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| 1 | 2 | 3 |
|---|---|---|
| 339 (47) | Gas Filter<br>Vertical, Cylindrical<br>Cap. 400 M³/H Press, 150 kg/Cm2<br>India. 0.40 M Out-dia 0.60 M. H.4.3M<br>Packed active Cool 300 K.G.<br>Body: Special Steel<br>Note: For Desulphurizing | 8,000 |
| 339 (48) | Gas Filter<br>Vertical cylindrical<br>Cap. 400 M3/H Press. 150 K.G/Cm2<br>In-dia 0.40 M Out-dia. 0.60 M H. 4.30 M<br>Packed active Coal 300 K.G.<br>Body: Special Steel<br>Note: For Desulphurizing | 8,000 |
| 339 (49) | Receiver<br>Vertical Cylindrical<br>Cap. 1.2M3 India 0.20 M Outdia. 0.33M<br>H.4.30 M Press 150 K.G/Cm2<br>Body: Special Steel<br>Note: For Methanol | 3,000 |
| 339 (50) | Reaction tower<br>Vertical Cylindrical<br>Normal Press. 150 kg/Cm2<br>Reaction temp 250-300°C<br>Packed CuO 200 Kg<br>In-dia. 0.40 M Out-dia. 0.60 M H.4.30 M<br>Outlet O.D 32 M.M. Inlet O.D. 50 M.M.<br>Body: Special Steel<br>Note: Electrical inner Heating<br>Electric Heater<br>Resistance Furnace<br>25 K.W. 1 Phase 220 V 500° C | 8,000 |

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| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| kg/Cm2<br>60 M. H.4.3M<br>.G. | 8,000 | L 450<br>W 100<br>H 100 | Kure Navy<br>Arsenal<br>Japan | 1934 |
| K.G/Cm2<br>.60 M H. 4.30 M<br>.G. | 8,000 | L 450<br>W 100<br>H 100 | Kure Navy<br>Arsenal<br>Japan | 1934 |
| Outdia. 0.33M<br>m2 | 3,000 | L 450<br>W 70<br>H 70 | Kure Navy<br>Arsenal<br>Japan | 1938 |
| 0.60 M H.4.30 M<br>0.D. 50 M.M.<br><br>Heating<br><br>500° C | 8,000 | L 450<br>W 100<br>H 100 | Kure Navy<br>Arsenal<br>Japan | 1938 |

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| 1 | 2 | 3 | 4 |
|---|---|---|---|
| 339 (51) | Gas Filter<br>Vertical Cylindrical<br>Cap. 400 M3/H Press 150 kg/Cm2<br>Packed active coal 100 kg<br>In-dia. 0.20 M Out-dia. 0.33 M H 4.30 M<br>Body: Special Steel<br>Note: For Desulphurizing | 3,000 | L 450<br>W 40<br>H 40 |
| 339 (52) | Cooler<br>Shell and Coils<br>Cooling Surface 19 M2<br>Normal Temp, Unknown<br>Normal Press. Usual<br>Tube: Steel In-let 1⅛" Out-let 1⅛"<br>Shell: Steel, Inlet 1⅛" Out-let 3"<br>Dia. 1.20 M H.2.00 M<br>Note: For Cooling Gas | 1,500 | L 200<br>W 120<br>H 120 |
| 339 (53) | Gas Filter<br>Vertical Cylindrical<br>Cap. 400 M3/H Press 150 kg/Cm2<br>Packed Active Coal 300 Kg.<br>In-dia. 0.40 M Out-dia 0.60 M H.4.30 M<br>Body: Special Steel<br>Note: For Desulpturizing | 8,000 | L 450<br>W 100<br>H 100 |
| 339 (54) | Gas Filter<br>Vertical Cylindrical<br>Cap. 400 M3/H Press, 150 kg/Cm2<br>Packed active coal 300 kg<br>In-dia 0.40 M Out-dia. 0.60 M H.4.30 M<br>Body: Special Steel<br>Note: For Desulphurizing | 8,000 | L 450<br>W 100<br>H 100 |

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| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| 150 kg/Cm2<br>00 kg<br>e. 0.33 M H 4.30 M<br>ing | 3,000 | L 450<br>W 40<br>H 40 | Kure Navy<br>Arsenal<br>Japan | 1938 |
| 2 | 1,500 | L 200<br>W 120<br>H 120 | Kobe Seiko<br>Japan | 1938 |
| " Out-let 1⅛"<br>⅛" Out-let 3" | | | | |
| 150 kg/Cm2<br>00 Kg.<br>11a 0.60 M H.4.30 M<br>ing | 8,000 | L 450<br>W 100<br>H 100 | Kure Navy<br>Arsenal<br>Japan | 1934 |
| 150 kg/Cm2<br>00 kg<br>a. 0.60 M H.4.30 M<br>zing | 8,000 | L 450<br>W 100<br>H 100 | Kure Navy<br>Arsenal<br>Japan | 1934 |

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| 1 | 2 | 3 |
|---|---|---|
| 339 (55) | Reaction tower<br>Vertical Cylindrical<br>Normal temp 250 - 300°C<br>Normal Press, 150 kg/Cm2<br>In-dia 0.315 M Rise In-let 32 M.M.(O.D.)<br>R. 4.20 M Out-let 32 M.M. (O.D.)<br>2 Passes Packed CuO 35 kg<br>Body: Forged Special Steel<br>1.5 M.M. Copper Plate Lining<br>Electrical Heater<br>Internal heater<br>15 K.W. 220 V 1 phase<br>External heater<br>50 K.W. 220V. 1 phase | 7,000 |
| 339 (56) | Receiver<br>Vertical Cylindrical<br>Cap. 0.17 M3 in-dia 0.365M<br>out-dia 0.55 M H.1.70 M<br>Press. 150 kg/Cm2<br>Body: Special Steel Forged<br>Note: For Methanol Receiver | 2,500 |
| 339 (57) | Cooler<br>Vertical Cylindrical tank & coils<br>Cooling Surface 2.5 M2<br>Normal temp. unknown<br>Normal Press. usual<br>Coil: Copper in-let 1" out-let 1"<br>Shell: Steel, inlet 2" outlet 1½"<br>Dia. 1.10 M H. 1.50 M<br>Note: For Cooling gas | 1,500 |

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| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| | 7,000 | L 450<br>W 100<br>H 100 | Kure Navy Arsenal Japan | 1934 |
| 2<br>let 32 M.M.(O.D.)<br>M. (O.D.)<br>kg<br>eel<br>ining | | | | |
| 65M | 2,500 | L 200<br>W 100<br>H 100 | Kobe Seiko Japan | 1934 |
| ged<br>iver | | | | |
| nk & coils | 1,500 | L 150<br>W 130<br>H 130 | Kobe Seiko Japan | 1934 |
| out-let 1"<br>outlet 1½" | | | | |

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| 1 | 2 | 3 | 4 |
|---|---|---|---|
| 339 (58) | Reaction tower<br>Vertical Cylindrical<br>Normal temp, 250 - 300° C<br>Normal Press 150 kg/Cm2<br>India 0.315 M H. 4.20 M<br>Riser, Inlet ~~3.2~~ 32 M.M. (O.D.) Outlet 32 m.m. (O.D.)<br>2 Passes. Packed CuO 35 Kg.<br>Body: Special Steel Forged<br>1.5 m.m. Copper plate Lining<br>Electrical Heater<br>Internal Heater<br>15 K.W. 220V 1 phase<br>External heater<br>50 Kw 220 V 1 phase | 7,000 | L<br>W<br>H |
| 339 (59) | Receiver<br>Vertical cylindrical<br>Cap. 0.17 m3 India 0.365 m<br>Outdia 0.55m H. 1.70 m<br>Press. 1.50 kg/Cm2<br>Body: Special Steel forged<br>Note: For Methanol | 2,500 | L<br>W<br>H |
| 339 (60) | Cooler<br>Vertical Cylindrical tank & coils<br>Cooling surface 2.5 m2<br>Normal temp. unknown<br>Normal press, usual<br>Coil: Copper tube inlet 1" outlet 1"<br>Shell, Steel inlet 2" outlet 1½"<br>Dia 1.10 M H.1.50 M<br>Note: For cooling gas | 1,500 | L<br>W<br>H |

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| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| | 7,000 | L 450<br>W 100<br>H 100 | Kure Navy<br>Arsenal<br>Japan | 1934 |
| D.) Outlet 32 m.m. (O.D.)<br>ge.<br>ed<br>ning | | | | |
| m | 2,500 | L 200<br>W 100<br>H 100 | Kobe Seiko<br>Japan | 1934 |
| ged | | | | |
| nk & coils | 1,500 | L 150<br>W 130<br>H 130 | Kobe Seiko<br>Japan | 1934 |
| 1" outlet 1"<br>outlet 1⅛" | | | | |

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| 1 | 2 | 3 |
|---|---|---|
| 339 (61) | Reaction tower<br>Vertical cylindrical<br>Normal temp. 250 - 300°C<br>Normal Press 150 kg/Cm2<br>India 0.315 m H. 4.20 m<br>Riser: inlet 32 m.m.(O.D)<br>Outlet 32 m.m. (O.D.)<br>2 Passes. Packed CuO. 35 kg<br>Body: Special Steel Forged<br>1.5 m.m. Copper plate Lining<br>Electrical Heater<br>Internal heater<br>15 K.W. 220V. 1 phase<br>External heater<br>50 K.W. 220V. 1 phase 550°C | 7,000 |
| 339 (62) | Receiver<br>Vertical cylindrical<br>Cap. 0.17 m³ India 0.365 m<br>Outdia 0.55 m H.1.70 m<br>Press 150 kg/Cm2<br>Body: Steel Plate Forged<br>Note: For Methenol | 2,500 |
| 339 (63) | Cooler<br>Vertical cylindrical tank & coils<br>Cooling Surface 2.5 m2<br>Normal temp. unknown<br>Normal Press. usual<br>Coils: Copper, inlet 1" outlet 1"<br>Shell: Steel, inlet 2" outlet 1½"<br>Dia 1.10 m H. 1.50 m.<br>Note: For Cooling gas. | 1,500 |

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| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| | 7,000 | L 450<br>W 100<br>H 100 | Kure Navy Arsenal Japan | 1934 |
| kg<br>ad<br>ning | | | | |
| 00c | | | | |
| | 2,500 | L 200<br>W 100<br>H 100 | Kobe Seiko Japan | 1934 |
| m | | | | |
| k & coils | 1,500 | L 150<br>W 130<br>H 130 | Kobe Seiko Japan | 1934 |
| outlet 1"<br>outlet 1½" | | | | |

