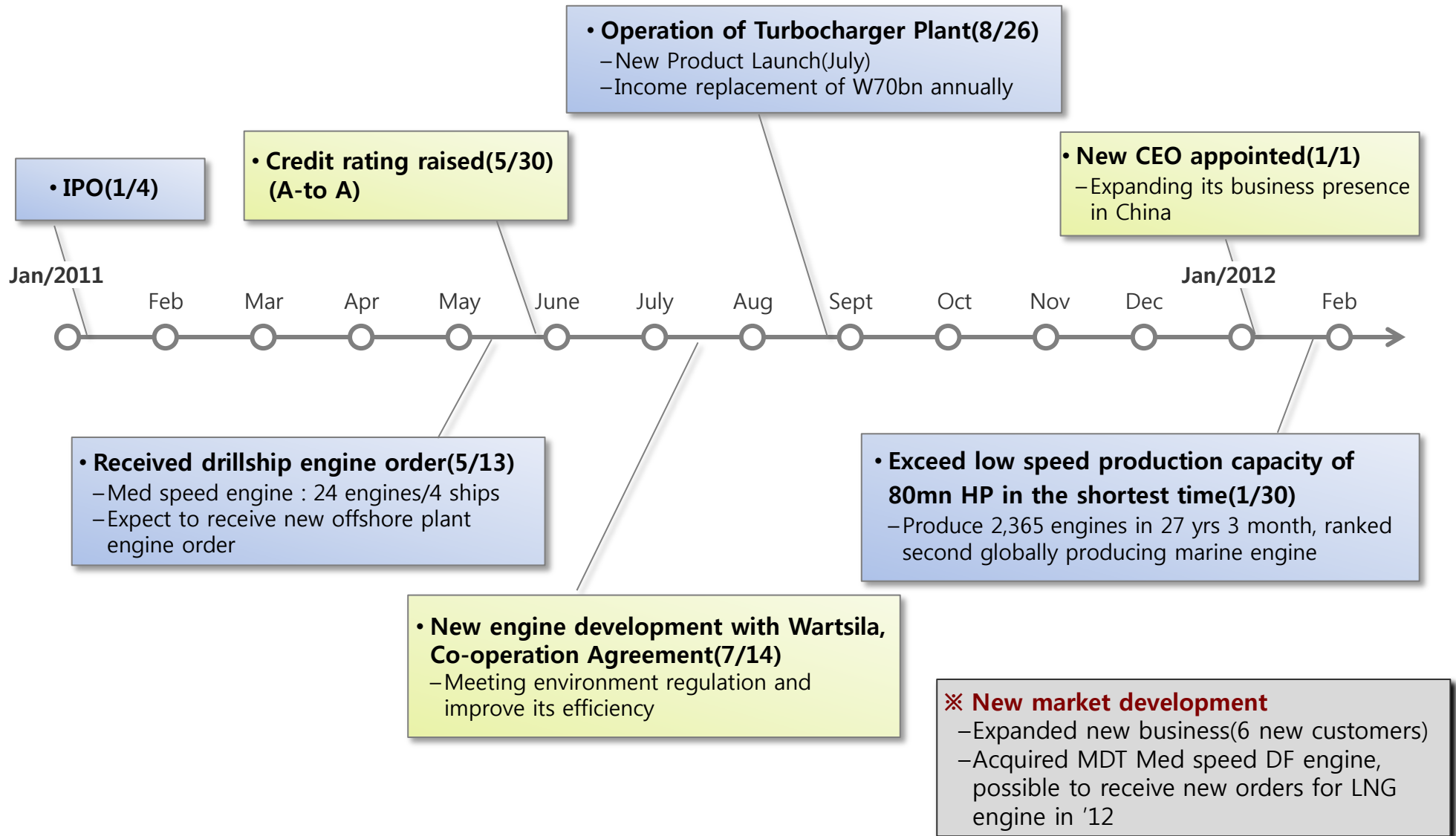
✓ Sales : W2,005bn, Operating Profit W280bn(OPM 14.0%)

	(W bn)		
	2010	2011	YoY
New Orders*	889	<b>1,138</b>	+28.0%
Sales	1,832	<b>2,005</b>	+9.5%
COGS ratio%)	82.8%	<b>81.9%</b>	-0.9%p
SG&A	59	<b>68</b>	
Other Gain	34	<b>7</b>	
Other Loss	12	<b>23</b>	
Operating Profit	278	<b>280</b>	+1.1%
OPM(%)	15.1%	<b>14.0%</b>	-1.1%p
Financial Income	88	<b>83</b>	
Financial Expense	117	<b>78</b>	
Gain/Loss on Equity Method	25	<b>12</b>	
Pretax Profit	272	<b>297</b>	+9.0%
Net Profit	201	<b>225</b>	+12.0%
Net Debt	-50	<b>-158</b>	
Debt Ratio	531%	<b>257%</b>	

Main Issues	
<b>New Orders</b>	<ul style="list-style-type: none"> <li>• <b>New Orders W1,138bn (+28% YoY)</b> <ul style="list-style-type: none"> <li>- Low speed engine order increased 35% YoY to W956bn despite the delayed orders</li> <li>- Med speed engine order increased 45% YoY to W140bn due to new business deals</li> </ul> </li> </ul>
<b>Sales</b>	<ul style="list-style-type: none"> <li>• <b>Marine Engine</b> : Sales jumped due to increase of engine shipments                             <ul style="list-style-type: none"> <li>- Low speed: +W118bn, Med speed: +W42bn</li> </ul> </li> <li>• <b>Diesel Engine</b> : Sales jumped W12bn due to increase in progress completion</li> </ul>
<b>Non-operating gain/loss</b>	<ul style="list-style-type: none"> <li>• <b>Financial Income/Expense +W5bn</b> <ul style="list-style-type: none"> <li>- Interest income &amp; expense +W6bn(+W35bn YoY)</li> <li>- Forward hedging gain &amp; loss +W0.2bn( +W12bn YoY)</li> </ul> </li> <li>• <b>Gain/Loss on Equity Method +W12bn</b> (Bobcat +W13bn, Casco -W1bn)                             <ul style="list-style-type: none"> <li>- Equity method gain of W25bn in '10 includes the disposal income of Doosan Infracore stake(W90bn)</li> <li>- Gain on equity method of Bobcat increased +W65bn YoY</li> <li>( -W52bn in '10 → +W13bn in '11 )</li> </ul> </li> </ul>

