Wood Pellet Production in Meiken Lamwood Corporation

IEA Joint Task 40 ／ ERIA workshop

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Auditorium, Tsukuba Central 1

National Institute of Advanced Industrial Science and Technology (AIST)

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Outline

1. Company Profile
2. Material flow by using byproducts of Laminated timber in Meiken
3. History of Wood Pellet Production and Investment
4. Production Flow of Wood Pellet
5. Sales
6. Quality of Wood Pellet and Development of Steam Boiler

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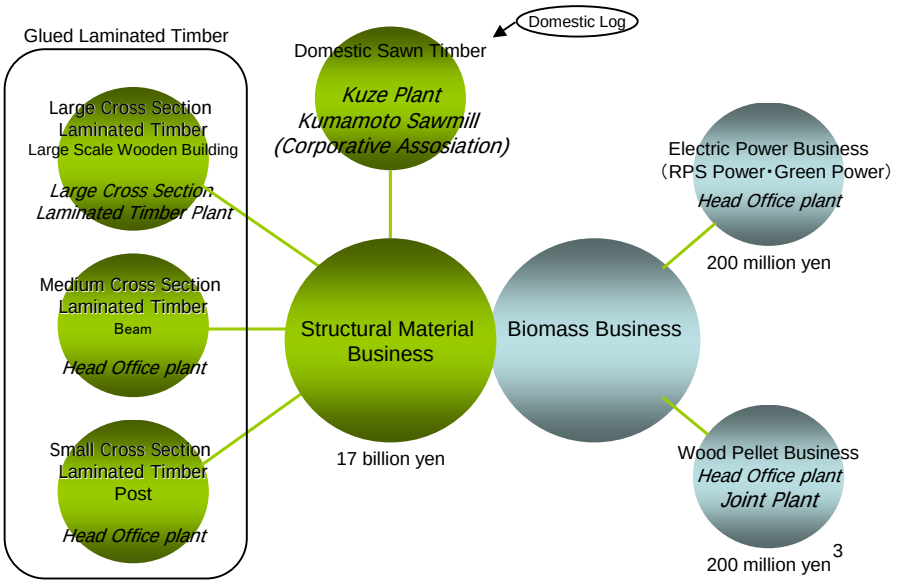
1-1. Overview of Business



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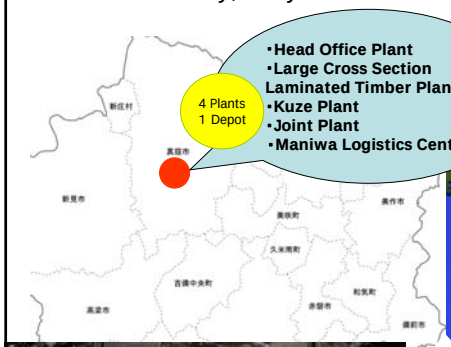
1-2. Business Location

Maniwa City, Okayama Pref.

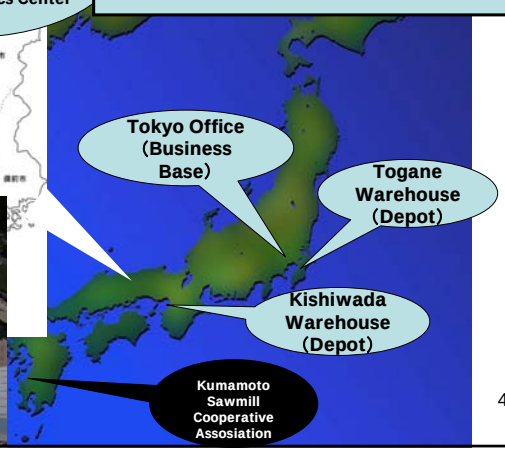


- Head Office Plant
- Large Cross Section Laminated Timber Plant
- Kuze Plant
- Joint Plant
- Maniwa Logistics Center

Plant **4 plants(+1)**
4 plants are in Maniwa City in Okayama
＊Plant-related in Kuma-county in Kumamoto

Business Base **2 Bases**
Maniwa City in Okayama
Cyuo District in Tokyo

Depot **3 Depots**
Maniwa City in Okayama
Kishiwada City in Osaka
Togane City in Chiba