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| 1 | 2 | 3 |
|---|---|---|
| 339 (64) | Reaction Tower<br>Vertical cylindrical<br>Normal temp. 250 - 300°C<br>Normal Press. 150 kg/Cm2<br>India 0.315 m H.4.20 m<br>Riser: Inlet 32m.m.(O.D)<br>Outlet 32 m.m. (O.D.)<br>2 Passes. packed CuO, 35 kg<br>Body: Special Steel Forged<br>1.5 m.m. Copper plate Lining<br>Electrical Heater<br>Internal heater<br>15 K.W. 220V. 1 phase<br>External Heater<br>50 K.W. 220V. 1 Phase 550°C | 7,000 |
| 339 (65) | Receiver<br>Vertical cylindrical<br>Cap. 0.17 m3 India 0.365 m<br>Outdia 0.55 m H. 1.70 m<br>Press. 150 kg/Cm2<br>Body: Steel plate Forged<br>Note: For methanol | 2,500 |
| 339 (66) | Cooler<br>Vertical cylindrical tank & coils<br>Cooling Surface 2.5 m2<br>Normal Press usual<br>Normal temp. unknown<br>Coils: Copper inlet 1" outlet 1½"<br>Dia. 1.10 m H, 1.50 m<br>Note: For cooling gas.<br>→ Shell: steel inlet 2" outlet ½" | 1,500 |

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| 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| 00°C<br>/Cm2<br>0 m<br>0.D)<br>)<br>, 35 kg<br>Forged<br>e Lining<br><br>ase<br><br>ase 550°C | 7,000 | L 450<br>W 100<br>H 100 | Kure Navy<br>Arsenal<br>Japan | 1934 |
| .365 m<br>0 m<br><br>rged | 2,500 | L 200<br>W 100<br>H 100 | Kobe Seiko<br>Japan | 1934 |
| tank & coils<br>m2<br><br>1" outlet 1⅛"<br>m<br>s.<br>outlet ½" | 1,500 | L 150<br>W 130<br>H 130 | Kobe Seiko<br>Japan | 1934 |

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| 1 | 2 | 3 |
|---|---|---|
| 339 (67) | Crane<br>Overhead travelled<br>Hand operated<br>Max. Load, 10 Tons, lift 8 M<br>Span 6.8 m Length of Rail 24 m | 4,000 |
| 339 (68) | Induction Regulator<br>Oil immersed Self cooling<br>Hand operated<br>Cap. 15 K.V.A. 1 phase<br>P.V. 220V. S.V.220V<br>Note: For Regulating Reaction Tower Temp. | 450 |
| 339 (69) | Induction Regulator<br>Oil immersed Self cooling<br>Hand operated<br>Cap. 15 K.V.A. 1 phase<br>P.V. 220V. S.V. ±220 V.<br>Note: For Regulating Reaction Tower temp. | 450 |
| 339 (70) | Induction regulator<br>Oil immersed, selfcooling<br>Hand operated<br>Cap. 15 K.V.A. 1 phase<br>P.V. 220V. S.V. ±220 V<br>Note: For regulating reaction<br>tower temp. | 450 |
| 339 (71) | Induction regulator<br>Oil immersed selfcooling<br>Hand operated<br>Cap. 15 KVA 1 phase<br>PV. 220V. S.V. ±220 V.<br>Note: For regulating reaction tower temp. | 450 |

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| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| | 4,000 | L 750<br>W 250<br>H 130 | Kobukuro<br>Japan | 1934 |
| M<br>24 m | | | | |
| | 450 | L 60<br>W 75<br>H 150 | Shibaura<br>Japan | 1934 |
| tion | | | | |
| ng | 450 | L 60<br>W 75<br>H 150 | Shibaura<br>Japan | 1934 |
| .<br>action Tower temp. | | | | |
| ng | 450 | L 60<br>W 75<br>H 150 | Shibaura<br>Japan | 1934 |
| tion | | | | |
| ng | 450 | L 60<br>W 75<br>H 150 | Shibaura<br>Japan | 1934 |
| action tower temp. | | | | |

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| 1 | 2 | 3 |
|---|---|---|
| 339 (72) | Induction regulator<br>Oil immersed, self cooling<br>Hand operated<br>Cap. 25 KVA 1 phase<br>PV. 220 V. S.V. ±220V.<br>Note: For regulating reaction tower temp.<br>SWITCH board<br>Panel marble, pipe frame<br>W 0.45 m H. 1.50 m<br>O.C.B. 600 V. 300 A<br>1 ammeter 0 - 300A<br>1 Volt meter<br>1 C.T. 5/3,000 A. 1 P.T. 110/440 V.<br>Note: Voltmeter missing | (E) 850 |
| 339 (73) | Switch board<br>Direct control board<br>Vertical, panel<br>Size of panel<br>L. 0.45 m W 0.30 m<br>H. 2.10 m<br>Steel plate A.C. 3,500 V.<br>100 A 600 KW 3 phase<br>3 ammeter 1 voltmeter<br>1 KW meter, 0 - 600 KW<br>1 KWH meter<br>O.C.B. 3,500 V. 200 A<br>3 poles. 20 L, relay<br>2 p.t. 110/3,300 V.<br>2 C.T. 5/100 A<br>Note: 20, L. Relay 4,1/KWH meter missing | 250 |

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| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| | (E) 850 | L 150<br>W 120<br>H 145 | Hitachi<br>Japan | 1944 |
| tion tower | | | | |
| | 250 | L 45<br>W 30<br>H210 | Nissin<br>Japan | 1934 |

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| 1 | 2 | 3 | 4 |
|---|---|---|---|
| 339 (74) | Switch board<br>Direct Control board<br>vertical, panel, marble.<br>A.C. 400 V. 3 phase<br>1 ammeter 0 - 200 A<br>1 volt meter 0 - 300 V<br>1 KWH meter<br>Knife switch<br>1 - 3φP x 600 A. 2-3φP x 200 A<br>2 - 3φP x 100 A<br>Note: Volt meter & KWH meter missing | 130 | L 62<br>W 25<br>H 210 |
| 339 (75) | Switch board<br>Direct control board<br>Vertical, panel, marble<br>A.C. 400 V. pipe frame works<br>Note: 4 panels. 1 set<br>Consisting of<br>20 ammeter 0 - 75 A<br>4 ammeter 0 - 100 A<br>4 ammeter 0 - 300 A<br>8 volt meter 0 - 250 V.<br>4 C.T. 5/100A, 8 C.T. 5/300 T<br>16 C.T. 5/75 A<br>3 knife switch<br>Note: 3 knife switch<br>2 ammeter & 2 C.T.<br>5/75 A missing | 1,200 | L 450<br>W 210<br>H 35 |
| 339 (76) | Converting furnace<br>Naval type<br>Cap. 75 L/H.<br>Normal temp. 400°C<br>Packed catalyst Fe203 200 kg<br>L 8.00 m W 2.75 m<br>H 5.00 m<br>Note: For converting gas<br>Heat exchanger<br>Double tube<br>Heat exchanging surface 23 $m^2$ | 80,000 | L 500<br>W 200<br>H 200 |

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| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| | 130 | L 62<br>W 25<br>H 210 | Osaka Denki<br>Japan | 1934 |
| 00 A | | | | |
| | 1,200 | L 450<br>W 210<br>H 35 | Nissin<br>Japan | 1934 |
| Ks | | | | |
| 00 T | | | | |
| | 80,000 | L 500<br>W 200<br>H 200 | Unknown<br>Japan | 1934 |
| kg | | | | |
| $m^2$ | | | | |

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| 1 | 2 | 3 |
|---|---|---|
| | Dia. 1.40m H. 3.25 m<br>Heat exchanger<br>Double tube<br>Heat exchanging surface 23 $m^2$<br>Dia. 1.40 m H.3.25m<br>Converter<br>Vertical, Cylindrical<br>Steel plate thickness 6 mm<br>Packed catalyst $Fe_2O_3$ 200 kg.<br>Reaction temp. 400 $^oC$ | |
| 339 (77) | Stack<br>Dia. 1.00 m. H. 23.00 m.<br>Constr. riveted<br>Steel plate thickness 8 mm. | 5,000 |
| 339 (78) | Tank<br>Vertical, Cylindrical<br>Cap. 2 KL. Dia. 1.35 m H.1.50 m<br>Constr. Welded<br>Plate thickness 4mm<br>Note: Copper plate,<br>For methanol, three<br>copper angles wind up | 600 |
| 339 (79) | Tank<br>Vertical, cylindrical,<br>Cap. 2 KL Dia. 1.35 m. H. 1.50 m.<br>Constr. Welded<br>Plate thickness 4mm.<br>Note: Copper plate,<br>For methanol, three<br>copper angle wind up. | 600 |

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| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| 23 m² | | | | |
| m<br>00 kg. | 5,000 | L 700<br>W 300<br>H 100 | Unknown<br>Japan | 1934 |
| mm.<br>H. 1.50 m | 600 | L 140<br>W 140<br>H 180 | Unknown<br>Japan | 1934 |
| H. 1.50 m. | 600 | L 140<br>W 140<br>H 180 | Unknown<br>Japan | 1934 |

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| 1 | 2 | 3 |
|---|---|---|
| 339 (80) | Tank<br>Vertical, cylindrical<br>Cap. 2 KL. Dia. 1.35 m.<br>H. 1.50 m.<br>Constr. Welded.<br>Plate thickness 4 mm.<br>Note: Copper plate<br>For methanol, three<br>copper angles wind up. | 600 |
| 339 (81) | Tank<br>Vertical cylindrical<br>Cap. 2 KL Dia 1.35 m H. 1.50 m<br>Constr welded<br>Plate thickness 4 m.m.<br>Note: copper plate<br>For methanol Three copper<br>Angles wind up. | 600 |
| 339 (82) | Cooler<br>Vertical cylindrical tank & coils<br>cooling surface 3 $m^2$<br>Normal temp. Unknown<br>Normal Press Usual<br>Coils: Gas pipe<br>Inlet 1" Outlet 1"<br>Shell: Steel, inlet 2" outlet 2"<br>Dia. 0.66 m H.1.25 m<br>Note: For cooling methanol<br>Placed on the Frame H. 2.70 m. | 400 |
| 339 (83) | Cooler<br>Vertical cylindrical tank & coils<br>cooling surface 3m2<br>Normal temp. unknown<br>Normal press usual<br>Coils: Gas pipe<br>Inlet 1" outlet 1"<br>Shell: Steel inlet 2" outlet 2"<br>Dia 0.66 m H.1.25 m.<br>Note: For cooling methanol<br>Placed on the Frame H. 2.70 m. | 400 |