•New Order Recognition : Booked after receiving prepayment deposit

# 2011 Business Review

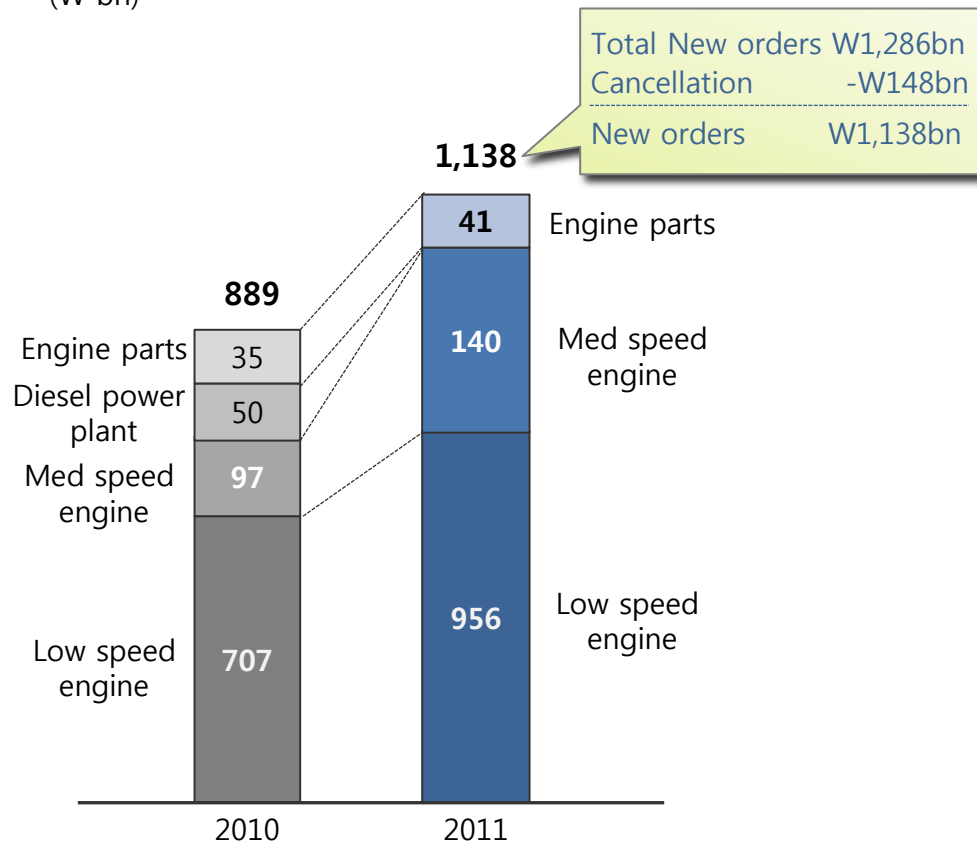


# 2011 New orders

✓ New orders increased 28% YoY to W1,138bn(Non-recognized order of W101bn not included)

## New orders\*

(W bn)



## Marine Engine(low speed+med speed) new orders breakdown

(W bn)

By Ship Type	FY 2010		FY 2011	
Container	439		714	
Bulker	73		196	
Tanker	284		112	
Others	2		71	
Offshore	5		45	
<b>Total</b>	<b>804</b>		<b>1,138</b>	

By Customers	FY 2010		FY2011	
SHI+DSME	312		639	
Domestic Others	28		91	
China	426		338	
Overseas Others	38		70	
<b>Total</b>	<b>804</b>		<b>1,138</b>	

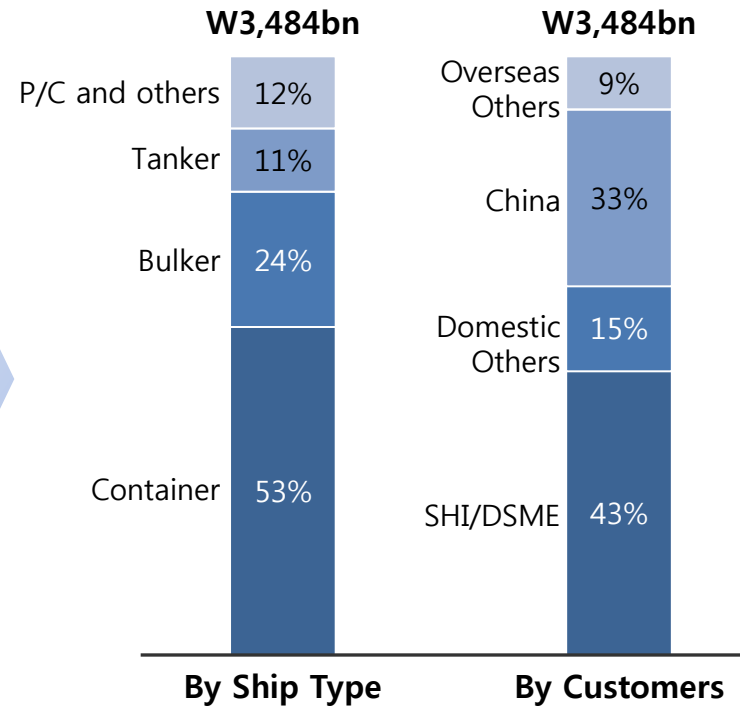
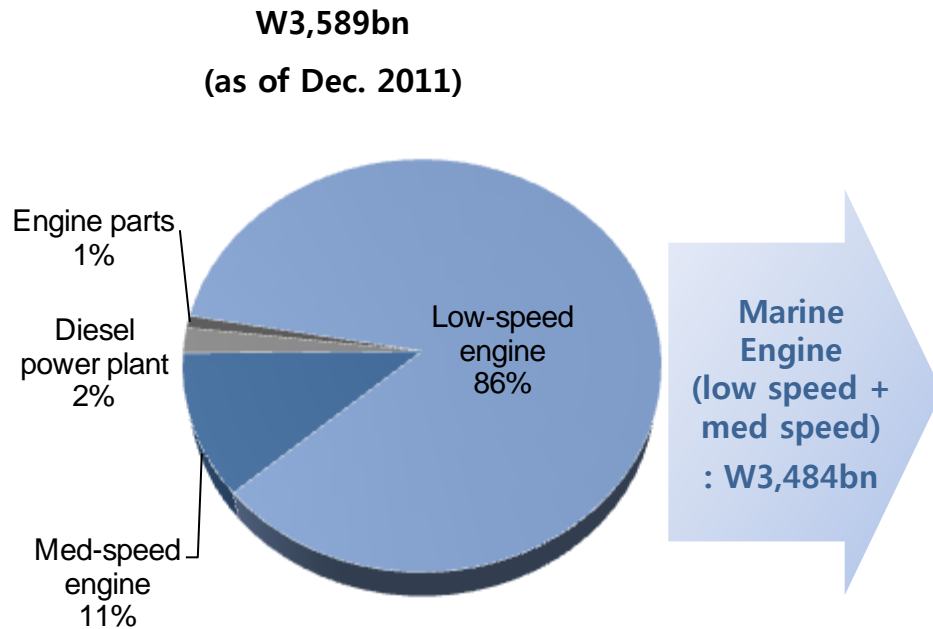
\* New orders : Recognized upon receiving prepayment deposit(post reflection of cancellation and order changes)

# Order backlog

✓ Order backlog : W3.6tr, marine engine accounts 97%

## Order Backlog Breakdown

(W bn %)



\* Backlog : Recognized upon receiving prepayment deposit(post reflection of cancellation and order changes)

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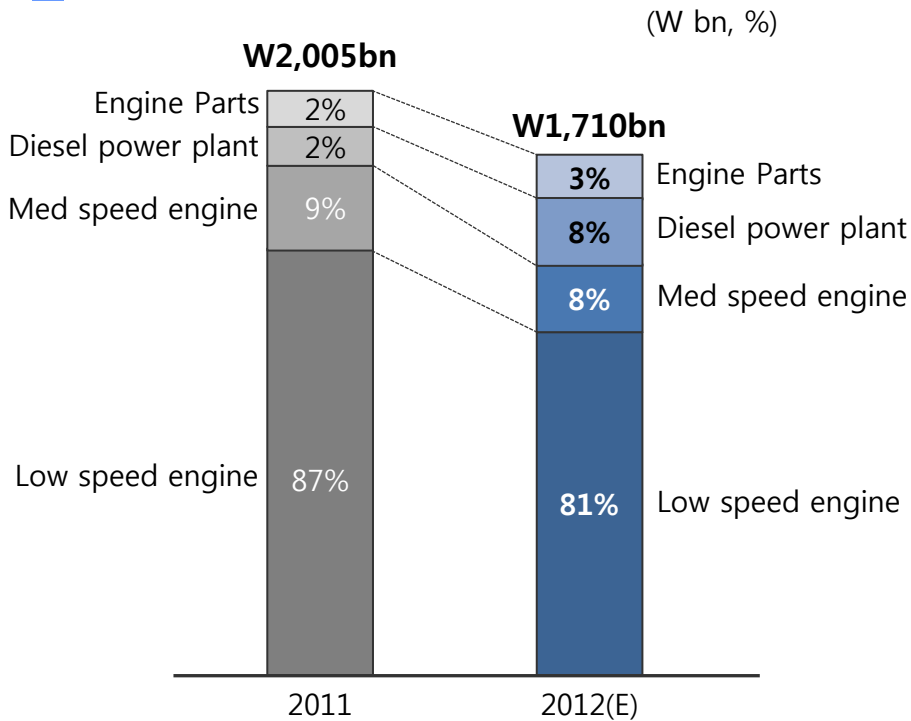
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# 2012 Guidance

