



# Biomass Business

HANWA Co.,Ltd.  
Energy Department  
Renewable Energy Section

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# Company Profile

Company  
Outline

Products

Our Efforts

Confidential



## Company Outline

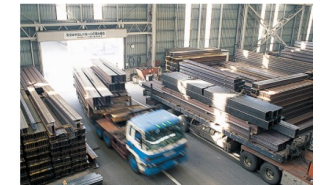
As of April 2021

Founded	1 <sup>st</sup> April 1947
Capital	USD 420 Million
Number of Employees	1,532 (Consolidated : 4,845)
Head Office	Osaka Chuo, Tokyo Ginza
President	Hironari Furukawa
Main Commodity	Steel Products, Steelmaking raw materials, construction materials, Non-Ferrous metals, Petroleum, Chemicals, Seafood, Cement, Lumber, industrial machineries and others
Sales	USD 18.4 Billion (Steel 58%. Petroleum • Chemicals 14%, Metal and Alloys 15%, Foods 6%, Non-ferrous Metals 6%, その他 4%)
Overseas Office	49 offices (America 12, Asia 29, EMEA 8)

## Main Commodities of Hanwa

### Steel

Steel bars, Shapes, Construction materials, Steel sheets, Distributor Sales, Wire products& Special Steels, etc.



### Fuel

Industrial Fuel (Heavy Oil • Kerosene • LPG • Coal), Transportation Fuel (Bunker Oil • Gasoline • Diesel • LP Gas) ,Lubricant Oil, Industrial Gas. (Oxygen etc) 、 Biomass fuel. RPF etc.



# Biomass Fuel

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Mainly export PKS and Wood Pellet to Japan, Korea and Taiwan

		PKS (Palm Kernel Shell)	Wood Pellet	Black Pellet
Appearance				
Main Area of Production		Indonesia, Malaysia	Canada, America, Thailand, Vietnam, Malaysia	US, Canada, EU, S.E Asia
General Spec	Net Calorific Value	Above 3,500kcal/kg	Above 4,000kcal/kg	Above 5,000-7,500kcal/kg
	Moisture	15~25%	Around 10%	-
	Na+K	Under 1,500ppm	Under 2,000ppm	-
	Cl	Under 1,000ppm	Under 500ppm	-
Storage		Could be kept in Yard	Indoor	Water resistance
Note		Made in Malaysia and Indonesia are different	Product from North America have tendency to possess higher Calorie	High energy density leads to better efficiency in transportation and storage

# Hanwa's Biomass structure

Company Outline

Products

Our Efforts  
PKS Pellet



Number One PKS trading Company and Aiming for Number One Biomass Trading Company

## Supplier

### PKS

- ✓ 4 suppliers, 7 loading ports in Indonesia, more under development
- ✓ 4 suppliers, 7 loading ports in Malaysia
- ✓ 2 potential suppliers from Thailand

### Wood Pellets

- ✓ 7 suppliers, 3 loading ports in Thailand, more under development
- ✓ 6 suppliers, 2 loading ports in Malaysia, more under developments
- ✓ 3 suppliers, 2 loading ports in Vietnam
- ✓ Investment pellet plant/plantation in Indonesia

Supply from various sources

## Company Structure

### Japan

- members
- ✓ Total Manage
- ✓ Sell to Japan

### Thailand

- 3 members
- ✓ Manage the negotiation with supplier
- ✓ Sell to Asia

### Indonesia

- 6 members
- ✓ Manage the field
- ✓ Manage the loading

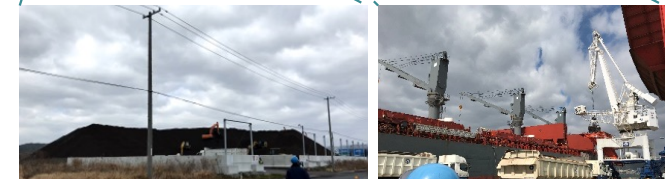
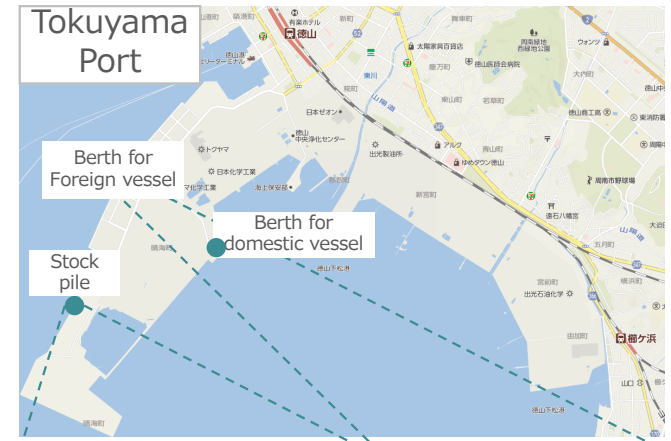
### Vietnam

- 1 member
- ✓ Manage the field
- ✓ Manage the loading

As of Oct 1<sup>st</sup> 2019

Utilizing each countries' network, build buyer-seller structure.