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| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| | 600 | L 140<br>W 140<br>H 180 | Unknown<br>Japan | 1934 |
| 50 m | 600 | L 140<br>W 140<br>H 180 | Unknown<br>Japan | 1934 |
| coils | 400 | L 280<br>W 140<br>H 140 | Unknown<br>Japan | 1934 |
| st 2" | | | | |
| coils | 400 | L 280<br>W 140<br>H 140 | Unknown<br>Japan | 1934 |
| st 2" | | | | |

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| 1 | 2 | 3 |
|---|---|---|
| 339 (84) | Accumulator<br>Vertical, cylindrical<br>Cap. 0.087KL Press 150 kg/Cm$^2$<br>Dia 0.25m H.1.50 m<br>Constr Riveted (Æ)<br>Plate Thickness (Æ) 6 m.m.<br>Note: For gas purifier<br>Copper plate | 500 |
| 339 (85) | Accumulater<br>Vertical cylindrical<br>Cap. 0.07 KL Press 150 kg/cm$^2$<br>Dia. 0.25 m H.1.50 m<br>Constr. Riveted<br>Plate thickness (Æ) 6 mm<br>Note: For purifier<br>Copper plate | 500 |
| | 2 Pieces of 10" gate valve<br>Body: Cast Steel, Trim: gunmetal<br>Face to Face 425 m.m. | 540 |
| | 2 Pieces of 8" gate valve<br>Body: Cast Steel Trim gunmetal<br>Face to Face 360 m.m. | 378 |
| | 6 Pieces of 8" gate valve<br>Body: Cast Steel, Trim gunmetal<br>Face to Face 260 m.m. | 840 |
| | 5 Pieces of 8" gate valve<br>Body: Cast Steel, trim gunmetal<br>Face to Face 300 m.m. | 800 |
| | 2 Pieces of 6" gate valve<br>Body: Cast Steel, Trim gunmetal<br>Face to Face 300 m.m. | 237 |

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| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| 2 | 500 | L 150<br>W 40<br>H 40 | Unknown<br>Japan | 1938 |
| | 500 | L 150<br>W 40<br>H 40 | Unknown<br>Japan | 1938 |
| tal | 540 | L 86<br>W 55<br>H 140 | Unknown<br>Japan | 1934 |
| l | 378 | L.72<br>W.45<br>H.113 | unknown<br>Japan | 1934 |
| al | 840 | L 80<br>W 80<br>H 100 | Unknown<br>Japan | 1934 |
| al | 800 | L 150<br>W 42<br>H 100 | Unknown<br>Japan | 1934 |
| al | 237 | L 62<br>W. 32<br>H 82 | Unknown<br>Japan | 1934 |

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| 1 | 2 | 3 |
|---|---|---|
| | 2 Pieces of 4" Stop Valve<br>Body: Cast Steel trim gunmetal<br>Face to Face 200 m.m. | 80 |
| | 2 Pieces of 4" gate valve<br>Body: Cast Steel, trim gunmetal<br>Face to Face 250 m.m. | 82 |
| | 3 Pieces of 4" gate valve<br>Body: Cast Steel, Trim gunmetal<br>Face to Face 215 m.m. | 126 |
| | ~~1 piece of 4" gate valve~~<br>~~Body: Cast steel, Trim gunmetal~~<br>~~Face to face 190 m.m.~~ | ~~21~~ |
| | 1 piece of 4" gate valve<br>Body: Cast steel,<br>Trim: gunmetal<br>Face to face 190 m.m. | 42 |
| | 1 piece of 4" gate valve<br>Body: Cast steel,<br>Trim: gunmetal<br>Face to face 125 m.m. | 41 |
| | 1 Piece of 3" grand cock<br>Body: Cast steel,<br>Trim: Cast steel<br>Face to face 160 m.m. | 40 |
| | 6 Pieces of 3" gate valve<br>Body: Cast iron<br>Trim: gun metal<br>Face to face 165 m.m. | 162 |
| | 2 Pieces of 3" gate valve<br>Body: Cast iron<br>Trim: gun metal<br>Face to face 215 m.m. | 54 |

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| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| nmetal | 80 | L 40<br>W 25<br>H 40 | Unknown<br>Japan | 1934 |
| unmetal | 82 | L 50<br>W 27<br>H 67 | " | " |
| nmetal | 126 | L 66<br>W 26<br>H 70 | " | " |
| unmetal | ~~21~~ | ~~L 17~~<br>~~W 28~~<br>~~H 49~~ | " | " |
| | 42 | L 19<br>W 29<br>H 61 | " | " |
| | 41 | L 13<br>W 28<br>H 49 | " | " |
| | 40 | L 16<br>W 11<br>H 22 | " | " |
| | 162 | L 35<br>W 60<br>H 58 | " | " |
| | 54 | L 22<br>W 40<br>H 48 | " | " |

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

| 1 | 2 | 3 |
|---|---|---|
| | 1 Piece of 3" stop valve<br>Body: Cast iron<br>Trim: gun metal<br>Face to face 170 m.m. | 15 |
| | 4 Pieces of 3" Stop valve<br>Body: gun metal<br>Trim: gun metal<br>Face to face 250 m.m. | 100 |
| | 1 Piece of 3" gate valve<br>Body: Cast steel<br>Trim: gun metal<br>Face to face 205 m.m. | 27 |
| | 10 Pieces of 3" Stop valve<br>Body: gun metal<br>Trim: gun metal<br>Face to face 210 m.m. | 270 |
| | 2 Pieces of 3" Stop valve<br>Body: gun metal<br>Trim: gun metal<br>Face to face 190 m.m. | 5 |
| | 1 Piece of 2½" gate valve<br>Body: gun metal<br>Trim: gun metal<br>Face to face 210 m.m. | 32 |
| | 1 Piece of 2½" Stop valve<br>Body: gun metal<br>Trim: gun metal<br>Face to face 135 m.m. | 23 |
| | 2 Pieces of 2½" Stop valve<br>Body: gun metal<br>Trim: gun metal<br>Face to face 150 m.m. | 7 |

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013



| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| | 15 | L 17<br>W 21<br>H 42 | Unknown<br>Japan | 1934 |
| | 100 | L 50<br>W 45<br>H 44 | " | 1934 |
| | 27 | L 21<br>W 23<br>H 51 | " | 1934 |
| | 270 | L 65<br>W 45<br>H 35 | " | " |
| | 5 | L 19<br>W 32<br>H 30 | " | " |
| | 32 | L 21<br>W 11<br>H 35 | " | " |
| | 23 | L 14<br>W 11<br>H ~~23~~ 22 | " | " |
| | 7 | L 30<br>W 15<br>H 27 | " | " |

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

| | 2 | 3 |
|---|---|---|
| | 1 Piece of 2" grand cock<br>Body: Cast iron<br>Trim: Cast iron<br>Face to face 175 m.m. | 2 |
| | 6 Pieces of 2" grand cock<br>Body: gun metal<br>Trim: gun metal<br>Face to face 140 m.m. | 14 |
| | 1 Piece of 2" Stop valve<br>Body: Cast iron<br>Trim: gun metal<br>Face to face 180 m.m. | 3 |
| | 2 pieces of 2" Stop valve<br>Body: Cast iron<br>Trim: gun metal<br>Face to face 250 m.m. | 38 |
| | 7 pieces of 2" stop valve<br>Body: gun metal<br>Trim: gun metal<br>Face to face 125 m.m. | 18 |
| | 10 pieces of 2" Stop valve<br>Body: gun metal<br>Trim: gun metal<br>Face to face 125 m.m. | 25 |
| | 1 piece of 2" Gate valve<br>Body: gun metal<br>Trim: gun metal<br>Face to face 180 m.m. | 3 |
| | 5 pieces of 2" Stop valve<br>Body: gunmetal.<br>Trim: gunmetal.<br>Face to Face 205 m.m. | 68 |

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013



| 2 | 3 | 4 | 5 |
|---|---|---|---|
| ece of 2" grand cock<br>dy: Cast iron<br>im: Cast iron<br>ce to face 175 m.m. | 2 | L 18<br>W 15<br>H 26 | Unknown<br>Japan |
| ces of 2" grand cock<br>dy: gun metal<br>im: gun metal<br>ce to face 140 m.m. | 14 | L 28<br>W 40<br>H 24 | " |
| ce of 2" Stop valve<br>dy: Cast iron<br>im: gun metal<br>ce to face 180 m.m. | 3 | L 18<br>W 18<br>H 14 | " |
| ces of 2" Stop valve<br>dy: Cast iron<br>im: gun metal<br>ce to face 250 m.m. | 38 | L 25<br>W 36<br>H 37 | " |
| ces of 2" stop valve<br>dy: gun metal<br>im: gun metal<br>ce to face 125 m.m. | 18 | L 26<br>W 30<br>H 23 | " |
| ces of 2" Stop valve<br>dy: gun metal<br>im: gun metal<br>ce to face 125 m.m. | 25 | L 26<br>W 80<br>H 27 | " |
| ce of 2" Gate valve<br>dy: gun metal<br>im: gun metal<br>ce to face 180 m.m. | 3 | L 18<br>W 18<br>H 45 | " |
| ces of 2" Stop valve<br>dy: gunmetal.<br>im: gunmetal.<br>e to Face 205 m.m. | 68 | L 45<br>W 55<br>H 45 | " |

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013



| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| | 2 | L 18<br>W 15<br>H 26 | Unknown<br>Japan | 1934 |
| | 14 | L 28<br>W 40<br>H 24 | " | " |
| | 3 | L 18<br>W 18<br>H 14 | " | " |
| | 38 | L 25<br>W 36<br>H 37 | " | " |
| | 18 | L 26<br>W 30<br>H 23 | " | " |
| | 25 | L 26<br>W 80<br>H 27 | " | " |
| | 3 | L 18<br>W 18<br>H 45 | " | " |
| | 68 | L 45<br>W 55<br>H 45 | " | " |