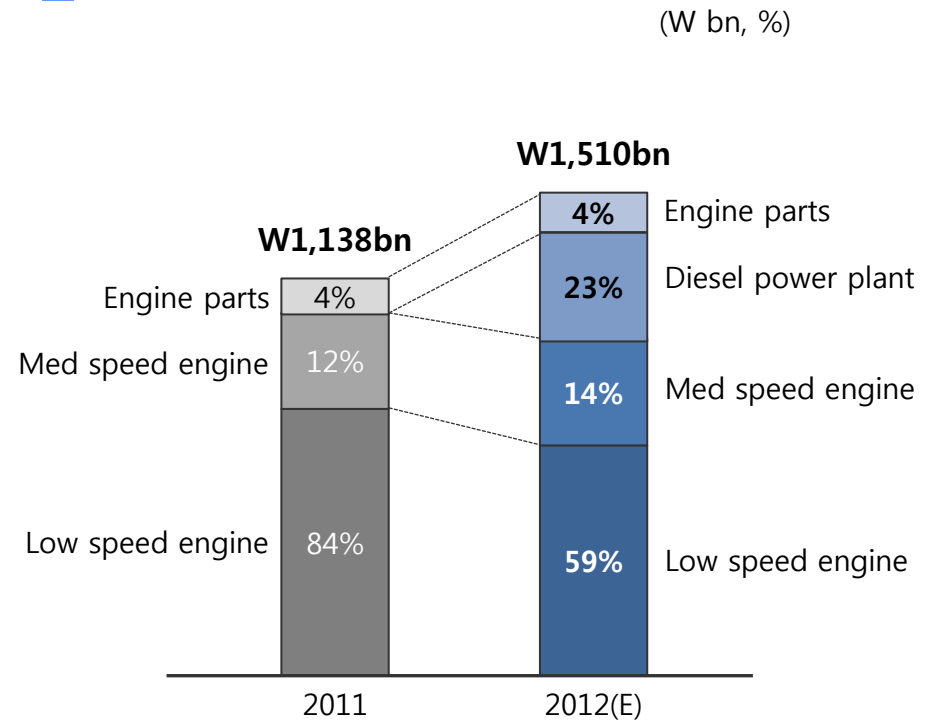
✓ Sales : W1,710bn(-14.7% YoY), New orders : W1,510bn(+33% YoY)

## Sales outlook



- Sales expect to fall due to decreased new orders in '09 ~'10
  - New orders: W889bn in '10 → W1,138bn in '11
  - Backlog : W4,408bn in '10 → W3,589bn in '11

## New order outlook



- Marine Engine
  - Expansion of overseas market especially in China (W408bn in '11 → W538bn in '12 )
- Diesel Power Plant
  - Expanding its new orders(W352bn in '12 )

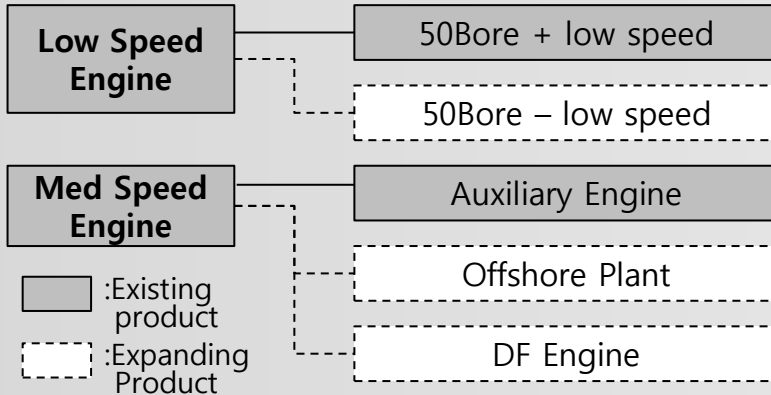
# Mid-Long Term Growth Strategy

- ✓ Differentiated order-taking competitiveness and securing cost competitiveness
- ✓ Focusing non-shipbuilding business such as Diesel Power Plant, Parts, C/S Business, shipbuilding equipment business

Strategy	'12 Key Strategy	Main Issues
<p>1</p> <p><b>Strengthen Engine Business Competitiveness</b></p>	<ul style="list-style-type: none"> <li>• Differentiated ordering-taking competitiveness</li> <li>• Secure cost competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>• Differentiated marketing efforts for ship-owners and shipyards</li> <li>• Customer valued marketing</li> <li>• Strengthen strategic alliance and collaboration with licensors for developing engines</li> <li>• Securing cost competitiveness by implementing O.E expansion and global sourcing</li> </ul>
<p>2</p> <p><b>Stable Business Portfolio</b></p>	<ul style="list-style-type: none"> <li>• Strengthen Diesel Power Plant and parts, C/S Business</li> <li>• Diversify business scope via green parts</li> </ul>	<ul style="list-style-type: none"> <li>• Expanding med-speed diesel engine business</li> <li>• Strengthen emergency generators for nuclear power plant</li> <li>• Engine Parts, C/S business, localization parts and expansion of retrofit items</li> <li>• Develop eco-friendly/Efficiency-enhancing ship parts</li> <li>• Develop non-shipbuilding business</li> </ul>

# Business Portfolio Improvement

## Marine Engine



### 50Bore – low speed engine

- Expanding the market by the increase number of small to mid sized shipbuilders

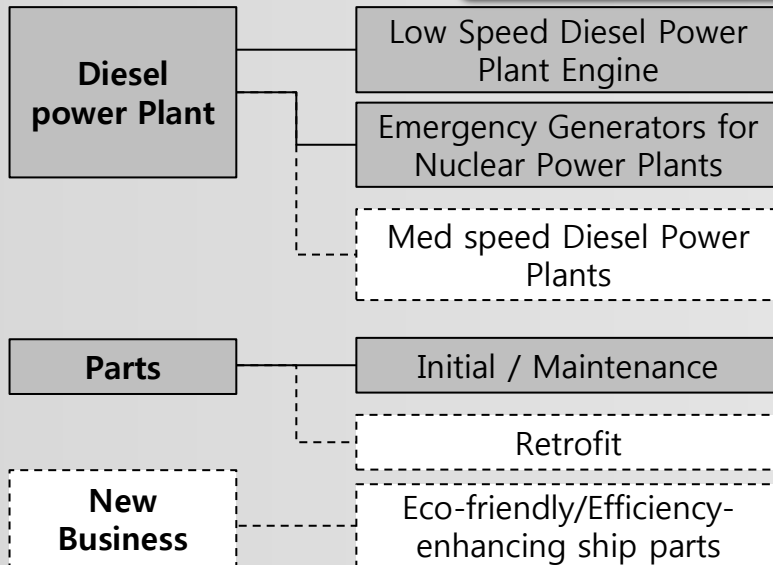
### Offshore Plant Engine

- Expanding the M/S in the captive market to 30%

### DF(Dual Fuel)Engine

- Acquired MDT Med speed DF engine(Effective January 2012)
- Expanding new orders opportunity after receiving low speed DF engine license

## Non-Marine Engine



### Med speed diesel power plants

- Strengthening cost competitiveness by securing its own engine model

### Retrofit

- Increasing the demand of high efficient parts to improve the engine efficiency for ship-owners