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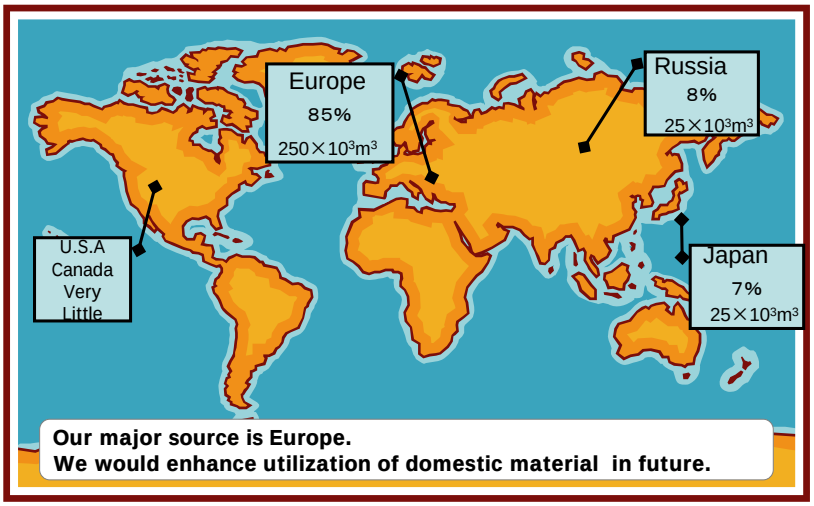
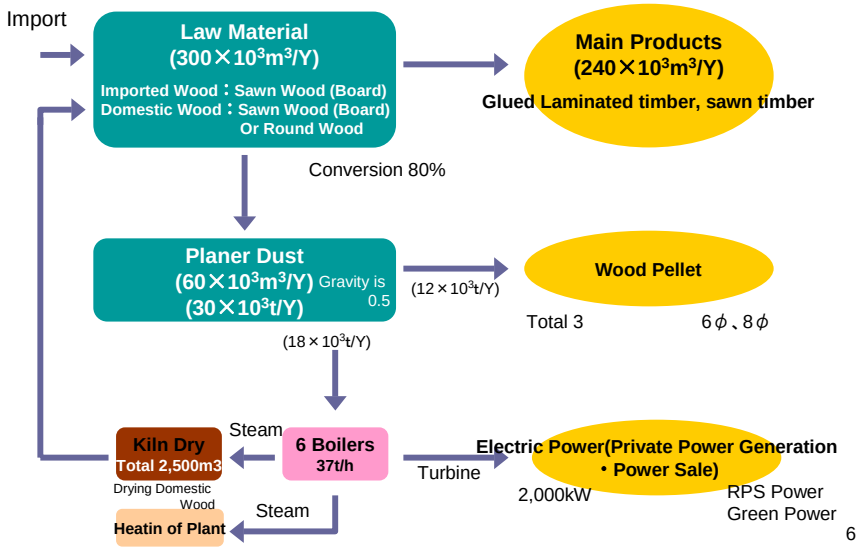
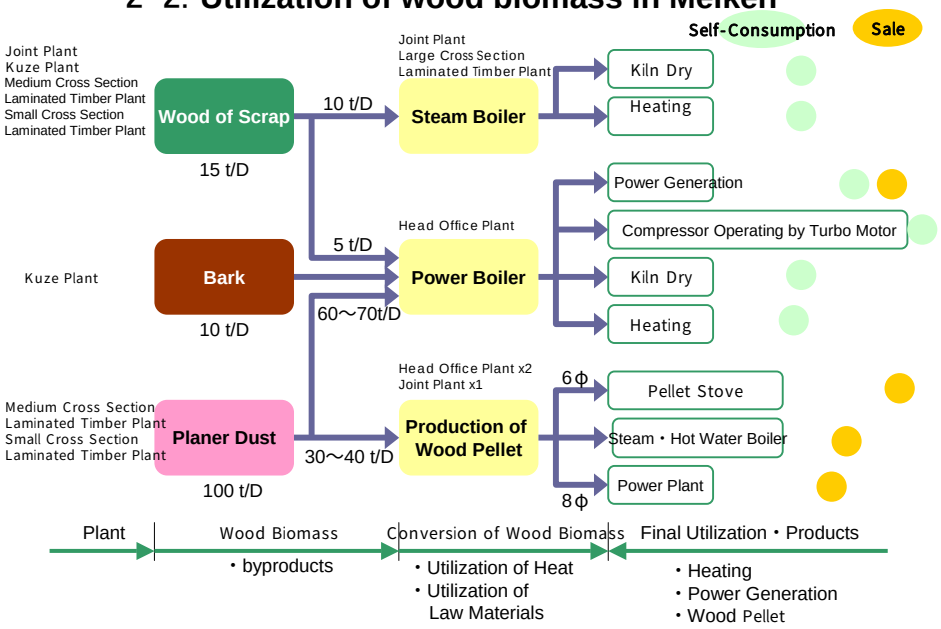
1-3. Source of Law Material