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

| 1 | 2 | 3 |
|---|---|---|
| | 3 Pieces of 1⅝" Stop valve<br>Body: gunmetal, Trim gunmetal<br>Face to Face 150 m.m. | 34 |
| | 17 Pieces of 1½" Stop valve<br>Body: gunmetal. Trim gunmetal<br>Face to Face 120 m.m. | 246 |
| | 27 Pieces of 1½" gate valve<br>Body: gunmetal. Trim gunmetal<br>Face to Face 80 m.m. | 44 |
| | 3 Pieces of 1½" Stop valve<br>Body: gunmetal. Trim gunmetal<br>Face to Face 140 m.m. | 6 |
| | 10 Pieces of 1½" Stop valve<br>Body: gunmetal, Trim gunmetal<br>Face to Face 100 m.m. | 20 |
| | 8 Pieces of 1½" Stop valve<br>Body: gunmetal, Trim gunmetal<br>Face to Face 110 m.m. | 16 |
| | 6 Pieces of 1½" Stop valve<br>Body: gunmetal, Trim gunmetal<br>Face to Face, 120 m.m. | 12 |
| | 2 Pieces of 1¼" grand cock<br>Body: gunmetal, Trim gunmetal<br>Face to Face 110 m.m. | 5 |
| | 14 Pieces of 1¼" Stop Valve<br>Body: gunmetal Trim gunmetal<br>Face to Face. 125 m.m. | 12 |

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013



| 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| " Stop valve<br>al, Trim gunmetal<br>150 m.m. | 34 | L 15<br>W 45<br>H 25 | Unknown<br>Japan | 1934 |
| " Stop valve<br>al. Trim gunmetal<br>120 m.m. | 246 | L 60<br>W 55<br>H 21 | " | " |
| " gate valve<br>al. Trim gunmetal<br>80 m.m. | 44 | L 35<br>W 35<br>H 40 | " | " |
| " Stop valve<br>al. Trim gunmetal<br>140 m.m. | 6 | L 14<br>W 27<br>H 25 | " | " |
| " Stop valve<br>al, Trim gunmetal<br>100 m.m. | 20 | L 40<br>W 75<br>H 32 | " | " |
| " Stop valve<br>al, Trim gunmetal<br>110 m.m. | 16 | L 22<br>W 32<br>H 20 | " | " |
| " Stop valve<br>al, Trim gunmetal<br>120 m.m. | 12 | L 25<br>W 42<br>H 16 | " | " |
| " grand cock<br>al, Trim gunmetal<br>110 m.m. | 5 | L 15<br>W 26<br>H 20 | " | " |
| " Stop Valve<br>al Trim gunmetal<br>125 m.m. | 12 | L 40<br>W 70<br>H 25 | " | " |

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013



| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| | 34 | L 15<br>W 45<br>H 25 | Unknown<br>Japan | 1934 |
| | 246 | L 60<br>W 55<br>H 21 | 〃 | 〃 |
| | 44 | L 35<br>W 35<br>H 40 | 〃 | 〃 |
| | 6 | L 14<br>W 27<br>H 25 | 〃 | 〃 |
| | 20 | L 40<br>W 75<br>H 32 | 〃 | 〃 |
| | 16 | L 22<br>W 32<br>H 20 | 〃 | 〃 |
| | 12 | L 25<br>W 42<br>H 16 | 〃 | 〃 |
| | 5 | L 15<br>W 26<br>H 20 | 〃 | 〃 |
| | 12 | L 40<br>W 70<br>H 25 | 〃 | 〃 |

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

| 1 | 2 | 3 |
|---|---|---|
| | 2 Pieces of 1½" Stop valve<br>Body: Gun metal<br>Trim: Gun metal<br>Face to face 105 m.m. | 2 |
| | 2 Pieces of 1" Grand cock<br>Body: Gun metal<br>Trim: Gun metal<br>Face to face 145 m.m. | 2 |
| | 14 Pieces of 1" Stop valve<br>Body: Gun metal<br>Trim: Gun metal<br>Face to face 125 mm | 11 |
| | 11 Pieces of 1" Stop valve<br>Body: Gun metal<br>Trim: Gun metal<br>Face to face 90 m.m. | 8 |
| | 17 Pieces of ¾" Stop valve<br>Body: Gun metal<br>Trim: Gun metal<br>Face to face 85 m.m. | 9 |
| | 1 Piece of ¾" Stop valve<br>Body: Gun metal<br>Trim: Gun metal<br>Face to face 90 m.m. | 1 |
| | 8 Pieces of ½" Grand cock<br>Body: Gun metal<br>Trim: Gun metal<br>Face to face 50 m.m. | 11 |
| | ~~9 Pieces of ½" Stop value<br>Trim: Gun metal<br>Face to face 60 m.m.~~ | ~~8~~ |

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013



| 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| Value<br>.m. | 2 | L 12<br>W 20<br>H 18 | Unknown<br>Japan | 1934 |
| ock<br>.m. | 2 | L 15<br>W 25<br>H 16 | " | " |
| Value<br>.m. | 11 | L 38<br>W 65<br>H 25 | " | " |
| Value<br>.m. | 8 | L 20<br>W 48<br>H 19 | " | " |
| Value<br>m. | 9 | L 26<br>W 64<br>H 30 | " | " |
| alue<br>m. | 1 | L 19<br>W 12<br>H 16 | " | " |
| ock<br>m. | 11 | L 12<br>W 9<br>H 6 | " | " |
| Value<br>.m. | 2 | L 20<br>W 20<br>H 15 | " | " |

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

| 1 | 2 | |
|---|---|---|
| | 9 Pieces of ½" Stop valve V<br>Body: Gun metal<br>Trim: Gun metal<br>Face to face 60 m.m. | |
| | 27 Pieces of ⅜" Needle valve V<br>Body: Gun metal<br>Trim: Gun metal<br>Face to face 120 m.m. | 32 |
| | 40 Pieces of ⅜" Needle valve V<br>Body: Gun metal<br>Trim: Gun metal<br>Face to face 130 m.m. | 80 |
| | 5 Pieces of ¼" Needle valve V<br>Body: Special Trim Gun metal<br>Face to face 200 m.m. | 10 |
| | 8" Gas pipe<br>Out dia 216 m.m. Total Length 35 m. | 1,2 |
| | 6" Gas pipe<br>Out dia 165 m.m. Total Length 5 m. | 1 |
| | 4" Gas pipe<br>Out dia 114 m/m. Total Length 6 m. | |
| | 3" Gas pipe<br>Out dia 89 m.m. Total Length 300 m. | 3,02 |

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| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| | 2 | L 20<br>W 20<br>H 15 | Unknown<br>Japan | 1934 |
| | 324 | L 72<br>W 48<br>H 52 | Kobe Seiko<br>Japan | 1934 |
| | 800 | L 92<br>W 65<br>H 70 | " | " |
| metal | 100 | L 150<br>W 28<br>H 48 | " | " |
| l Length 35 m. | 1,238 | L 500<br>W 250<br>H 200 | Unknown<br>Japan | " |
| l Length 5 m. | 116 | L 500<br>W 20<br>H 20 | " | " |
| l Length 6 m. | 85 | L 500<br>W 25<br>H 13 | " | " |
| l Length 300 m. | 3,020 | L 500<br>W 100<br>H 60 | " | " |

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| 1 | 2 | |
|---|---|---|
| | 2½" Gas pipe<br>Out dia 76 m.m. Total length 10 m. | 8 |
| | 2" Gas pipe<br>Out dia 60 m.m. Total length 70 m. | 42 |
| | 1½" Gas pipe<br>Out dia 49 m.m. Total length 460 m. | 2,01 |
| | 1" Gas pipe<br>Out dia 34 m.m. Total length 80 m. | 21 |
| | ¾" Gas pipe<br>Out dia 27 m.m. Total length 45 m. | 8 |
| | ½" Gas pipe<br>Out dia 22 m.m. Total length 16 m. | 3 |
| | 5" Steel pipe<br>Out dia 157 m.m. Total length 2 m. | 52 |

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| 2 | 3 | 4 | 5 | |
|---|---|---|---|---|
| Gas pipe<br>Out dia 76 m.m. Total length 10 m. | 85 | L 500<br>W 16<br>H 16 | Unknown<br>Japan | |
| Gas pipe<br>Out dia 60 m.m. Total length 70 m. | 423 | L 500<br>W 30<br>H 30 | " | |
| Gas pipe<br>Out dia 49 m.m. Total length 460 m. | 2,019 | L 500<br>W 75<br>H 75 | " | |
| Gas pipe<br>Out dia 34 m.m. Total length 80 m. | 218 | L 500<br>W 15<br>H 15 | " | |
| Gas pipe<br>Out dia 27 m.m. Total length 45 m. | 85 | L 500<br>W 15<br>H 6 | " | |
| Gas pipe<br>Out dia 22 m.m. Total length 16 m. | 3 | L 500<br>W 5<br>H 5 | " | |
| Steel pipe<br>Out dia 157 m.m. Total length 2 m. | 52 | L 200<br>W 16<br>H 16 | " | |

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013



| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| 10 m. | 85 | L 500<br>W 16<br>H 16 | Unknown<br>Japan | 1934 |
| 70 m. | 423 | L 500<br>W 30<br>H 30 | " | " |
| 460 m. | 2,019 | L 500<br>W 75<br>H 75 | " | " |
| 80 m. | 218 | L 500<br>W 15<br>H 15 | " | " |
| 45 m. | 85 | L 500<br>W 15<br>H 6 | " | " |
| 16 m. | 3 | L 500<br>W 5<br>H 5 | " | " |
| gth 2 m. | 52 | L 200<br>W 16<br>H 16 | " | " |

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| 1 | 2 | 3 |
|---|---|---|
| | 3" Steel pipe<br>Out dia 100 m.m. Total length 40 m. | 739 |
| | 2" Steel pipe<br>Out dia 75 m.m. Total length (E) 50 m. | 428 |
| | 1" Steel pipe<br>Out dia 30 m.m. Total length 2 m. | 9 |
| | ¾" Steel pipe<br>Out dia 25 m.m. Total length 30 m. | 57 |
| | 3/8" ½" Steel pipe<br>Out dia 18 m.m. Total length 30 m. | 28 |
| | 10" Cast iron pipe<br>Out dia 295 m.m. Total length 45 m. | 763 |
| | 8" Cast iron pipe<br>Out Dia. 240 m.m.<br>Total length 20 m. | 1,579 |