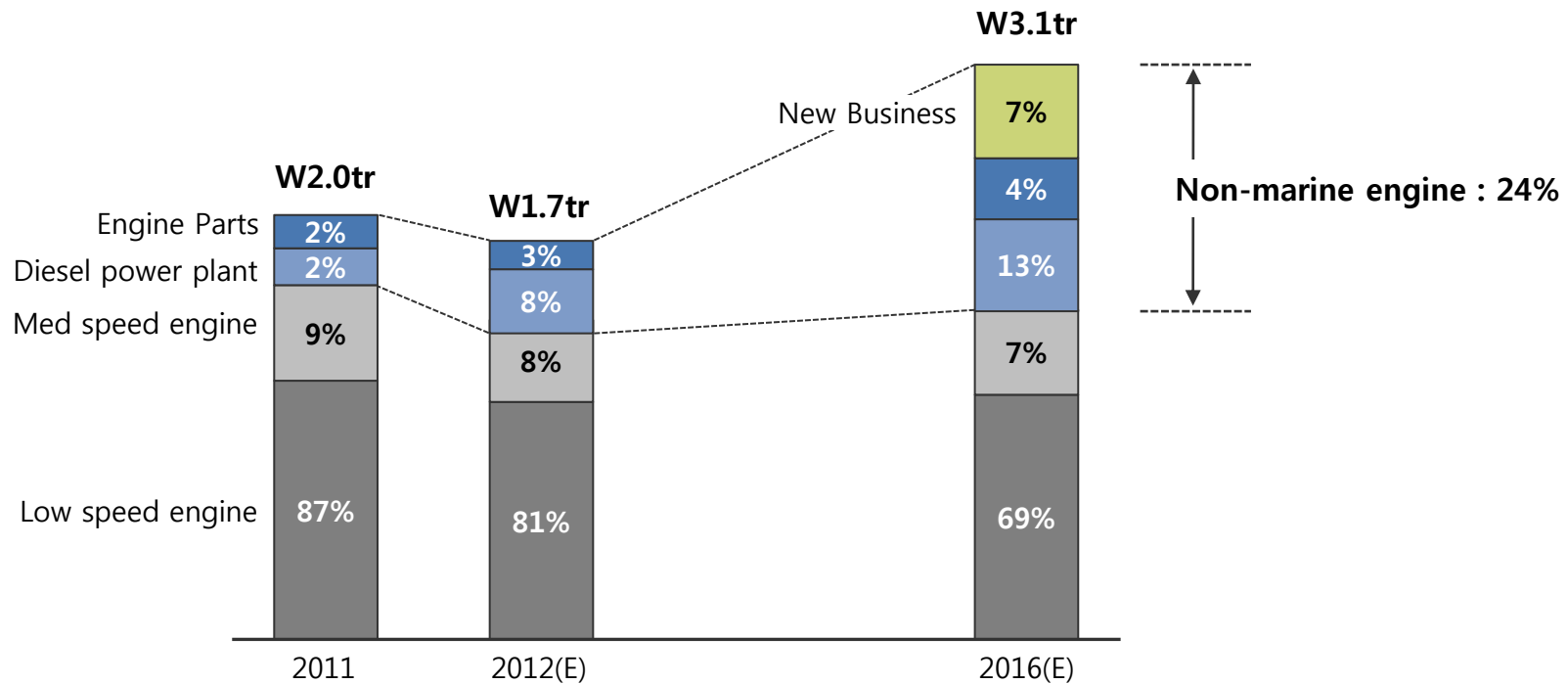
### Eco-friendly/Efficiency-enhancing ship parts

- Acquiring core technologies by creating joint development and forming collaboration with the key players

# Mid-to-long term Vision

✓ Focus on non-marine engine areas to achieve W3.1tr sales by 2016

## Mid to long term Financial Aspiration – Sales



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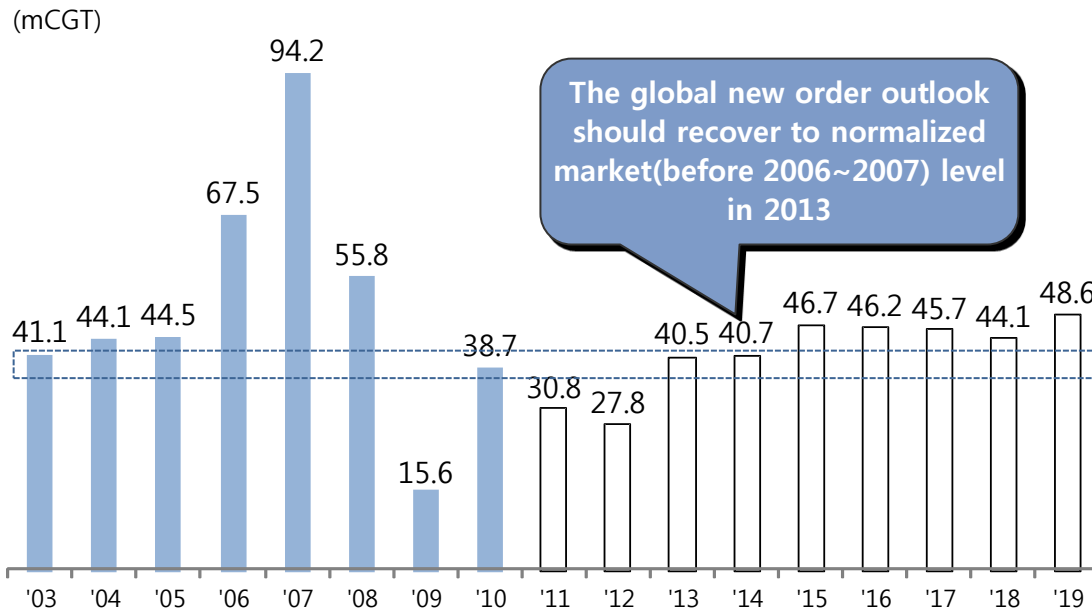
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# Shipbuilding market outlook

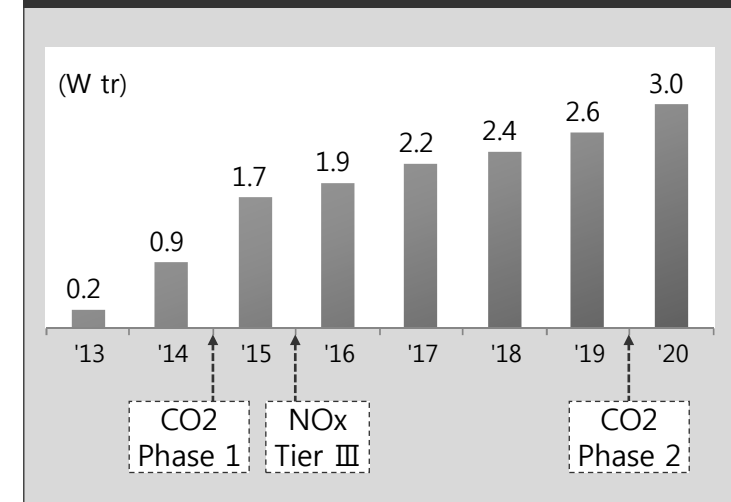
- ✓ The global new order outlook should recover to normalized(40mCGT) market level in 2013
- ✓ The Abatement (emission-reducing equipment) market will significantly grow to W3tr in 2020 after the market develops in 2013

## Global new order outlook



\* Source : Clarkson Forecast Report(September 2011, Base Case)