## Storage



Able to stock 80,000 MT  
Able to react emergency with domestic vessel

# Our Strength



Confidential



We have pioneering policies to build a trustful supply system to customers.

	① Domestic Storage	② Field Management	③ Long-term Charter	④ Two Ports Discharging	⑤ Certification
Policy	<ul style="list-style-type: none"> <li>✓ Possesses a storage, capacity of 100,000MT, at Tokuyama and have plan for extension.</li> <li>✓ Possible to react to the urgent matter by home trade vessel.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Strick management with Stockpile Check List and Loading Check List</li> <li>✓ Our staff will stand by all the shipment to manage.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Long-term charter of 16,500DWT Vessel from 2019 to solve future transport problems.</li> </ul>	<ul style="list-style-type: none"> <li>✓ As a number one trading company for PKS, able to deliver with flexibility for customer's need.</li> <li>✓ By bulk, has made a historical delivery over 30,000MT at one shipment.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Achieved CoC FSC, PEFC, GGL, and RSB.</li> <li>✓ Joining BPA(Biomass Power Association)</li> </ul>
Effect	Quality	Quality	Quality	Quality	Quality
	Cost	Cost	Cost	Cost	Cost
	Delivery	Delivery	Delivery	Delivery	Delivery

# Our Strength – ① Domestic Storage

Company Outline

Products

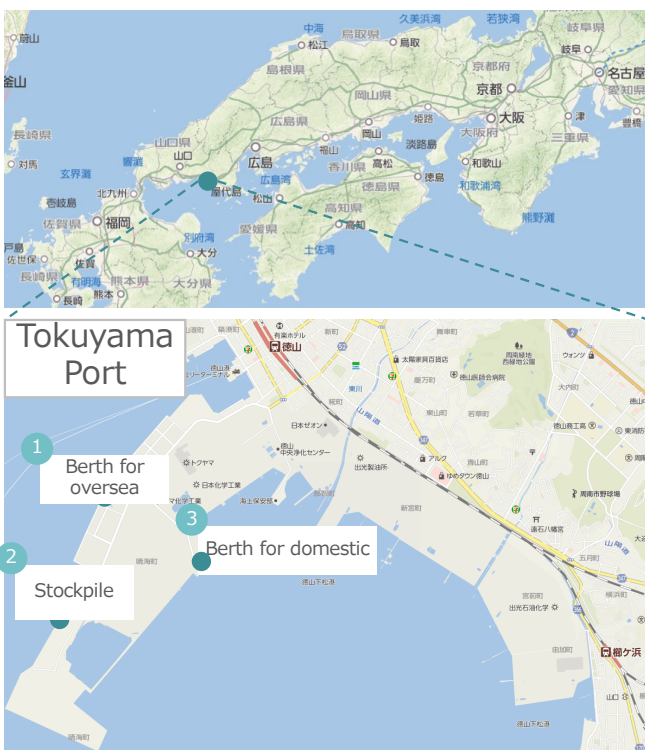
Our Efforts  
PKS Pellet

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Building a delivery system which could immediately react to the emergency of customers, with largest stockpile amongst other Japanese traders.

## Exterior



## Value Chain

### ① Import



✓ High speed discharging equipment which could handle 5,000MT/day

### ② Storage



✓ Possesses a storage with a capacity of 100,000MT and will expand more.

### ③ Domestic Vessel



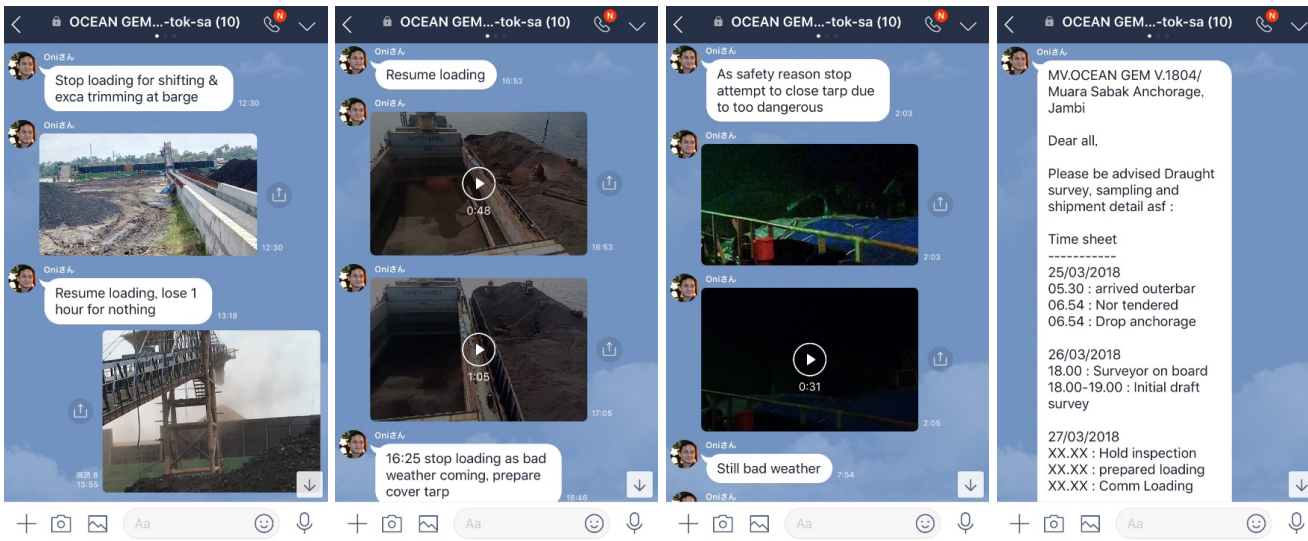
✓ Local vessel which can load PKS 1,300M are prepared timely.