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| 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| ipe<br>e 100 m.m. Total length 40 m. | 739 | L 500<br>W 50<br>H 50 | Unknown<br>Japan | 1934 |
| ipe<br>e 75 m.m. Total length (E) 50 m. | 428 | L 500<br>W 80<br>H 8 | " | " |
| ipe<br>e 30 m.m. Total length 2 m. | 9 | L 200<br>W 3<br>H 3 | " | " |
| ipe<br>25 m.m. Total length 30 m. | 57 | L 500<br>W 18<br>H 15 | " | " |
| ipe<br>18 m.m. Total length 30 m. | 28 | L 500<br>W 12<br>H 10 | " | " |
| on pipe<br>e 295 m.m. Total length 45 m. | 763 | L 400<br>W 60<br>H 50 | " | " |
| on pipe<br>e. 240 m.m.<br>length 20 m. | 1,579 | L 400<br>W 100<br>H 25 | " | " |

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| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| 0 m. | 739 | L 500<br>W 50<br>H 50 | Unknown<br>Japan | 1934 |
| ) 50 m. | 428 | L 500<br>W 80<br>H 8 | " | " |
| 2 m. | 9 | L 200<br>W 3<br>H 3 | " | " |
| m. | 57 | L 500<br>W 18<br>H 15 | " | " |
| n. | 28 | L 500<br>W 12<br>H 10 | " | " |
| 45 m. | 763 | L 400<br>W 60<br>H 50 | " | " |
| | 1,579 | L 400<br>W 100<br>H 25 | " | " |

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| 1 | 2 | 3 |
|---|---|---|
| | Copper pipe<br>Out dia. 58 m.m.<br>Total length 10 m. | 37 |
| | Copper pipe<br>Out dia 50 m.m.<br>Total length (E) 90 m. | 1,410 |
| | Copper pipe<br>Out dia. 38 m.m.<br>Total length (E) 280 m. | 2,542 |
| | Copper pipe<br>Out dia. 32 m.m.<br>Total length 400 m. | 2,775 |
| | Copper pipe<br>Out dia. 22 m.m.<br>Total length 120 m. | 338 |
| | Copper pipe<br>Out dia. 18 m.m.<br>Total length 40 m. | 45 |
| | Steel pipe x x pipe<br>Out dia. 50 m.m.<br>Total length (E) 100 m. | 878 |
| | of 157 items, from item 1,700 to 1856 | 323,929 |

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| 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| 58 m.m.<br>gth 10 m. | 37 | L 500<br>W 15<br>H 60 | Unknown<br>Japan | 1934 |
| 30 m.m.<br>gth (E) 90 m. | 1,410 | L 500<br>W 62<br>H 12 | " | " |
| 38 m.m.<br>gth (E) 280 m. | 2,542 | L 500<br>W 40<br>H 25 | " | " |
| 32 m.m.<br>gth 400 m. | 2,775 | L 500<br>W 32<br>H 28 | " | " |
| 22 m.m.<br>ngth 120 m. | 338 | L 500<br>W 15<br>H 10 | " | " |
| 18 m.m.<br>ngth 40 m. | 45 | L 500<br>W 8<br>H 4 | " | " |
| x x pipe<br>50 m.m.<br>ngth (E) 100 m. | 878 | L 500<br>W 5<br>H 10 | " | " |
| 57 items, from item 1,700 to | 323,929 | | | |

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013



| | 3 | 4 | 5 | 6 |
|---|---|---|---|---|
| | 37 | L 500<br>W 15<br>H 60 | Unknown<br>Japan | 1934 |
| | 1,410 | L 500<br>W 62<br>H 12 | " | " |
| | 2,542 | L 500<br>W 40<br>H 25 | " | " |
| | 2,775 | L 500<br>W 32<br>H 28 | " | " |
| | 338 | L 500<br>W 15<br>H 10 | " | " |
| | 45 | L 500<br>W 8<br>H 4 | " | " |
| | 878 | L 500<br>W 5<br>H 10 | " | " |
| | 323,929 | | | |

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中國民事部分

ECONOMICS
CHIEF 1
D & I 2
N.R.
LABOR
FILE 3
45-7, Sec II

## Report of rescission of Authorized Use Equipment

Date: 23 February, 1951

Plant Name: Tokuyama 3rd Naval Fuel Depot

Location (Code No.): Tokuyama City, Yamaguchi Pref. 45-7

User: Mitsubishi Oil Co., Ltd.

Reason of Rescission: These oil tanks can not be taken to pieces, because they are surrounded tightly with ferro-concrete. Moreover, the iron sheet adhered to ferro-concrete is very badly corroded, and there is little possibility of making use of it.

Total Number of Rescinded Equipment: 6 each

Name of reporter:
( Signature )

FOR SHUNICHI TAKEUCHI, President
Mitsubishi Oil Co., Ltd.

List of Rescinded Equipment

| Inventory No. | Name of Equipment | Remark |
|---|---|---|
| 235-20 (203) | Oil Tank | Area 4 |
| " (204) | " | " |
| " (205) | " | " |
| " (206) | " | " |
| " (207) | " | " |
| " (208) | " | " |

MANUFACTURING INDUSTRY
45-7
Sec II

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

Chugoku Finance Bureau

2. April 1951

Chugoku Civil Affairs Region

Subject: Petition for Authorized Use of Reparation Machineries.

Enclosed application has been submitted to Finance Ministry with our letter Chu Zai Bai No. 370 To Dated 27. March 1951.

MANUFACTURING AND INDUSTRY FILE 45-07 Sect II

Encl: Application of_____

1 Japan Gas Chemical Industry Company. Ltd.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

# APPLICATION FOR MOVEMENT AND AUTHORIZED USE OF DESIGNATED REPARATION MACHINERY AND EQUIPMENT

Date: March 20, 1951.

To: The Minister of Finance.

From: Ryuichiro Enomoto
President of the Japan Gas Chemical Industry Company, Ltd.
No. 1, 2-chome, Uchisaiwai-cho, Chiyoda-ku, Tokyo.

(1) Name (Code No.) and location of the plant which intends to use the designated reparation machinery and equipment.

Name: The Japan Gas Chemical Industry Cpmpany, Ltd.

Code No.: None. Is not designated as reparation.

Location: No. 600-7, Enoki, Niigata-shi, Niigata-ken.

(2) Name (Code No.) and location of the plant where designated reparation machinery and equipment to be used actually exists.

Name: The Former Third Naval Fuel Depot.

Code No.: 45-7

Location: Tokuyama-shi, Yamaguchi-ken.

(3) List of designated reparation machinery and equipment to be moved and used.

Refer to the attached sheet.

(4) Necessity for movement and use of machinery and equipment.

The factory where said equipment is to be moved and put into use is in tending to produce methanol from natural gas at Niigata, where there is an abundance of cheap natural gas.

This enterprise is the first attempt of a petro chemical industry in Japan at harnessing raw natural gas which is extremely rich and cheap. The future development of this enterprise is expected to be great and economically profitable.

It will contribute to the reconstruction of Japan and the restoration of her national economy.

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This enterprise will utilize the Niigata factory of the Oriental Synthesis Company Ltd., which is now idle. This factory will be converted to produce water gas from natural gas --- the main constituent of methane. It is, therefore, necessary for the factory to establish a new methane cracking plant, and a very suitable methane cracking plant is now idle at the former Third Naval Fuel Depot.

The factory must increase its capacity of high pressure vessel, as the vessel which was formerly used for synthesis of ammonia is too small. There also exists a very suitable high pressure vessel at the former Third Naval Fuel Depot.

We, therefore, wish to apply for permission in the movement and use of said methane cracking plant and high pressure vessels.

R Enomoto

Ryuichiro Enomoto

President,
The Japan Gas Chemical Industry Co., Ltd.

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

Attached Sheet

## LIST OF THE DESIRED REPARATION DESIGNATED MACHINERY AND EQUIPMENT

### Japan Gas Chemical Industry Co., Ltd.

(1) Methane Cracking Plant

| Name of Items | Name of m.f.g. | Type and Dimension | Inv. No. | Operating or Idle | No.of Items | Remarks |
|---|---|---|---|---|---|---|
| Methane cracking furnace | Mitsubishi Japan | Vertical under draft. Gas fire thermal cracking of Methane Gas, and superheated steam system. Cap.500m$^3$/h, temp.1300°C-1400°C, dia:4.50m, H:15.00m, shell:steel, Thick:19mm, inner constr:linning of fire brick & with thermal chequer, gas inlet:8", air inlet:4". | 257(1) | Idle | 1857 | Page332 |
| Methane cracking furnace | " | " | 257(2) | " | 1858 | " |
| Methane Gas preheater | " | Vertical under draft gas fire. Cap.500m$^3$/h, cracking gas normal temp. 1000°C, dia:4.00m, H:15.00m, shell: steel, plate of thickness: 19mm. Inner constr:linning of fire brick with thermal chequer, raw gas inlet 8". | 257(3) | " | 1859 | " |
| Methane gas preheater | " | " | 257(4) | " | 1860 | " |
| Gas wash tower | " | Vertical, room equipment. Shower cap.3000m$^3$/h, generating gas normal temp. 180°Cx40°C, normal press: 60mm/hg, dia:1.50m, H:7.80m, shell:thickness 9mm, hot gas inlet: 18", gas outlet:14". | 257(5) | " | 1861 | 333 |
| Blower | Unknown Japan | Turbo, 1 stage, motor driven Cap.3000m$^3$/h, press:60mm/hg, 1740rpm, suc. bore:12"x9", Del. bore:14". Induction motor enclossed, wound rotor, 30hp,3ph, 220V, 4 poles, 60 cycle, 1740 rpm. | 257(6) | " | 1862 | " |