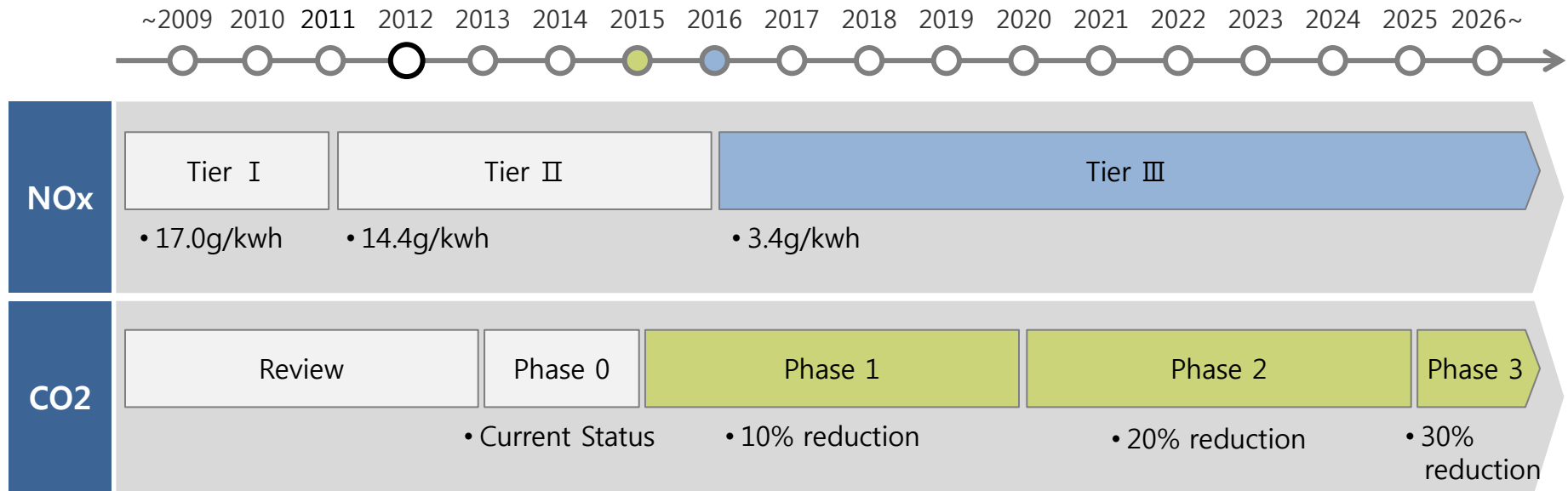
## Abatement market size outlook



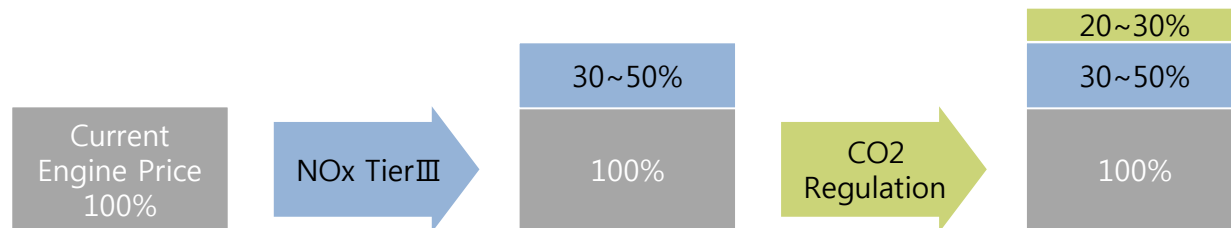
\* Source : Doosan Engine Estimates

# Investment Point 1. IMO environmental regulation trend

## IMO regulation Milestone



## Impact on Engine Price

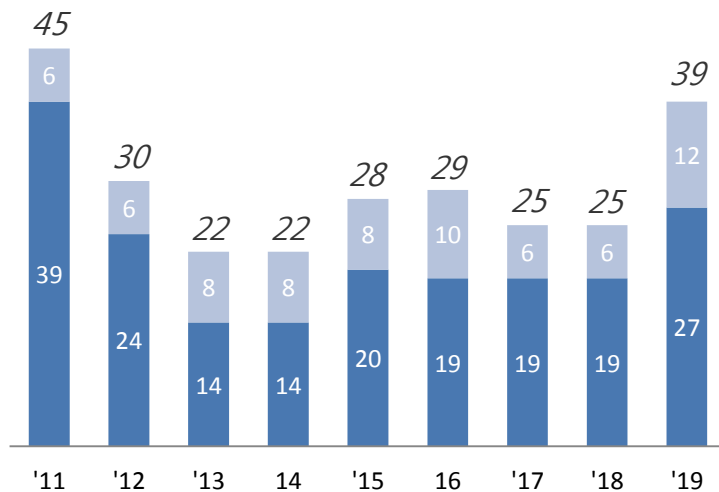


# Investment Point 2. Offshore Plant Engine

- ✓ Captive market expect to place an average of 162 engine orders for offshore plant in '11~'19
- ✓ The first Drillship engine order in May 2011 : Plan to secure 50 engines per year and expand the M/S in captive market to 30%

Offshore plant Order outlook for Domestic player

■ Drill Ship (Unit: # of ships)  
 ■ FPSO(Exclude LNG-FPSO)

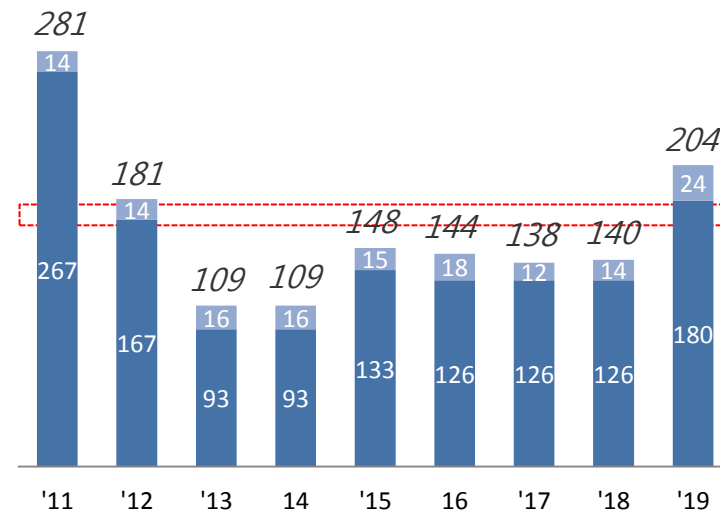


\* Source : Clarkson, Doosan Engine

• Based on the amount of order received by ship types and shipyards for '08~'10 (3 years)

Offshore plant Engine Order outlook for Captive Market

■ Drill Ship (Unit: # of engines)  
 ■ FPSO(Exclude LNG-FPSO)



Average of 162 engines

\* Source : Clarkson, Doosan Engine

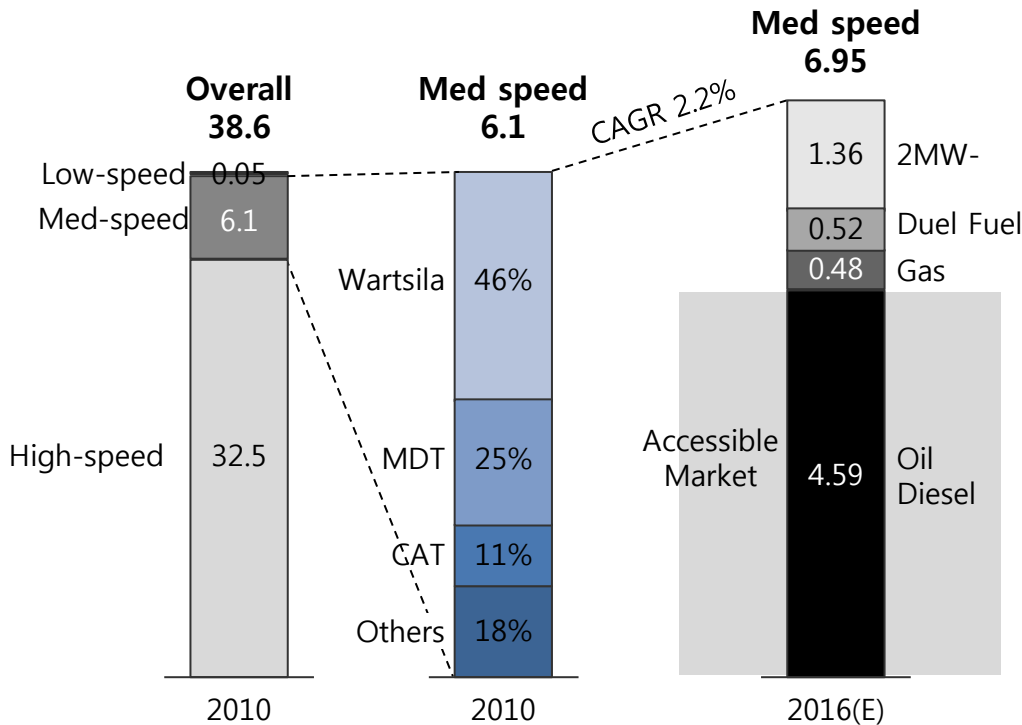
• Number of engines by ship type  
 - Drillship : 6~8 Med-speed engines per ship  
 - FPSO : 4 Med-speed engines per ship