# Our Strength ② Field Management



With abundant experience, our field staff checks quantity and quality of products during loading.

## Timely Share the Information



## Management Format

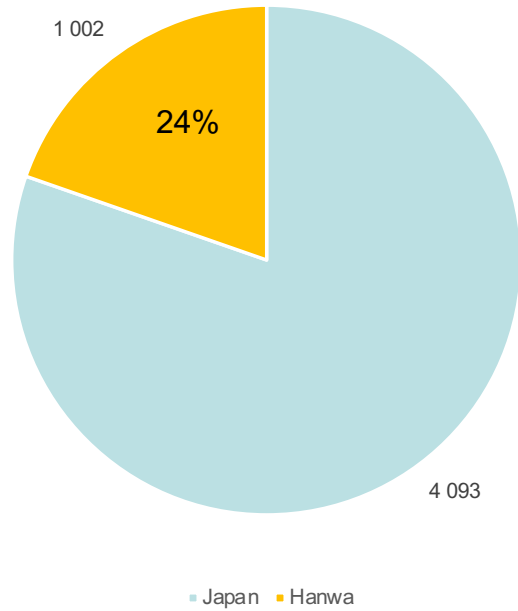
Operation					
P/NP	Director	1 Who is the director? 2 Is the director able to contact directly the management team? 3 Does the director grasp everything in the stockpile? 4 Does the director have a good reputation from staffs? 5 Does the director train staffs strictly and well?			
P/NP	Staff	1 The number of staffs 2 Does each staff have his own role? 3 How is the work system? (24-hours work? Daytime work?) 4 How is the salary system?			
P/NP	Cleanness of the	1 Is the stockpile clean enough? If Yes, 2 Are there no garbages on the ground such as cigarette butts or PET bottles?			
P/NP	Status of the deliv	1 The amount of delivered PKS per day 2 Status of the delivery trucks 3 Are the delivery trucks in good condition? 2 Status of the delivered PKS 3 Is the delivered PKS in good condition?			
P/NP	Way of piling stock	1 How do they pile stock? 2 What is the standard of piling stock like?			
P/NP	Handling moisture	1 Is there a routine task to handle moisture? 2 Is there a special preparation for the dry season? 3 Is there a special preparation for the rainy season?			
P/NP	Shipping	1 The status of the trucks used during shipping 2 Are the trucks used during shipping in good condition?			
P/NP	Staff Training	1 Are the staffs well-trained? 2 What are the don'ts that the staffs keep in mind? 3 Is there a work manual for staffs?			
P/NP	Management team	1 How does the management team handle the situation in case of trouble 2 How often does the management team conduct on-site inspection?			
Evaluation					
	Facility	Pass	Non-pass	Reference	
	Operation	Pass	Non-pass	Reference	
Evaluation from the buyer					
Comprehensive Evaluation					