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| | | | | | | |
|---|---|---|---|---|---|---|
| Blower | Unknown Japan | Turbo, 1 stage motor driven cap.3000 $m^3/h$, press:60mm/hg, 1800 rpm. Suc. bore:18"X10", Del.bore:18". Induction motor enclossed, cage rotor, 30hp, 3ph, 200V, 97.5A, 4 poles, 60 cy., 1800 rpm. | 257(7) | Idle | 1863 | 333 |
| Gas wash tower | Mitsubishi Japan | Vertical, room equipment. Shower cap. $300m^3/h$, pass of gas, normal temp:25°C, normal press:60mm/hg. ~~xxx~~ Dia:1.00m, H:3.00m. Shell: thickness, 9mm, gas inlet:18" 10". Gas outlet:14". | 257(8) | " | 1864 | 334 |
| Gas wash tower | " | " | 257(9) | " | 1865 | " |
| Dust separating tpwer | Shibaura Japan | Cottrel. Cap.$4000m^3/h$, pass of gas normal temp:25°C, normal press:30mm/hg. Dia:2.00m, H:3.00m. Shell thickness:9 mm. Gas inlet:14". Outlet:14". | 257(10) | " | 1866 | " |
| Dust separator | " | Elect. precipitation of cottrel. Rectifier:dirat coupled to motor. Synchronous motor:5hp, 200V, 800 rpm. Transformer: indoor oil immesed self-cooling 15KVA, lph, P.V. 220V, 210V, 200V. S.V.120V-280V. | 257(11) | " | 1867 | " |
| ~~Meter board~~ | ~~----~~ | ~~L:2.00m, H:1.60m.~~ | ~~257(12)~~ | ~~"~~ | ~~1868~~ | ~~335~~ |
| Plunger pump | Mitsubishi Japan | Vertical, duplex, motor driven Cap. 6kl/h, nominal size:6"X4", normal press:11kg/$cm^2$. Suc.bore:2", Del.bore:2", Induction motor 15 hp. | 257(13) | " | 1869 | " |
| Plunger pump | " | " | 257(14) | " | 1870 | " |
| ~~Meter board~~ | ~~----~~ | ~~L:2.50m, H:2.00m.~~ | ~~257(15)~~ | ~~"~~ | ~~1871~~ | ~~336~~ |
| Blower | Ehara Japan | Turbo, 1 stage, motor driven Cap. $90m^3$/min. press:80mm/$H_2O$, 3480 rpm. Suc.bxxe:5", Del.bore:5". | 257(16) | " | 1872 | " |
| | | | 257(17) | " | 1873 | " |
| Fan | Mitsubishi Japan | Turbo, motor driven Cap. $4000m^3/h$, press:10"x7", 1750 rpm. S.B.:10". D.B.:10"x7". Induction motor: 10hp, 1750 rpm, 220V. | | | | |
| Blower | Ehara Japan | Centrefugal, 1 stage, motor driven Cap. $500m^3/h$, press: 80mm/$H_2O$, 1750 rpm. Suc.bore:5", Del.bore:5". Induction motor: 15hp, 220V, 1750 rpm. | 257(18) | " | 1874 | " |

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| | | | | | | |
|---|---|---|---|---|---|---|
| Accumulater | Mitsubishi Japan | Vertical, cylindrical, cap:4.5m$^3$, dia:2m, H:2.5m. | 257(19) | Idle | 1875 | 336 |
| Fan | " | Turbo, motor driven<br>Cap. 4000m$^3$/h, press:10"x7", 1750rpm.<br>Induction motor:10hp. 1750rpm, 220V. | 257(22) | Idle | Missed from the evaluation in error. | |
| Steam heater | " | Vertical, shell & tubes heating surface: 100m$^2$, dia:1.40m, H:5.00m.<br>Gas inlet:18", outlet:14".<br>Steam inlet:8", outlet:6". | 257(21) | " | 1877 | " |
| 4 pieces | " | 18" long operating valve.<br>Body castiron. trim: special steel face to face: 470mm. | Absent | " | 1878 | " |
| 4 pieces | " | 8" long operating valve.<br>Air acting system.<br>Body cast iron, trim:special steel face to face: 260mm. | " | " | 1879 | " |
| 2 pieces | " | 4" long operating valves.<br>Air acting system.<br>Body cast steel, trim: special steel face to face 200mm. | " | " | 1880 | " |
| 2 pieces | " | 18" gate valve.<br>Body cast steel, face to face 470mm. | " | " | 1881 | " |
| 1 piece | " | 12" gate valve, face to face: 350mm. | " | " | 1882 | 338 |
| 6 pieces | " | 8" gate valve, face to face: 240mm. | " | " | 1883 | " |
| 15 pieces | " | 6" gate valve, face to face: 230mm. | " | " | 1884 | " |
| 7 pieces | " | 6" globe valve, face to face: 320mm. | " | " | 1885 | " |
| 8 pieces | " | 4 gate valve, face to face: 200mm. | " | " | 1886 | " |
| 5 pieces | " | " | " | " | 1887 | " |
| 4 pieces | " | 3" globe valve<br>Body: gun metal, trim: gun metal face to face: 300mm. | " | " | 1888 | " |
| 8 pieces | " | 2" globe valve, face to face: 120mm. | " | " | 1889 | " |
| 9 pieces | " | 1½" globe valve<br>Body: gun metal, trim: gun metal | " | " | 1890 | " |
| 20 pieces | " | 1" globe valve | " | " | 1891 | " |

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# CORRECTION

THIS DOCUMENT

HAS BEEN REPHOTOGRAPHED

TO ASSURE LEGIBILITY

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| | | | | | | |
|---|---|---|---|---|---|---|
| Accumulater | Mitsubishi Japan | Vertical, cylindrical, cap:4.5m$^3$, dia:2m, H:2.5m. | 257(19) | Idle | 1875 | 336 |
| Fan | " | Turbo, motor driven<br>Cap. 4000m$^3$/h, press:10"x7", 1750rpm.<br>Induction motor:10hp. 1750rpm, 220V. | 257(22) | Idle | Missed from the evaluation in error. | |
| Steam heater | " | Vertical, shell & tubes heating surface: 100m$^2$, dia:1.40m, H:5.00m.<br>Gas inlet:18", outlet:14".<br>Steam inlet:8", outlet:6". | 257(21) | " | 1877 | " |
| 4 pieces | " | 18" long operating valve.<br>Body castiron. trim: special steel<br>face to face: 470mm. | Absent | " | 1878 | " |
| 4 pieces | " | 8" long operating valve.<br>Air acting system.<br>Body cast iron, trim:special steel<br>face to face: 260mm. | " | " | 1879 | " |
| 2 pieces | " | 4" long operating valves.<br>Air acting system.<br>Body cast steel, trim: special steel<br>face to face 200mm. | " | " | 1880 | " |
| 2 pieces | " | 18" gate valve.<br>Body cast steel, face to face 470mm. | " | " | 1881 | " |
| 1 piece | " | 12" gate valve, face to face: 350mm. | " | " | 1882 | 338 |
| 6 pieces | " | 8" gate valve, face to face: 240mm. | " | " | 1883 | " |
| 15 pieces | " | 6" gate valve, face to face: 230mm. | " | " | 1884 | " |
| 7 pieces | " | 6" globe valve, face to face: 320mm. | " | " | 1885 | " |
| 8 pieces | " | 4 gate valve, face to face: 200mm. | " | " | 1886 | " |
| 5 pieces | " | " | " | " | 1887 | " |
| 4 pieces | " | 3" globe valve<br>Body: gun metal, trim: gun metal<br>face to face: 300mm. | " | " | 1888 | " |
| 8 pieces | " | 2" globe valve, face to face: 120mm. | " | " | 1889 | " |
| 9 pieces | " | 1½" globe valve<br>Body: gun metal, trim: gun metal | " | " | 1890 | " |
| 20 pieces | " | 1" globe valve | "$_2$ | " | 1891 | " |

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| | | | | | | |
|---|---|---|---|---|---|---|
| 42 pieces | Mitsubishi Japan | 3/4" globe valve | Absent | Idle | 1892 | 338 |
| 10 pieces | " | 1/2" globe valve | " | " | 1893 | " |
| 18" steel pipe | " | Out dia: 500 mm, Total length: ©30 m. | " | " | 1894 | 339 |
| 12" gas pipe | " | Out dia: 320 mm, Total length: ©100 m. | " | " | 1895 | " |
| 10" gas pipe | " | Out dia: 268 mm, Total length: ©30m. | " | " | 1896 | " |
| 8" gas pipe | " | Out dia: 216 mm, Total length: ©80 m. | " | " | 1897 | " |
| 6" gas pipe | " | Out dia: 165 mm, Total length: ©350 m. | "7 | " | 1898 | " |
| 4" gas pipe | " | Out dia: 115 mm, Total length: ©130 m. | " | " | 1899 | " |
| 3" gas pipe | " | Out dia: 90 mm, Total length: ©50 m. | " | " | 1900 | " |
| 2½" gas pipe | " | Out dia: 76 mm, Total length: ©50 m. | " | " | 1901 | " |
| 2" gas pipe | " | Out dia: 60 mm, Total length: ©100 m. | " | " | 1902 | " |
| 1½" gas pipe | " | Out dia: 49 mm, Total length: ©80 m. | " | " | 1903 | " |
| 1" gas pipe | " | Out dia: 34 mm, Total length: ©320 m. | " | " | 1904 | " |
| 3/4" gas pipe | " | Out dia: 27 mm, Total length: ©450 m. | " | " | 1905 | " |
| 1/2" gas pipe | " | Out dia: 22 mm, Total length: ©50 m. | " | " | 1906 | " |

(2) <u>High Pressure Vesseles</u>

| | | | | | | |
|---|---|---|---|---|---|---|
| High press. tower | Kure Navy | Vertical cylinder. Vol:5.5m$^3$, dia: 0.85m, H:9.85m, former reaction vessel. | 241(51) | Idle | 417 | 670 |
| High press. tower | " | Vertical cylinder. Vol:3.5m$^3$, dia: 0.85m, H:9.85m, former preheater. | 241(52) | " | 418 | " |
| High press. | " | Vertical cylinder. Vol:5.5m$^3$, dia:0.85m, H:9.85m, former reaction vessels. | 241(55) | " | 421 | 671 |

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CHIEF OF THE TOKYO INTERNATIONAL TRADE AND INDUSTRY BUREAU

March 20, 1951

To: Chief of The Chugoku Finance Bureau.

Subject: Recommendation on Application for the Movement and Use of the Methane Cracking Plant and High Pressure Vessels.

Concerning the above, we have received an application from The Japan Gas Chemical Industry Company of the effect that they wish to be permitted to remove to their factory in Niigata and use for manufacture of methanol that methane cracking plant and high pressure vessels (3) which are at present at the former Third Naval Fuel Depot in Tokuyama.

This plan will contribute greatly towards the rational development and utilization of natural gas. It will open up an immense new field to the synthetic chemical industry of Japan and great results are expected through this operation.