# Investment Point 3. Diesel Power Plant Market

- ✓ Med-speed diesel power plant market will grow to 6.95GW due to the increasing demand of electricity (med-small sized) in 2016
- ✓ Expanding med-speed diesel power plant business and strengthening its emergency generators for nuclear power plants business

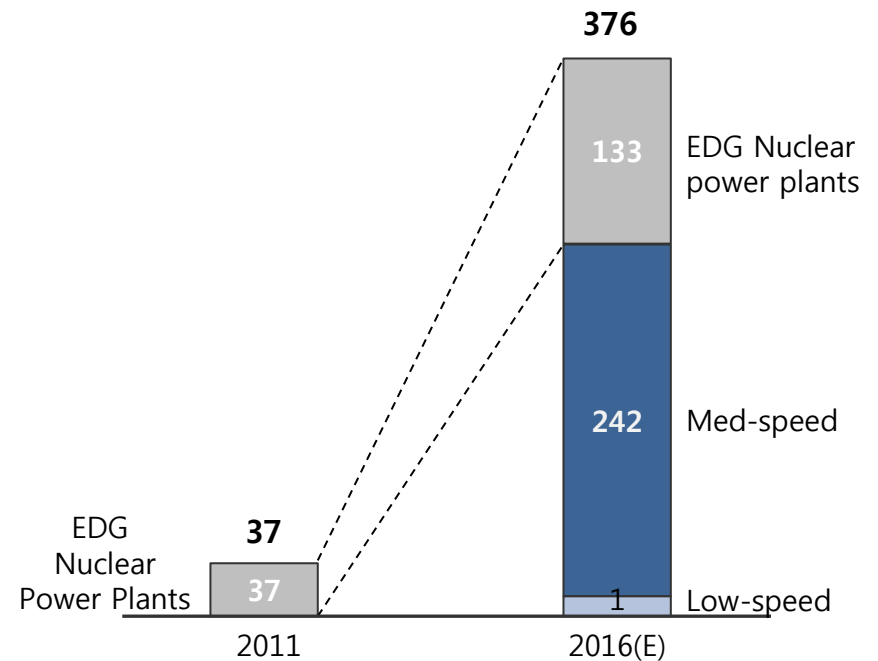
## Diesel power plant market

(GW)



## Mid-to-long term financial goals

(W bn)

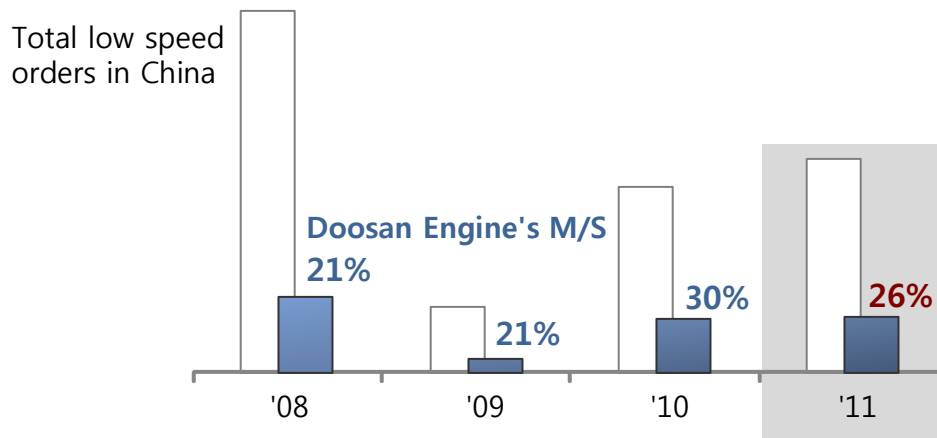


\* Source : Diesel & Turbo, IEA World Energy Outlook 2010

# Investment Point 4. China Market

- ✓ M/S in China maintained the number one position(26% in 2011), the growth of Chinese shipbuilders is an opportunity

## Doosan Engine new orders M/S in China



(Unit: '000HP)

Total new orders in China	13,400	2,407	6,879	7,875
<b>New orders to Doosan Engine</b>	<b>2,800</b>	<b>500</b>	<b>2,026</b>	<b>2,034</b>

- Recorded M/S of 26% in '11
- ➔ Likely to maintain M/S of 25~30%

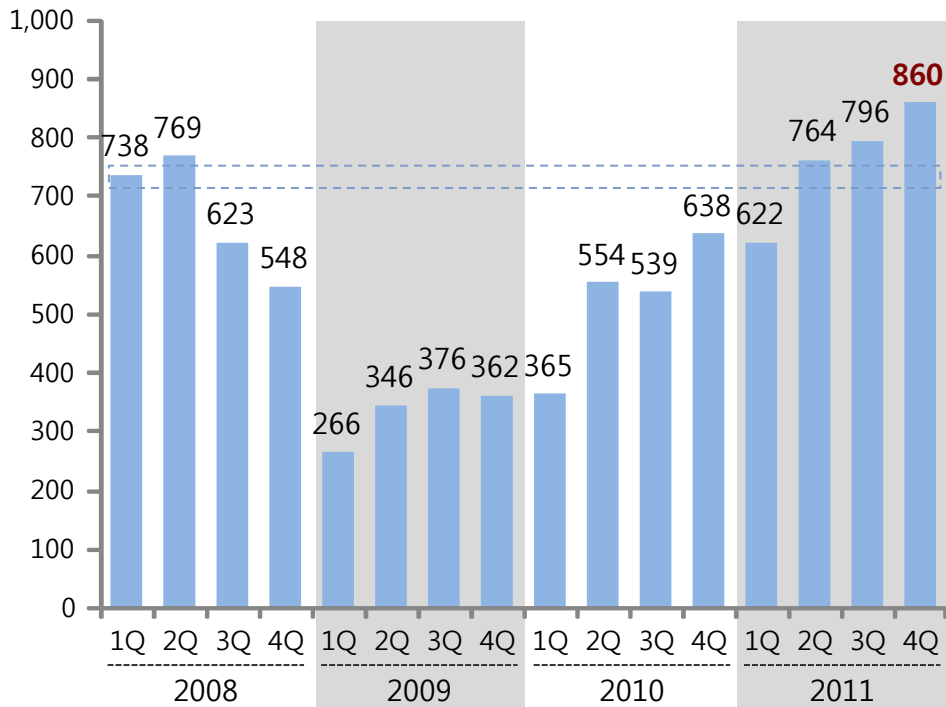
※ M/S : Based on actual engine new orders from 42 shipyards in China(Based on 50+ Bore segments)  
(Detailed orders breakdown in '08 is not accessible  
We figured out the M/S based on our contract basis against the Clarkson new engine orders)

# Investment Point 5. Bobcat Turnaround

- ✓ 4Q Sales : W991bn(+16% QoQ, +39.1% YoY)
- ✓ 4Q Net profit recorded net loss due to recognition of one-off expense(call redemption fees W32bn)  
Operating profit improved to 5.9% in 4Q11, Gain on equity method of W13bn in '11(+W65bn YoY)

## Bobcat Sales Trend ('08~'11)

(mn\$)



## Bobcat Operating Results

(W bn, %)

	3Q11	4Q11	QoQ
Sales	855	991	+16%
OP	41	58	+41%
OPM(%)	(4.8%)	(5.9%)	(+1.1%p)
NI	-8	-28	

## Equity Method Gain/Loss

(W bn, %)