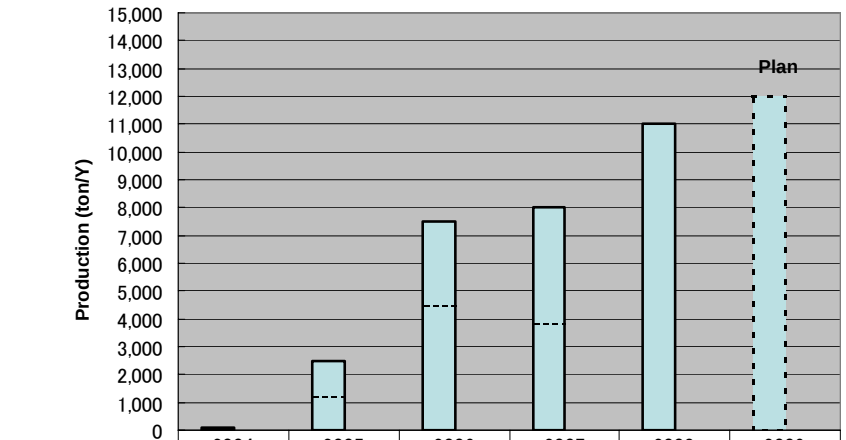
2−1. Material flow, Glued laminated timber and Wood Biomass in Meiken



2−2. Utilization of wood biomass in Meiken



3. Wood Pellet Production Volume



	2004	2005	2006	2007	2008	2009
Production(T/Y)	80	2,500	7,500	8,000	11,000	12,000
Capacity	No.1	No.2	No.3			
(Capacity)	6,000 ton/Y	6,000 ton/Y	8,000 ton/Y			

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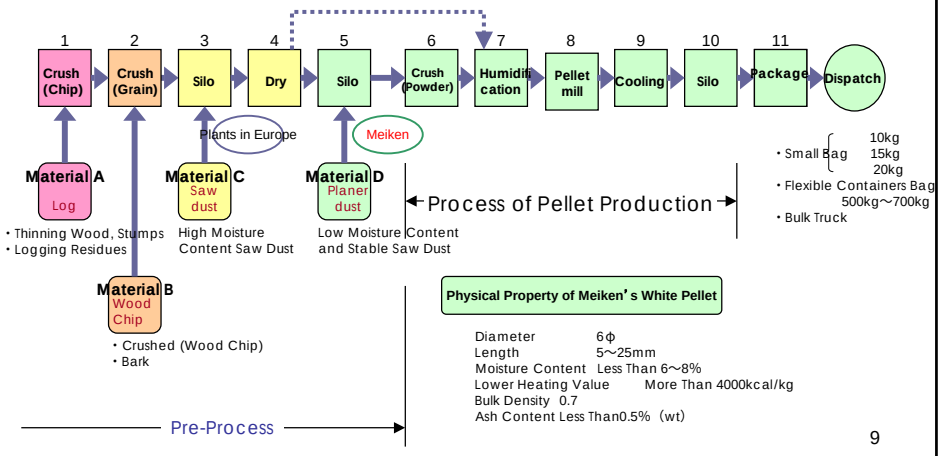
4−1. Sort of Wood Pellet and Flow of Pellet Plant

Sort of Wood Pellet

	Ash Content
a. White Pellet	0.3〜0.5wt%
b. Bark Pellet	2.0〜5.0wt%
c. Mixed（a＋b）Pellet	Depends on Mixed Ratio