Considering the fact that all the conditions for the operation are fulfilled in this company's factory in Niigata we feel it advisable to allow them to realize the plan.

We request that special consideration be given to the permission for the removal and use of the equipments.

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Chugoku Finance Bureau

26 March 1951

Chugoku Civil Affairs Region

Subject: Petition for Authorized Use of Reparation Machineries.

Enclosed application has been submitted to Finance Ministry with our letter Chu Zai Bai No. 366 Dated 24 March 1951.

Encl: Application of Kanegafuchi Kagaku ~~Kyogo~~ Kogyo K.K.

SCAP FILE

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## Communication Addresses & Officers in Charge

**In Osaka:**

Head office of the company.
No. 27 4-chome, Honmachi,
Higashi-ku, Osaka

Tel. No. Semba (25) 1732 - 5
3083 - 7

Officer in charge.
Mr. Tetsunosuke Sawamura. (Chief of Technical Dept.)
or
Mr. Giichi Teramoto, (Vice-Manager of Purchasing Dept.)

**In Tokyo:**

Tokyo office of the company
No. 3745 Yoroi-cho, Ohi,
Shinagawa-ku, Tokyo-to

Tel. No. Ohmori (06) 0461 - 3
3241 - 3

Officer in charge.
Mr. Seihei Asahi. (Standing director & Manager of the office.)
or
Mr. Takashi Ichikawa, (Chief of business Section.)

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 77 5013

APPLICATION FOR MOVEMENT AND AUTHORIZED USE OF DESIGNATED REPARATION MACHINERY AND EQUIPMENT

26.3.22

To The Minister of Finance, Mr. H. Ikeda.

From K. Nakatsukasa, the President of Kanegafuchi Kagaku Kyogo Kabushiki Kaisha (Kanegafuchi Chemical Industrial Co., Ltd.)

27, 4-chome, Honmachi, Higashi-ku, Osaka.

1. Name and location of plant which intends to use designated reparation machinery and equipment;

   Takasago Plant of Kanegafuchi Kagaku Kogyo Kabushiki Kaisha, Otsu 1157-3, Miyamae, Takasago-cho, Kako-gun, Hyogo Pref.

2. Name (Code No.) and location of the plant where designated reparation machinery and equipment to be used actually exist;

   Code No.: 45 - 7

   Name & location: Tokuyama Ex-3rd, Navy Arsenal Tokuyama-Shingu-cho, Tokuyama-shi, Yamaguchi Pref.

3. List of designated reparation machinery and equipment:

   Refer to attached sheets.

4. Necessity for movement and use of machinery and equipment;

   A. Purpose of use;
      Manufacturing of di-octyl-phthalate (D.O.P.), a plasticizer for poly-vinyl-chloride.

   B. Necessity for use;

      1. The vinyl chloride industry in Japan has been showing a remarkable development in these few years. The scheduled producing quantity of it

Takasago Plant of Kanegafuchi Kagaku Kogyo Kabushiki Kaisha, Otsu 1157-3, Miyamae, Takasago-cho, Kako-gun, Hyogo Pref.

2. Name (Code No.) and location of the plant where designated reparation machinery and equipment to be used actually exist;

Code No.: 45 - 7

Name & location: Tokuyama Ex-3rd, Navy Arsenal
Tokuyama-Shingu-cho, Tokuyama-shi,
Yamaguchi Pref.

3. List of designated reparation machinery and equipment:

Refer to attached sheets.

4. Necessity for movement and use of machinery and equipment;

A. Purpose of use;
Manufacturing of di-octyl-phthalate (D.O.P.), a plasticizer for poly-vinyl-chloride.

B. Necessity for use;

1. The vinyl chloride industry in Japan has been showing a remarkable development in these few years. The scheduled producing quantity of it in the year of 1951 is 6,000 ton, and it exceeds three times of last year's it. As it is widely acquainted with, poly-vinyl-chloride is used in wide industrial fields, such as Electric Wire, Sheets, Leather, Insulators to Electricity, Paints, Architectures, Rubber articles manufacturing and also in Textile realms. It is especially emphatical fact that the majority of the raw materials can be available from our domestic supplies. Since vinyl-chloride plays so important role in self-support economy of this country, this industry must be enforced to utomost extent to meet with the expanding uses of the products in the future.



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2. To mould poly-vinyl-chloride, a superior plasticizer is vitally needed to perfectly utilize its charactristic and to fit with every different purpose. Unfortunately, the plasticiser industry in Japan is not showing a favorable development at present in quality and quantity compairing with that of vinyl chloride. We are, consequently, obliged to depend upon imports of the same despite of the difficulties in getting ample supplied from abroad hereafter. Besides the above bottle neck, to get rid of unfavorable cost-accounting, healthy and fundamental measures should be taken for a speedy and effective development of the industry.

3. Standing on this point of view, we have been contemplating to get 50 ton monthly production of a superior plasticizer D.O.P. In our Takasago plant, 90 ton per month production of Butanol has been gained shortly utilizing various equipments installed at the plant. Moreover, as we have been engaging in manufacture of Caustic Soda and other relative products in the same factory compound, it is, no doubt, very rational to start manufacture of D.O.P. there. The raw materials needed for the industry can easily be obtained from the aforesaid sources. Our Takasago plant is fairly qualified to be a multilateral Chemical factory having sufficient and basic facilities, so that to establish a D.O.P. plant there benefits us so much than erecting a factory in somewhere else as far as operative, technical and administrative matters concerned. In addition, we can not neglect a perpetual advantage that we shall be able to enjoy in improvement of quality in connection with raw materials and finished goods, for the plants of these manufactures are closely located to each other. To use our Takasago plant, comparing with erecting a new plant in somewhere else, shall be able to save us tremendous expenditures and time to erect.
All fundamental studies of producing plasti cizer have being finished in our Hyogo and Takasago experimental stations, and we have a conviction of its industrialization. Such being the case, we are sincerely willing to be granted an official permission in the earliest possible date for Authorized use and Movement of the Reparated Equipments.

4. Since Butanol is a basic and chief material of D.O.P., to establish a D.O.P. 50 ton plant within Takasago factory compound added to existing Butanol plant, is quite

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no doubt, very rational to start manufacture of D.O.P. there. The raw materials needed for the industry can easily be obtained from the aforesaid sources. Our Takasago plant is fairly qualified to be a multilateral Chemical factory having sufficient and basic facilities, so that to establish a D.O.P. plant there benefits us so much than erecting a factory in somewhere else as far as operative, technical and administrative matters concerned. In addition, we can not neglect a perpetual advantage that we shall be able to enjoy in improvement of quality in connection with raw materials and finished goods, for the plants of these manufactures are closely located to each other. To use our Takasago plant, comparing with erecting a new plant in somewhere else, shall be able to save us tremendous expenditures and time to erect.
All fundamental studies of producing plasti cizer have being finished in our Hyogo and Takasago experimental stations, and we have a conviction of its industrialization. Such being the case, we are sincerely willing to be granted an official permission in the earliest possible date for Authorized use and Movement of the Reparated Equipments.

4. Since Butanol is a basic and chief material of D.O.P., to establish a D.O.P. 50 ton plant within Takasago factory compound, added to existing Butanol plant, is quite rational and matchable in aspects of operations and capacities, and thus we can reduce producing cost of D.O.P., and other administrative benefits can be gained.

5. 30,000 cubic metres Hydrogen which is needed for producing Octanol that is essentially needed for producing D.O.P. 50 ton, can be obtained from by-producted Hydrogen in fermenting process of producing Butanol, and its quantity is sufficient and enough. In case when a new plant is going to be erected to get Hydrogen in that much, we suppose, about ¥10,000,000.00 is needed for factory buildings only, and about 200,000 K.W.H./month electricity is required to run the water decomposition equipment. But, we can save both when Takasago plant is used for.

6. To meet with the purpose of 50 ton D.O.P. production, space of 800 tsubo is needed for factory buildings only. We can use ferro-concrete factory buildings which have been established in the compound, for same purpose, so that construction expense ¥20,000,000.00 and time to build can wholly be saved.

7. Universal equipment such as boiler, electricity receiving, watering and others are all quite ready for immediate use to this purpose, and their capacities are in excess at present. Naturally, not only tremendous expenditures for newly erecting can be saved for, but considerable benefits, and conveniences can be obtained in aspect of operation.

C. Outline of operation plan and its connection with operation heretofore:

1. Outline of operation plan:

A. Production amount estimated:

D.O.P. 50 ton per month.

B. Materials to be required:

For constructions-

| | |
|---|---|
| Steel | 500 ton |
| Stainless steel | 5 " |
| Copper | 30 " |
| Portland cement | 1,000 " |
| Tin | 1 " |
| Lead | 5 " |
| Lumber | 500 b. ft. |

These above-mentioned estimations are made for all newly built plant.

Raw materials (per month)-

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D.O.P. 50 ton per month.

B. Materials to be required:

For constructions-

| | |
|---|---|
| Steel | 500 ton |
| Stainless steel | 5 " |
| Copper | 30 " |
| Portland cement | 1,000 " |
| Tin | 1 " |
| Lead | 5 " |
| Lumber | 500 b. ft. |

These above-mentioned estimations are made for all newly built plant.

Raw materials (per month)-

| | |
|---|---|
| Butanol | 65 ton |
| Phthalic anhydride | 23.5 " |

C. Fund:-

| | |
|---|---|
| For constructing | ¥145,000,000.- |
| For operation | "100,000,000.- |

But, the outline of operation funds using, per month, estimated at present are

Income

| | |
|---|---|
| D.O.P. 50 ton | ¥ 35,000,000.- |



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Expenditures

| | | |
|---|---|---|
| Purchasing expenses for raw materials | ¥ | 26,354,000.- |
| Manufacturing expenses | " | 2,467,000.- |
| Depreciation funds | " | 1,317,000.- |
| Sales & administrative expenses | " | 2,856,000.- |
| Total | ¥ | 32,994,000.- |

Method of raising funds:

Installation funds:-

Debenture or loan.

Operation funds:-

Loan.

D. Employee:

| | |
|---|---|
| Stuff officers | 6 men |
| Workmen | 33 " |
| Total | 39 men |

2. Outline of connection with operation heretofore:-

A. Production of poly-vinyl-chloride in our Osaka Factory so far amounted to 50 ton per month, has been increased to 100 ton per month from this March.