# Our PKS record

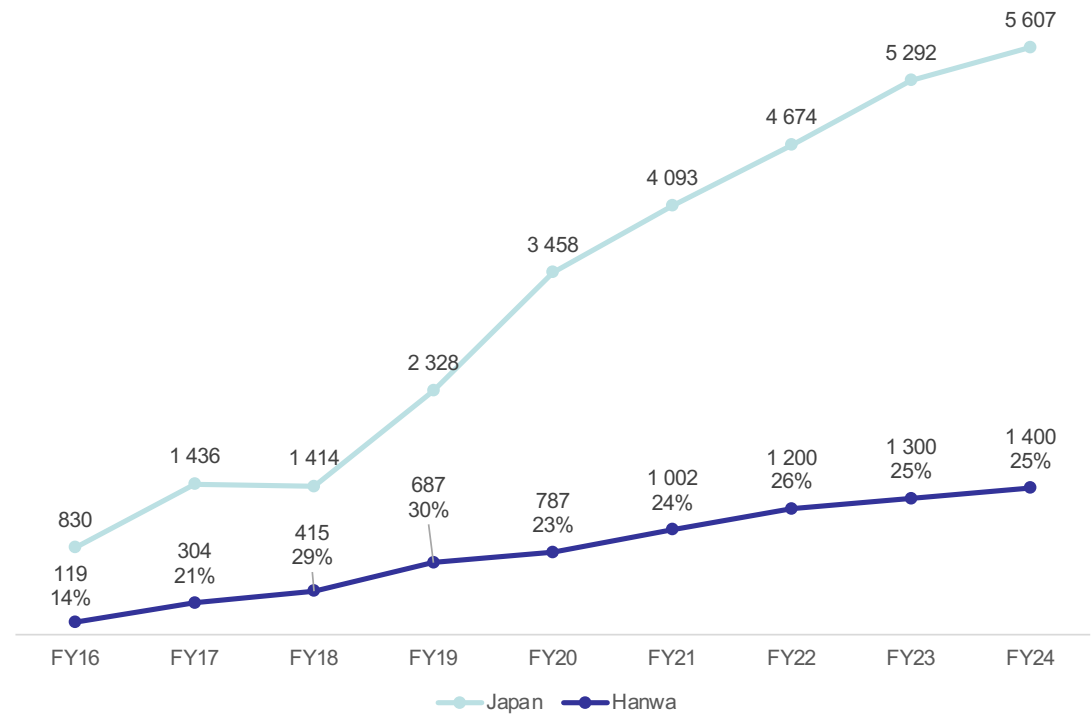


We have over 20% of shares of PKS import to Japan. (#1 PKS trader in Japan)

FY2021 PKS import(Thousand ton)



Japan PKS demand and our record(thousand ton)



Source : Ministry of Finance

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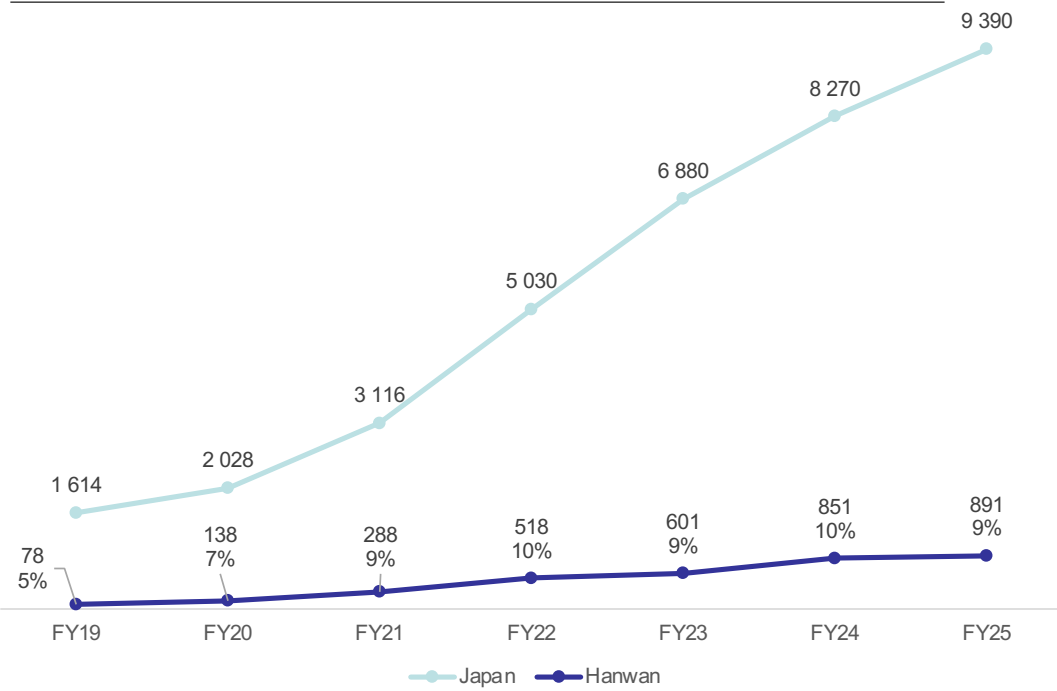


