MITSUBISHI MONSANTO CHEMICAL COMPANY

FROM LOCATION : Tokyo

DATE : January 6, 1970

SUBJECT : PYDRAUL-JAPAN

REFERENCE :

cc: Messrs.
T. Nakata-Tokyo
Y. Fukuei- "

TO : Dr. J. R. Durland
Tokyo

I am sending you a briefed package of information on the PYDRAUL market in Japan to supplement our discussion on this subject between you, Mr. Nakata and myself a few weeks ago as attached.

Your examination and comments will be highly appreciated.

And, in view of the increasing public concern on water pollution by PCB in the States, (cf: Quarterly Report-July, August, September-of M.D.) we would like to know the Organic Division's comments on whether or not the business strategy of PYDRAUL products will be revised.

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Market of Uninflammable Functional Fluid (Unit: 1,000kl)

(1) Size of Market

Type of Fluid	Present (1969)	After 5-year (1974)
Water glycol	2.0	3.3 - 4.7
Synthetic (*)	0.5	1.7 - 2.3
Total	2.5	5.0 - 7.0

note(*) Ratio of Phosphates/Pydraul at present is approximately 4/1, however, it would be changed to 1/1 in five years if our promotional efforts in the market development for Pydraul products can be made successfully.

(2) Briefing on the hydraulic equipment industry in Japan.

The Hydraulic Industry Institute of Japan made an intensive study on the market for hydraulic equipment in Japan.

a) The growth rate of the hydraulic industry in 1972 in comparison with 1967 is, as shown below, 190%.

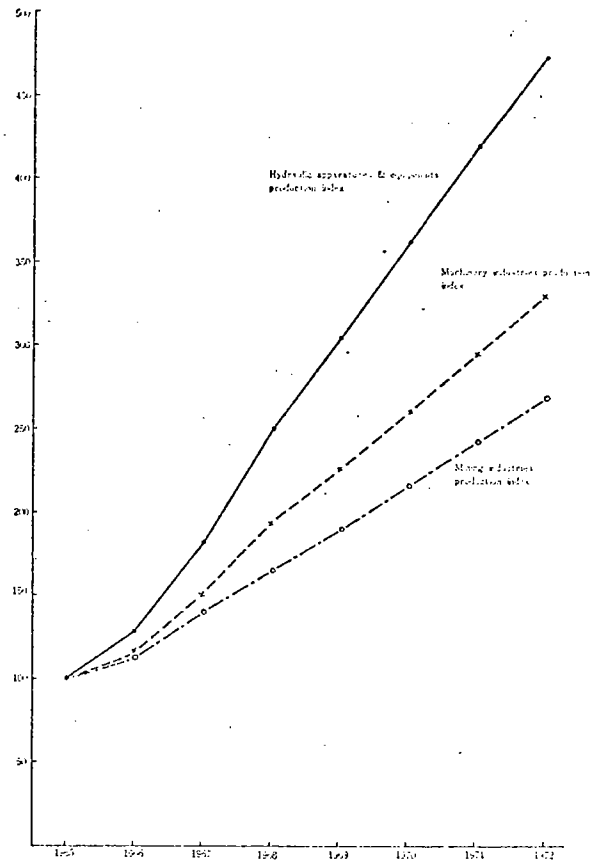
Civil engineering, construction, mining machineries	217%
Industrial wagon	207
Agricultural equipment	237
Special wagon	203
General machines	167
Metal, primary product mfg, machines	124
Metal, secondary processing machines	149
Plastics processing machines	181
Ships	161
Total	190%

b) Hydraulic apparatus and equipment production index compared with other industries' production index

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Index of production figure compared



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(3) The following Mr. T. Ishijima's information, cited from S.M./JRD: 4/14/'69, will also be useful for your understanding of PYDRAUL market in Japan.

a) Sales estimation of fire-resistant hydraulic fluids

(Unit: K litre)

	1967	1968	1969	1970	1971	1972	1973
Pydraul	38	86	200	360	560	800	1,040
Other synthetics	160	270	360	440	560	680	840
Water-glycol	1,200	1,500	1,800	2,100	2,300	2,500	2,700
Emulsion	600	680	800	920	1,040	1,200	1,360
Total	1,998	2,536	3,160	3,820	4,460	5,180	5,940

b) Sales estimation of Pydraul (Unit: t)

	1967	1968	1969	1970	1971	1972	1973
Pydraul	43	96	220	400	630	900	1,170
Aroclor content	22	46	110	200	315	450	585
Sales amount (M¥, net MMK)			60	100	150	210	260

c) Status of synthetic hydraulic fluids competitors

Manufacturer	Trade name	Market price	Note
(Imports) Stauffer (Ando Jimusho)	Cellulube	520 - 530¥/litre	Occupy 90% share of synthetics, to be produced domestically in 1 year
Mobil	Pyroguard	470 - 480¥/litre	
Shell	SFR	470 - 480¥/litre	
(Domestics)			
Idemitsu	Fireproof	380 - 450¥/litre	began practical activities in 1969

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