	FY 2010	FY 2011
Stake(%)	27.3%	18.4%
Acquisition Cost	738	738
Book Value	312	325
Gain(Loss) on Equity Method of Bobcat	-52	13

# Appendix

- I. Company overview**
- II. History**
- III. Plants**
- IV. Production infrastructure**
- V. Business area**
- VI. 2011 Financial Statements**

# Appendix 1. Company Overview

## Overview

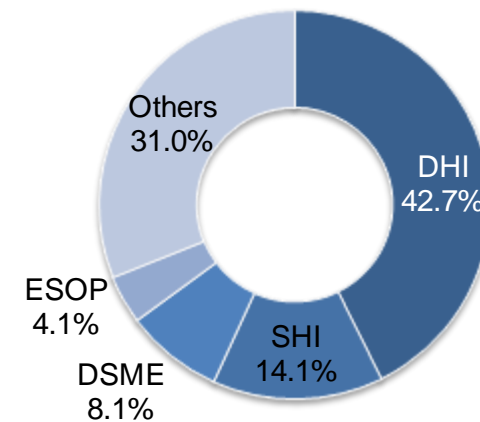
<b>Company</b>	Doosan Engine Co., Ltd
<b>Date of Foundation</b>	Dec 30, 1999
<b>Address</b>	Sinchon-dong 69-3, Seongsan-gu, Changwon-si, Gyeongnam
<b>Business</b>	Marine diesel engines / Diesel engines for power plants
<b>Exports</b>	Local/direct Exports(96%), Domestic (4%)
<b>Capital</b>	W69.5bn
<b>No. of Employees</b>	1,294 [As of Dec 2011]
<b>Subsidiary</b>	Doosan Marine Industrial (DMI) Dalian Co., Ltd (100% owned)

## Business Areas

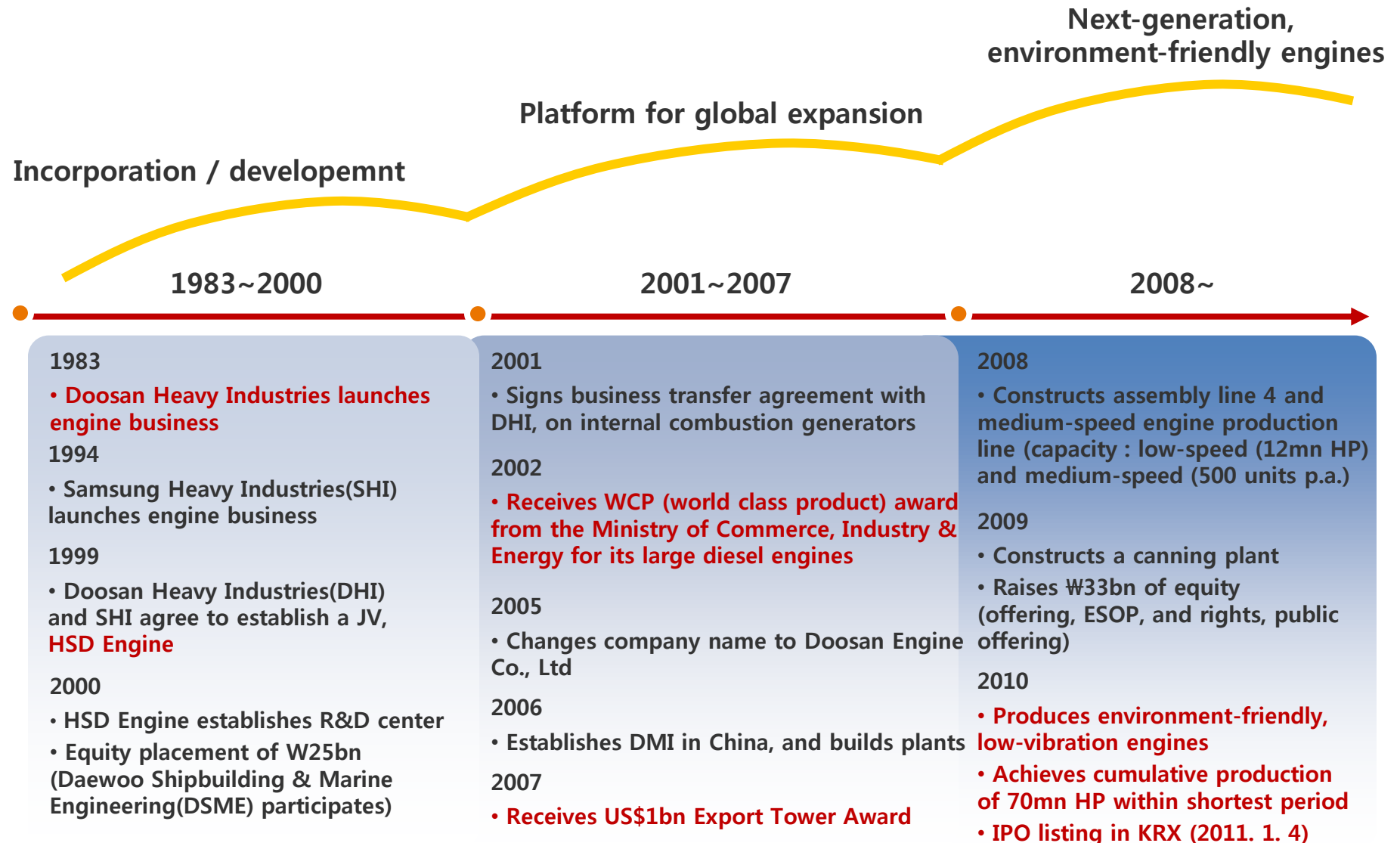
Business Areas	Sales (2011)	% of sales
Low-speed engine	W1,754bn	87%
Med-speed engine	W176bn	9%
Diesel power plant	W36bn	2%
Engine parts and C/S	W39bn	2%
Total	W2,005bn	100%

## Shareholders

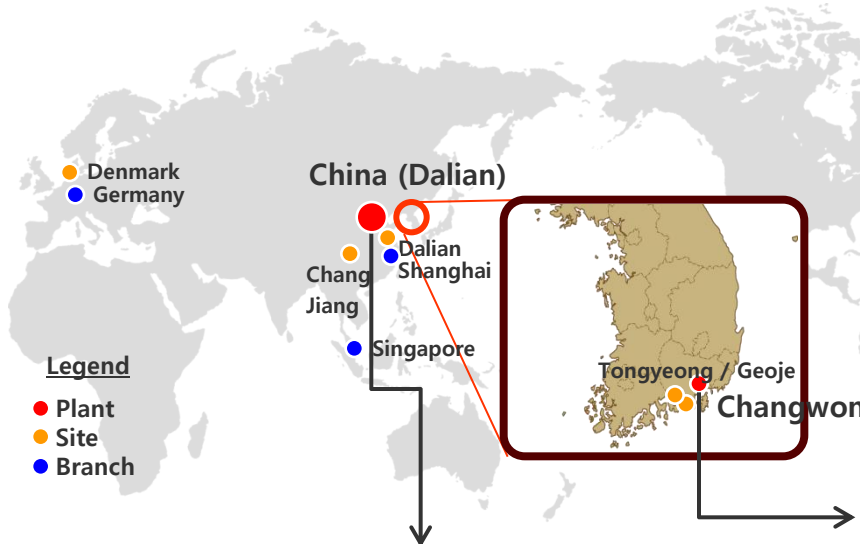
[ As of 2011.12.31 ]



# Appendix 2. History



# Appendix 3. Plants



**Dalian, China plant**



- Size : 57,904m<sup>2</sup> (17,500 pyeong)
- Product line-up : Diesel engine parts
- Production capacity : 250 blocks of engine canning parts

