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1967. 2. 23

Kanegafuchi Chemical ---- Kanechlor

1. Chlorinated biphenyl

Plant ---- located at Takasago, Hyogo Pref

Reaction units ---- 3

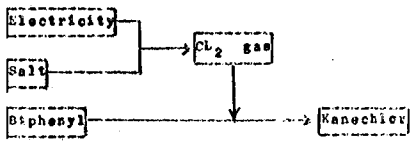
-- Production capacity ---- 300t/M
-(24 hrs /day operations for 30 days)
-now operating at capacity

Operation ratio ----	Production in terms of Kanechlor
67% for 4/65 - 9/65	1,206t
83% for 10/65 - 3/66	1,494t
117% for 4/66 - 9/66	2,114t

2. Kanechlor (Excl. TCB)

Production ----	1,806t(218t/M)	for 4/65 -	9/65
	1,573t(262t/M)	for 10/65 -	3/66
	2,209t(368t/M)	for 4/66 -	9/66
	2,190t(365t/M)	for 10/66 -	3/67 (schedule)
Sales ----------	1,363t(227t/M)	for 4/65 -	9/65
3,844t	1,666t(278t/M)	for 10/65 -	3/66
	2,178t(363t/M)	for 4/66 -	9/66

Process ---



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Informations on Kanegafuchi

1. Kanegafuchi is considered to be very good at marketing Kanechlor specially to the electrical industry.

2. They contacted almost all of capacitor and transformer manufacturers, and know well about this business. But they don't contact very small customers recently.

3. They provided good technical service in the electrical industry, but a little service in heat transfer fluids and PLS markets.

4. They don't offer any other services except technical service to customers. And they provide few technical service these days because they have almost no trouble.

5. They are selling their products through agents, except special transformer askarels which are specified by each customer, and sold directly.

6. They make deliveries promptly.

7. Their sales organization is established. Salesman in charge of Kanechlor are 2 at Osaka, and 1 at Tokyo, and they are not so active in selling. They don't contact the customers so often, because they have few troubles. They have strong technical relations with major transformer manufacturers, but not so close relations with capacitor manufacturers. All customers are afraid of displeasing Kanegafuchi, though Kanegafuchi exerts strong pressure on customers, specially small ones.

8. They are active in selling Kanechlor in heat transfer and PLS markets, too. They wish dealers to sell much more specially in PLS market in future. We don't hear so much about them in these markets.

9. They support their business with good application research and analytical facilities in the electric field.

10. They don't have continuing research programs in Kanechlor, and they are not trying to develop new products.

11. They have become complacent because of no competition.

12. They started commercial production of Kanechlor in 1954.

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13. The quality of Kanechlor is as well as Arcclor
They have almost no troubles.

14. Their customer prices are different for different markets.

	1968	1970-1971 (forecast)
Condenser insulator	¥170-180/kg	155-160/kg
Transformer askarel	¥200-220/kg	175-185/kg
PLS	¥215-225/kg	185-195/kg

15. As for raw materials, they have chlorine, and they get biphenyl from Yawata Chemical at about ¥130/kg.

16. Their manufacturing cost is considered to be about ¥135-145/kg. So their selling price could be down to ¥150-160/kg.

17. Kanegafuchi's strengths:

Raw materials ----- They have chlorine.
They are producing trichlorobenzene.

Manufacturing cost ----- Can be cheap because M & E depreciation is finished.

Marketing ----- Established position

Customer relations ----- Strong and close relations for a long term, specially with transformer manufecturers.

Quality ----- Kanechlor has no trouble on qualities, and customers use it with great satisfaction.

18. Kanegafuchi's weaknesses:

Marketing ----- They don't have so much knowledges, product application technology and know-how in PLS, fluids and heat transfer markets -- also very little application research.

Customer relations ----- They are bluffing and displeasing many small customers.

Raw materials ----- They do not produce biphenyl.

Complacent ----- They have no competition.

Operating at capacity -----Some customers having trouble with delivery.

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MMK -- AROCLOR

1. MMK's strengths:

Raw materials ----- MMK has chlorine, and biphenyl.

Manufacturing cost ----- MC's superior process which minimize the cost will be lower than Kanegafuchi.

Marketing ----- MC's many and long-term experiences in various markets.
PLS and fluids markets are Kanegafuchi's weak points.

Technical capability ----- MC's superior technical services, development capabilities, product technology and a lot of know-how.

Product line ----- Could use terphenyl to make HB-40 for sale as plasticiser.

Customer relations ----- Close relations with customers of Mitsubishi groups. Many customers know about Aroclor, and have tested it.

Timing ----- Kanegafuchi has no excess capacity.

Two sources of supply -----Many customers would like to see two sources in Japan.

Immediate product availability
for development of business ----- Can import temporarily from Monsanto & get started immediately.

2. MMK's weaknesses:

Marketing ----- Kanegafuchi's established position.
Markets for Aroclors are new for MMK.

Customer relations ----- Kanegafuchi's strong and close relations specially with transformer manufacturers.

Technical service ----- Aroclor is completely new business for MMK. Requires much training for laboratory and MTS people.

Manufacturing ----- New technology -- Products manufactured to very difficult electrical specifications. Requires completely new laboratory facilities.

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Market development ----- Will require development of new markets such as heat transfer, plasticizers, fluids -- this will be slow and expensive.

Raw materials ----- We have no TCB.

Royality to Monsanto ----- Will increase cost.

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Biphenyl situation

Producer ----- Yawata Chemical Ind. Co., only

Process ----- Synthesis from benzene

Production capacity ----- 210t/M (No.1 80t/M)
(No.2 130t/M)

Production ----- 220 - 230t/M

Sales -----		Uses
	150 - 160t/M	Kanechlor
	15 - 20	Therm S-300
	40 - 50	Exports to China

Uses ----- They have a new and large market recently. Maybe resin?

Expansion ----- decided ? (they will shut No. 1 line and build a larger unit)

Price ----- ¥130.-/kg

They will not sell biphenyl cheaper to Kanegafuchi. They seem to sell biphenyl almost at the same price in future.

Sample ----- Available to MMK

Triphenyl situation

Producer ----- Yawata Chemical Ind. Co., only

Process ----- by-products of biphenyl

Production --- 10% of biphenyl amount

Price -------- ¥130.-/kg

Tri-chloro benzene situation

Producer	Capacity	Production
Asahi Chemical (Kyoto)	100t/M	40-50t/M
Sanko Chemical (Kyushu)	"	"
Teiyo Chemical (Osaka)	"	"
Kanegafuchi Chem.	"	75

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Price ----- ¥80 - 90/kg (solvent grade)

Process --- Synthesis from BHC

Grade ----- Electrical grade is not readily available. May be available from Asahi Chemical with 100 ppm water which MMK must remove. Final cost about ¥100/kg.

Note: Kanegafuchi buys BHC from Mitsubishi Kasei.

Mitsubishi Kasei buys trichlorobenzene, 25t/M from Kanegafuchi at the price of ¥55/kg.

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