# Wood Pellet Record

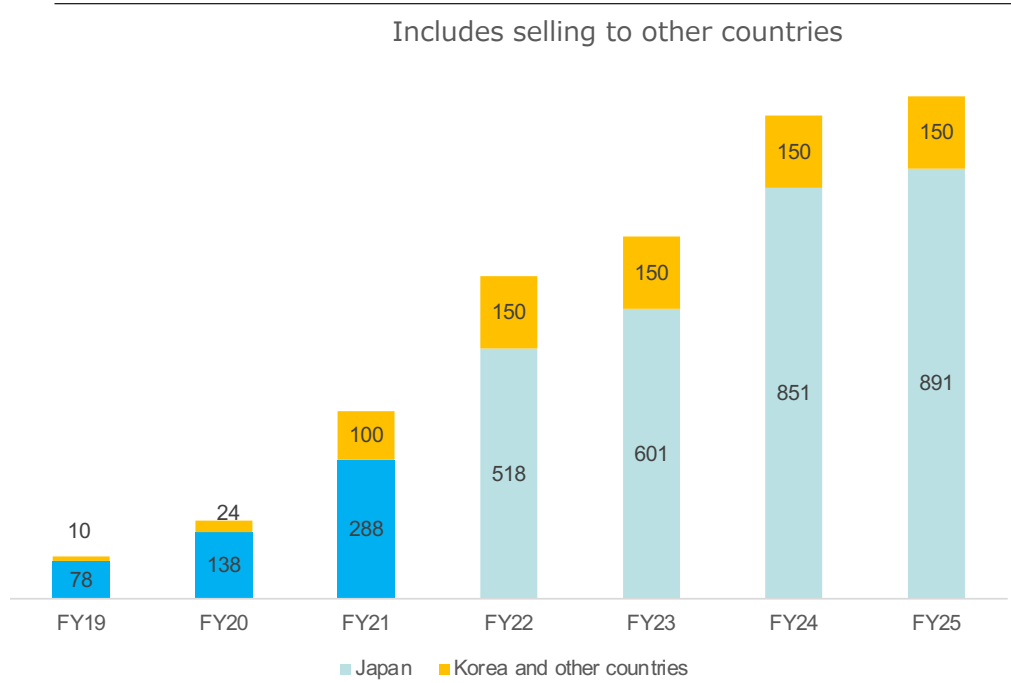


We are the only Japanese trader firm to sell to Korea as well, and we prospect to be #2 or #3 trader of wood pellet in future.

Japanese demand and our record(Thousand ton)



Hanwa's wood pellet record and prospect (Thousand ton/yr)



# Our Strength ③ Long-term Charter

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On May 20<sup>th</sup> 2019, Hanwa had vessel launching ceremony of MIDORI



## Vessel Detail

- ◇ Vessel Name : MV MIDORI
- ◇ Name Origin : MIDORI means green in Japanese which is a symbolic color of Hanwa Corporation. The vessel name itself contains our hope to become number one biomass trading company.
- ◇ Ship Flag : Panama
- ◇ Main Standard : Single Deck, DWT 16,500MT, Length 134m, Width 22.5m
- ◇ Charter Period : 10 years
- ◇ Virgin Voyage : September 2019

# Our Strength- ④ Two Ports Discharging

Company Outline

Products

Our Efforts  
PKS Pellet



Building a flexible delivery system as a number one PKS trader

海運プレス 2018年3月5日(月) 第三種郵便物認可

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## 38型バルカーでPKS輸送

■ 商船三井近海、1航海で過去最大の3万トン超

商船三井グループの近海船運航船社、商船三井近海(永田健一社長)はこのほど、3万8000重量トン型ハンディサイズ・バルカーでインドネシア/日本のアブラヤシ殻(PKS)輸送を行った。バイオオマース燃料のPKSの輸送は主に1万重量トン台の近海船で輸送されるが、今回はPKSの1航海の輸送量では過去最大となる3万トン超を輸送。日本のPKS輸入量が急増する中、商船三井近海は船型を大型化して競争力を高める。

今回輸送したPKSは阪和興業がインドネシアから輸入。タンジュンポント港で積んで佐伯と徳山で荷揚げし、イーレックスニューエナジー佐伯発電所向けを含む近隣のバイオオマース発電所で使用される。

ハンディサイズによるPKS輸送は、積地のマレーシア・インドネシアで入港できる港に限られるうえ、積地の貯蔵スペース不足などで荷役時間がかることなどが課題だったが、「タンジュンポントはハンディサイズが入港できる数少ない港の1つであり、積地間との連携を密にすることでスムーズな荷役を実現した」(商船三井近海輸入営業グループ)。