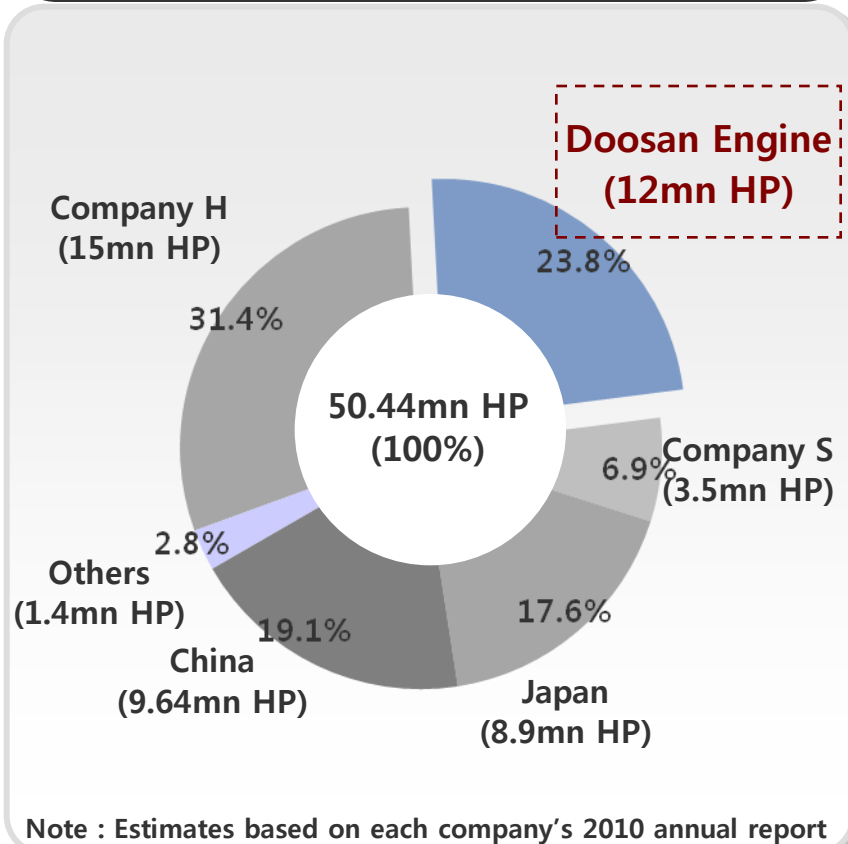


- Products : Diesel engines
- Size : 328,000m<sup>2</sup> (99,500 pyeong)
- Overview

Classification	Size(m <sup>2</sup> )	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)	
<b>Total Capacity</b>		<b>14,000,000 HP</b>

## Second largest diesel engine production facility in the world

### Low-speed diesel engine production Capacity



### Production facilities and infrastructure

#### 1. Large low-speed diesel engine plant

- Production capacity : 12mn 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(2011 Sales- 87% 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)

Containership engines



Crude tanker engines



LNG carrier engines



Bulk carrier engines



# Appendix 5. Business area : Med-speed diesel engines

## Medium-speed diesel engines



- New growth business  
(Sales : 9% of total sales in '11,+32% YoY)
- 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)

## Low-speed diesel power plant engines

### No.1 builder of large DPP engines

- Uses low-speed diesel engines (designed for large ships)
- Supply electricity in 10 countries currently
- Small/mid-size capacity power plants installed in small countries, developing countries, and islands (Namjeju Island, Papua New Guinea, India, Greece, etc.)
- Technology alliance with MAN of Germany



## Med-speed diesel power plants

### No.1 supplier of emergency generators for nuclear power plants

- Medium-speed diesel engines for power plants
- Exclusive supplier of emergency generators for nuclear power plants in Korea; Orders to grow from rise in nuclear power plant exports
- Medium-speed DPP : Small-capacity power plants for islands and other remote areas (Philippines, Fujairah, Bangladesh)
- Technology alliance with Daihatsu(2010) to help increase overseas orders for medium-speed DPP



Emergency power generator

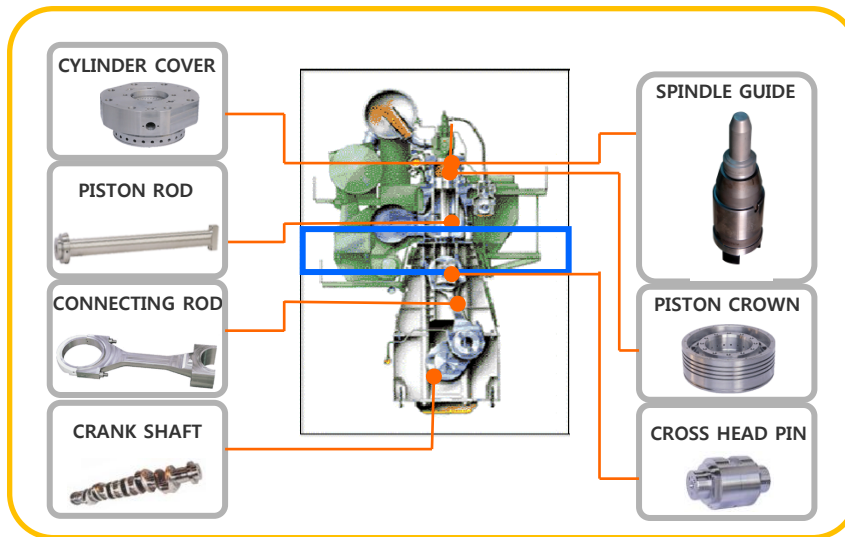


Med-speed DPP

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

# Appendix 5. Business area : Parts & C/S

## Main engine parts



- Uses : Ship engines, Retrofit
- Customers :
  - 12 agencies (10 domestic, 2 overseas)
  - Ship owners: A.P.Moller(Denmark), CSCL(China), NOVO Ship(Russia)
- Market size : ₩616bn(as of 2009)
- Business overview
  - Domestic production of engine parts
  - Expanding of parts sales network : 11 in 2010 to 20 in 2012
  - Developing paid A/S items



CYLINDER COVER



ROD(CON/PISTON)



ALPHA RETROFIT



CROSS HEAD PIN

# Appendix 6. 2011 Financial Statements

## Balance Sheet (K-IFRS)

(W bn)

	2010	2011	+/-
Current assets	1,073	<b>994</b>	-79
Non-current assets	1,133	<b>1,056</b>	-77
<b>Total assets</b>	<b>2,206</b>	<b>2,050</b>	-156
Current Liabilities	1,488	<b>1,217</b>	-271
Prepayment deposit	979	<b>725</b>	-254
Short-term debt	35	<b>25</b>	-10
Non-current liabilities	369	<b>259</b>	-109
Long -term debt	213	<b>143</b>	-70
<b>Total liabilities</b>	<b>1,857</b>	<b>1,476</b>	-381
Paid in capital	69.5	<b>69.5</b>	0
Capital surplus	367	<b>367</b>	0
Retained earnings	-67	<b>140</b>	+207
Accumulated other comprehensive income	-20	<b>-2</b>	+18
<b>Total equities</b>	<b>349</b>	<b>573</b>	+224
Total debt	446	<b>319</b>	-127
Cash & Cash Equivalents	496	<b>477</b>	-19
<b>Net Debt</b>	<b>-50</b>	<b>-158</b>	-108

## Income Statement (K-IFRS)

(W bn)

	2010	2011	YoY
Sales	1,832	<b>2,005</b>	+9.5%
COGS ratio(%)	(82.8%)	<b>(81.9%)</b>	(-0.9%p)
Gross Profit	315	<b>364</b>	
SG&A	59	<b>68</b>	
Other gain & loss	22	<b>-16</b>	
Operating Profit	278	<b>280</b>	+1.1%
OP Margin(%)	(15.1%)	<b>(14.0%)</b>	(-1.1%p)
Financial income	88	<b>83</b>	
Financial expense	117	<b>78</b>	
Equity method	25	<b>12</b>	
Pretax profit	272	<b>297</b>	+9.0%
Tax	72	<b>72</b>	
Net profit	201	<b>225</b>	+12.0%