Physical Property of Meiken's White Pellet

Diameter	6φ
Length	5〜25mm
Moisture Content	Less Than 6〜8%
Lower Heating Value	More Than 4000kcal/kg
Bulk Density	0.7
Ash Content	Less Than0.5%（wt）

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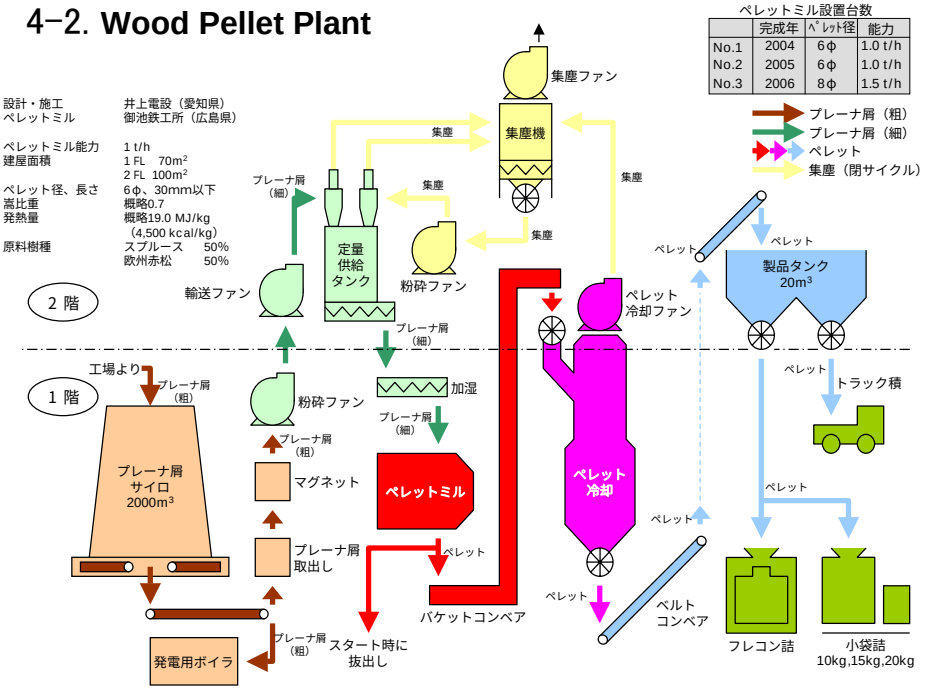
4−2. Wood Pellet Plant

設計・施工	井上電設（愛知県）
ペレットミル	御池鉄工所（広島県）
ペレットミル能力	1 t/h
建屋面積	1 FL 70m²
	2 FL 100m²
ペレット径、長さ	6φ、30mm以下
嵩比重	概略0.7
発熱量	概略19.0 MJ/kg（4,500 kcal/kg）
原料樹種	スプルース 50%
	欧州赤松 50%

ペレットミル設置台数

	完成年	ﾍﾟﾚｯﾄ径	能力
No.1	2004	6φ	1.0 t/h
No.2	2005	6φ	1.0 t/h
No.3	2006	8φ	1.5 t/h



5. Sales

Sales ・・・domestic Power Plant } 60%
Hot Water Boiler
Steam Boiler All seasons
Pellet Stove 25% Winter time
Green House 15%

Price・・・ 25yen/kg big bag（1m^3） Flexible Container bag
-30yen/kg small bag（10～20kg）

・・・ delivery cost 3 yen/kg (big bag, 100km)
20-30 yen/kg (small bag)

CO2 reduction projects from private company

700kWth, process steam

1ton/h ,	7,000hr/y
Pellet comsumption	1,000t/y
CO2reduction	1,000tco2/y

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6. Conclusion

Quality of Wood Pellet

・Moisture control is a key issue for pellet production
・Suitable material for pellets(sawmill byproducts) are not abundant in Japan
・Green woods(thinning woods) are wet, but demolition wood?
・Pellets need quality criteria, but no regulation or national standard

Development of Pellet Steam Boiler

・There are just one products(<1MWth pellet steam boiler)
・Target is in Boiler demands for industry

For future

・How can we collect raw material for next?
・We have rich forest resource but we can not use for forest industry…..

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