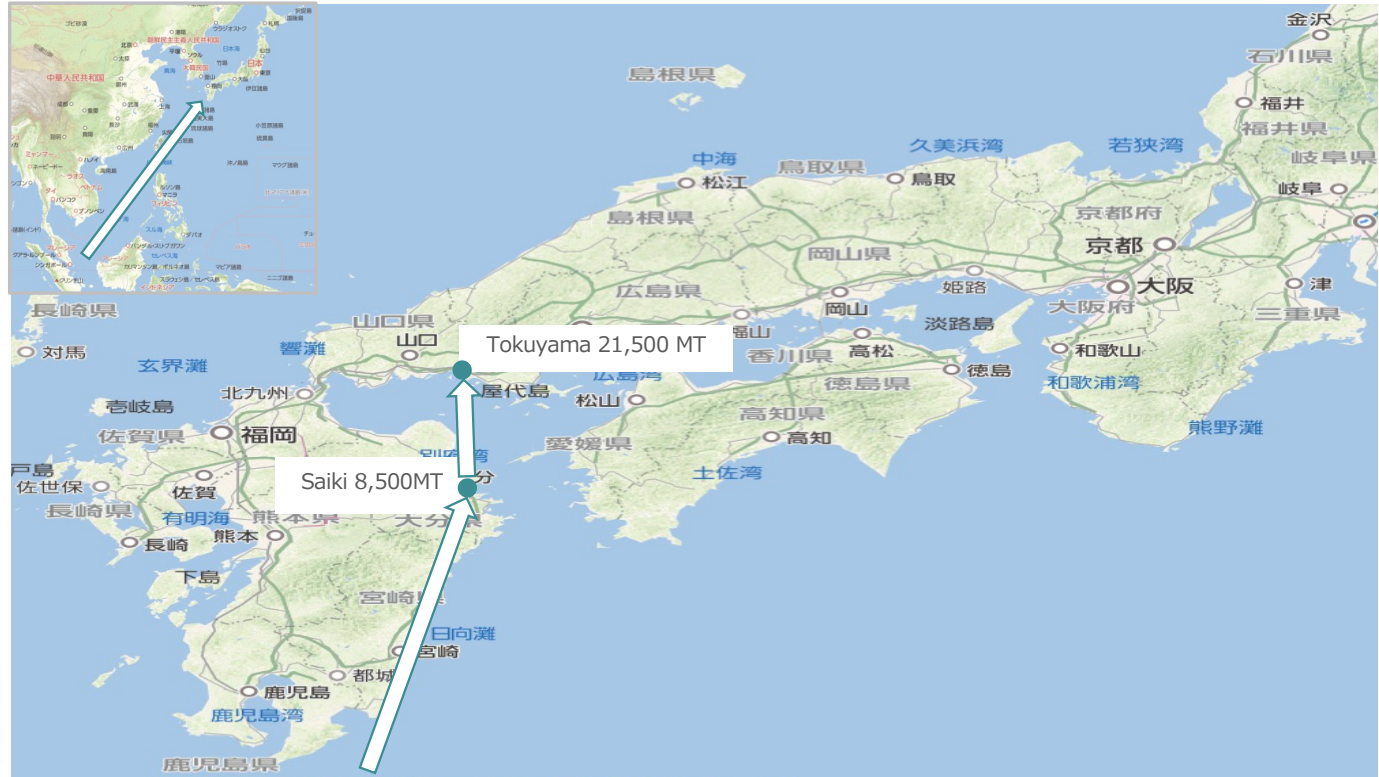
商船三井近海はこれまでPKS輸送に主力船型の1万3000重量トン型ツインデッカーを投入。引き続き同船型をPKS輸送の主力としていくが、タンジュンポント積みでは港湾のキャパシティを利用した大型バルカーによる輸送に、今後も鋭意対応して行く方針。ハンディサイズによる今回の輸送は5月に予定されている。

PKSはバイオオマース発電所の稼働が相次いでいることで輸入量が急増しており、2017年の輸入量は前年比1.75倍増の約140万トン。2020年には300万トン規模に達するとの試算もある。PKSの運賃は伸び悩んでいたが、「ドライバルク市況の上昇に伴う近海船のスポット用船料の上昇や、燃料油価格の上昇によりアジア出し日本向けのバルク貨物の足元の運賃は上昇傾向にあり、PKSも一服の上昇が見込まれる」(同)という。

近海船のインドネシア・マレーシア/日本航路は1ラウンドで40~55日を要するため、2020年に輸入量が300万トン規模に増加した場合、1万2000~1万3000重量トン型の近海船が現状からさらに15



積荷後の様子



~20隻が追加が必要になる。一方で今後数年の邦船社の近海船建造数は年間10隻前後にとどまると予想され、高齢船の自然減などを考慮すると、邦船社保有の近海船数は横ばいから減少基調で推移すると見られる。

商船三井近海は「PKSの輸送量増加で数年後に近海船の船腹不足が生じる可能性があるが、当社は大型船による輸送実績を積み上げて、荷主からの多様なニーズに対応していく準備がある」としている。「お客様のニーズにグループが連携し、「ひとつのMOL」で応えて行くOne MOLの合言葉のもとに、商船三井本体の不定期船部門や商船三井内航とも情報を共有し大手海運グループの総合力を生かしたハンディサイズでの輸送や、内航二次輸送を含めた幅広いサービスを提供する考え。

Source : The article from Kaiji Press, 3/5 2018

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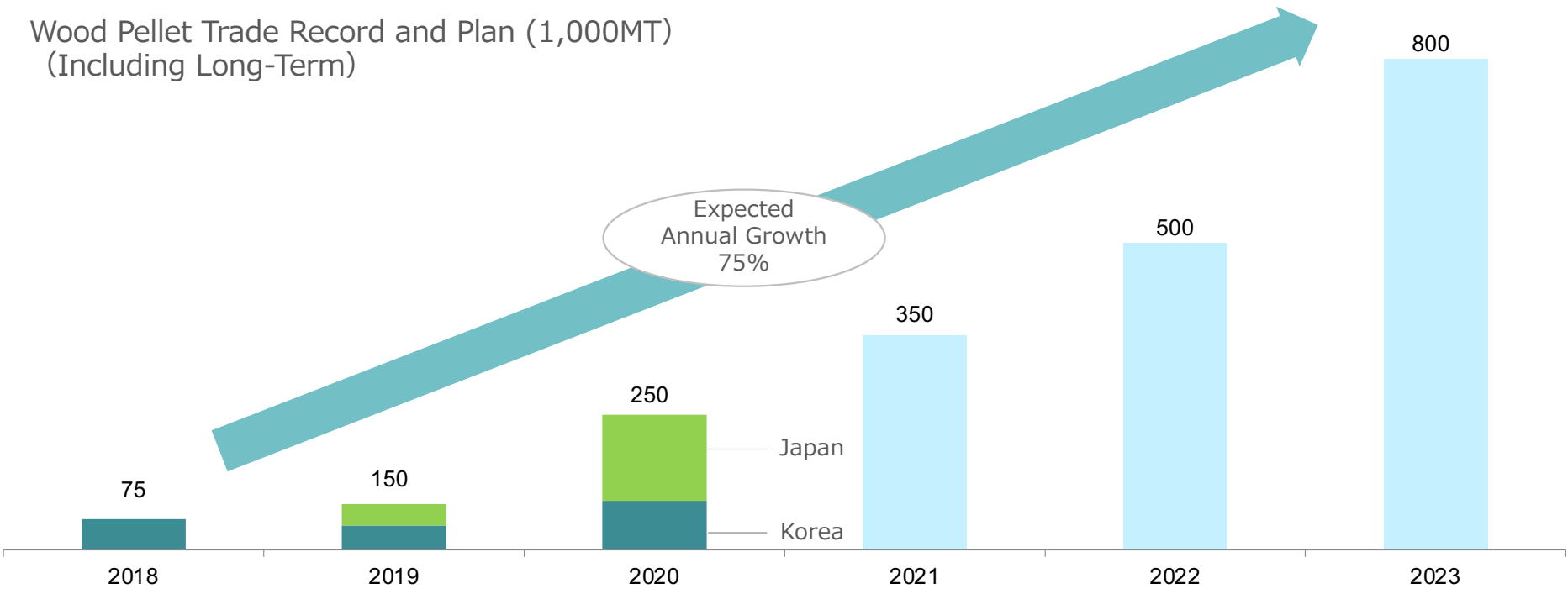
# Hanwa Wood Pellet Trade Record



Confidential



Wood Pellet Trade Record and Plan (1,000MT)  
(Including Long-Term)



# Special Container

Company  
Outline

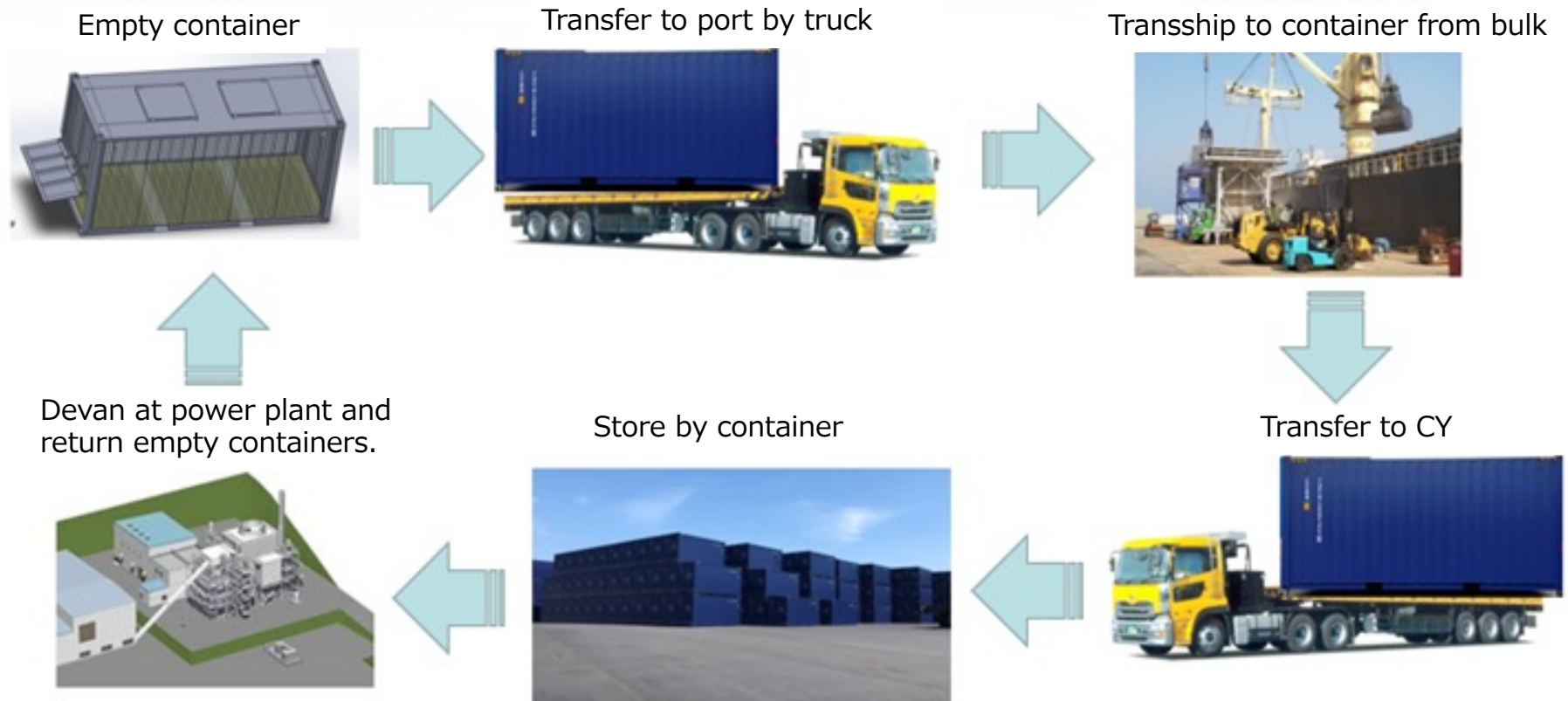
Products

Our Efforts  
PKS Pellet

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Transship from bulk to container. Can be used as mobile storage which is much cheaper than warehouse.



# Our Record

Company  
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Products

Our Efforts  
PKS Pellet

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Although there was no culture of storing wood pellets in containers, imports of special containers have begun with the increase in demand for wood pellets in Japan

## 600 special containers imported at Tokuyama Port



## Specification

**Shape** : Width2.438m × Length6.058m × Height2.896m、Weight2.5MT

**Pellet Volume** : 19MT~21MT/container

**Opening** : Rectangular in shape, top-opening mechanism

**Discharge** : However, employee safety is enhanced by making the discharge door stand on the side, rather than the front, and by making it openable and closable.

**Top plate** : Structure to prevent rainwater accumulation

**Number** : Container identification management is possible by marking each container with a number or symbol.

# Japan Coal Consumption

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Black pellet can contribute to decrease coal consumption, but also as a filler of hydrogen or ammonia.

#	Country	Yearly Coal Consumption (MMcf)	World Share	Cubic Feet Per Capita
1	<a href="#">China</a>	4,319,921,826,000	50.5 %	3,055.00
2	<a href="#">India</a>	966,288,692,600	11.3 %	729.54
3	<a href="#">United States</a>	731,071,000,000	8.5 %	2,263.27
4	<a href="#">Germany</a>	257,488,592,900	3.0 %	3,132.70
5	<a href="#">Russia</a>	230,392,143,100	2.7 %	1,585.90
6	<a href="#">Japan</a>	210,559,949,300	2.5 %	1,648.05
7	<a href="#">South Africa</a>	202,298,474,200	2.4 %	3,599.13
8	<a href="#">South Korea</a>	157,124,158,500	1.8 %	3,081.87
9	<a href="#">Poland</a>	148,799,901,400	1.7 %	3,916.90
10	<a href="#">Australia</a>	129,642,679,100	1.5 %	5,343.29

Adopting hydrogen and ammonia into sector will consume time and money.  
Black pellet can be a filler.

#	Sector	Carbon Neutral Policy
↓	1 Energy	Hydrogen/ ammonia
↓	2 Steel	Hydrogen/ ammonia
→	3 Cement	Carbon capture
↑	4 Food	Ammonia
↑	5 Chemical	Hydrogen

# Potential Demand of Black Pellet

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Currently Japan's total coal consumption is more than 100million tons.

Category		Example	
Power Generation (Steam Coal Alternative)	FIT	✓ Maximazing FIT %	
	Non FIT	Selling Electricity	✓ Replacement of coal
		Self Consumption (General industry)	✓ CSR
Steel Sector	<ul style="list-style-type: none"> <li>✓ Green steel</li> <li>✓ If want to sell to Europe, need to pay the carbon tax anyway.</li> </ul>		



# Our SNS Account (LINE)

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LINE ID @hk\_renewable