B. Butanol, chief material of D.O.P., has commenced 90 ton production per month from this March

---------- E N D ----------

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Operation funds:-

Loan.

D. Employee:

| | |
|---|---|
| Stuff officers | 6 men |
| Workmen | 33 " |
| Total | 39 men |

2. Outline of connection with operation heretofore:-

A. Production of poly-vinyl-chloride in our Osaka Factory so far amounted to 50 ton per month, has been increased to 100 ton per month from this March.

B. Butanol, chief material of D.O.P., has commenced 90 ton production per month from this March

---------- E N D ----------

Signed by

K. Nakatsukasa

(K. Nakatsukasa)
President
of
Kanegafuchi Kagaku Kogyo Kabushiki
Kaisha.



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Application for Authorized Use and

Move of the Reparation Equipment

OSAKA CORK INDUSTRY CO.,LTD.

45-7
Seattle

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# ATTACHED DOCUMENT

I hereby pledge that, when if you approve my application, dated (date), for movement and Authorized Use of the machinery and or equipment in the Tokuyama Ex-3rd Navy Arsenal, I will observe any and all directives affecting custody and maintenance of reparation machinery and equipment which have been issued or may hereafter be issued by the Supreme Commander for the Allied Powers.

Signed by K. Nakatsukasa
(Kiyoshi Nakatsukasa)
President
of

I hereby pledge that, when if you approve my application, dated (date), for movement and Authorized Use of the machinery and or equipment in the Tokuyama Ex-3rd Navy Arsenal, I will observe any and all directives affecting custody and maintenance of reparation machinery and equipment which have been issued or may hereafter be issued by the Supreme Commander for the Allied Powers.

Signed by K. Nakatsukasa
(Kiyoshi Nakatsukasa)
President
of
Kanegafuchi Kagakukogyo Kabushiki Kaisha.

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## List of Facilities under Application

| | |
|---|---|
| Code No. | 45 - 7 |
| Name of Plant | Tokuyama Ex-3rd Navy Arsenal |
| Address of Plant | Tokuyama-Shi, Yamaguchi Pref. |
| Machinery | Synthetic Methanol Plant |

| Inventory No. | Name of Machinery | Brief Specification | Quantity | Sheet No. | Remarks |
|---|---|---|---|---|---|
| 339 (1) | Blower | Roots, Horizontal, Single stage, Cap. 600 $m^3$/H Press 600 mm/$H_2O$ 1,750 RPM bore 8" Note: (1) For transmission of water gas (2) With 15 HP steam engine. | 1 | 302 | THWAITES U. S. A. 1934 |
| 339 (2) | Turbine Pump | 6 stages, single suction, Cap. 0.679 $m^3$/min Head 180 m/$H_2O$ 1,740 RPM. Suc. | 1 | 302 | Tenske Japan 1934 |

| Inventory No. | Name of Machinery | Brief Specification | Quantity | Sheet No. | Remarks |
|---|---|---|---|---|---|
| 339 (1) | Blower | Roots, Horizontal, Single stage, Cap. 600 $m^3$/H Press 800 mm/$H_2O$ 1,750 RPM bore 8" Note: (1) For transmission of water gas. (2) With 15 HP steam engine. | 1 | 302 | THWAITES U. S. A. 1934 |
| 339 (2) | Turbine Pump | 6 stages, single suction, Cap. 0.679 $m^3$/min Head 180 m/$H_2O$ 1,740 RPM. Suc. bore 4" Del. bore 3", Body: Cast iron Note: (1) For cooling water (2) With 50 H.P. induction motor & switch box | 1 | 302 | Tanaka Japan 1934 |
| 339 (3) | Turbine pump | 6 stages, single suction Motor driven Cap. 0.675 $m^3$/min Head 180 m/$H_2O$ 174 RPM. Del. bore 3" Body: Cast iron Suc. Boer 4" Note: (1) For cooling water (2) With 50 HP induction motor & switch box | 1 | 302 | Tanaka Japan 1934 |

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| Inventory No. | Name of Machinery | Brief Specification | Quantity | Sheet No. | Remarks |
|---|---|---|---|---|---|
| 339 (4) | Turbine Pump | 2 stages single suction<br>Motor driven<br>Cap. 15 KL/H Head 60 m/$H_2O$ H. 760 RPM bore 2"<br>Body: Cast iron<br>Note: For supply of caustic soda<br>Note:<br>(1) This motor missing<br>(2) With 7.5 HP induction motor | 1 | 303 | Ishii Japan 1934 |
| 339 (5) | Turbine Pump | 1 stage, single suction<br>Motor driven<br>Cap. 15 KL/H Head 40 m/$H_2O$<br>1.760 RPM bore 2"<br>Body: Cast iron<br>Note:<br>(1) For supply of caustic soda<br>(2) With 5 HP induction motor & switch box<br>Note:<br>This switch missing | 1 | 303 | Ishii Japan 1935 |
| 339 (7) | Cooling | Vertical, cylindrical | 1 | 303 | Ishii |

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| | | | | | | |
|---|---|---|---|---|---|---|
| | Pump | suction<br>Motor driven<br>Cap. 15 Kl/H Head 40 M/$H_2O$<br>1.760 RPM bore 2"<br>Body: Cast iron<br>Note:<br>(1) For supply of caustic soda<br>(2) With 5 HP induction motor & switch box<br>Note:<br>This switch missing | 1 | 303 | Ishii<br>Japan<br>1935 | |
| 339 (7) | Cooling tower | Vertical, cylindrical shower type<br>Wooden grate, Room Equipment<br>side inlet 10"<br>outlet 8"<br>Gas inlet temp. 400°C Outlet 30°C<br>Press atmos.<br>Dia 1.75 m H 6.00 m<br>Volume 14 M3<br>Note: For cooling and washing gas | 1 | 303 | Ishii<br>Japan<br>1934 | |
| 339 (8) | Gas purifier | Vertical, Cylindrical, Closed shower<br>Wooden grate<br>Iasaigring<br>Gas inlet 8" outlet 8"<br>Shower inlet 3"<br>outlet 3"<br>Dia. 1.80 m H. 9.00 m. Volume 7 m3<br>Note: For Desulphurising | 1 | 304 | Ishii<br>Japan<br>1934 | |

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| Inventory No. | Name of Machinery | Brief Specification | Quantity | Sheet No. | Remarks |
|---|---|---|---|---|---|
| 339 (9) | Soda Regneretor | Vertical, Cylindrical, Room Equip.<br>Shower, lassigring<br>Gas treating cap. 400 $m^3/H$<br>Gas inlet 8"<br>outlet 8"<br>Water tube 3" | 1, 1 | 304 | Ishii<br>Japan<br>1934 |
| 339 (10) | Gas Purifier | Vertical, Cylindrical<br>See board<br>Gas inlet 8"<br>outlet 8"<br>Water tube 3"<br>Dia 1.80 m. H. 14.00 m.<br>Volume 35$m^3$<br>Note: For gas exhauster | 1 | 304 | Ishii<br>Japan<br>1934 |
| 339 (11) | Scrubbing tower | Vertical, Cylindrical<br>Water sealed<br>Cap. 400 $m^3/H$<br>Test press: 20 $kg/Cm^2$<br>Normal Press, 15 $kg/Cm^2$<br>Gas inlet 3"<br>outlet 2"<br>Dia 1.20 m H. 11.00 m<br>Note: For $CO_2$ | 1 | 304 | Ishii<br>Japan<br>1934 |
| 339 (12) | Scrubbing tower | Vertical, Cylindrical<br>water sealed<br>Cap. 400 $m^3/H$<br>Test Press. 20 $kg/Cm^2$<br>Normal press | 1 | 305 | Ishii<br>Japan<br>1934 |

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|---|---|---|---|---|---|
| | | Note: For gas exhauster | | | |
| 339 (11) | Scrubbing tower | Vertical, Cylindrical<br>Water sealed<br>Cap. 400 $m^3$/H<br>Test press: 20 kg/$Cm^2$<br>Normal Press, 15 kg/$Cm^2$<br>Gas inlet 3"<br>outlet 2"<br>Dia 1.20 m H. 11.00 m<br>Note: For $CO_2$ | 1 | 304 | Ishii<br>Japan<br>1934 |
| 339 (12) | Scrubbing tower | Vertical, Cylindrical<br>water sealed<br>Cap. 400 $m^3$/H<br>Test Press. 20 kg/$Cm^2$<br>Normal press<br>15 kg/$Cm^2$<br>Gas inlet 3"<br>outlet 2"<br>Dia. 1.20 m. H. 11.00 m.<br>Note: For $CO_2$ | 1 | 305 | Ishii<br>Japan<br>1934 |
| 339 (13) | Water separater | Vertical,<br>Cylindrical<br>Cap. 2$m^3$ Dia. 0.80 m<br>H. 4.00 m.<br>Press 20 kg/$Cm^2$<br>Note: For scrubbing gas | 1 | 305 | Ishii<br>Japan<br>1934 |

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| Inventory No. | Name of Machinery | Brief Specification | Quantity | Sheet No. | Remarks |
|---|---|---|---|---|---|
| 339 (14) | Water Separater | Vertical, Cylindrical<br>Cap. 2 $m^3$ Dia 0.80 m<br>H. 4.00 m<br>Press 20 kg/$Cm^2$<br>Note: For scrubbing gas | 1 | 305 | Ishii<br>Japan<br>1934 |
| 339 (15) | Water pressure reducer | Vertical, cylindrical<br>Cap. 6 kg. Dia. 1.10 m. H. 6.00 m.<br>Top gas outlet 2"<br>Water inlet 6"<br>Note: For water level Control of Gas scrubber<br>Bottomward partly broken for about 3000 $Cm^2$ but patched by cement | 1 | 305 | Ishii<br>Japan<br>1934 |
| 339 (16) | Gas purifier | Box type Dry system<br>Cap. 27 $m^3$ L. 3.00 m. 3.00 m. H. 3.00 m.<br>Wooden grate<br>Iron oxide packed $Fe_2O_3$<br>Note: For Desulphurizing | 1 | 306 | Ishii<br>Japan<br>1934 |
| 339 (17) | Gas purifier | Box type. Dry system<br>Cap. 27 m3 L. 300 m.<br>H. 3.00 m. H. 3.00 m. | 1 | 800 | Ishii<br>Iron Works<br>Japan |

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|---|---|---|---|---|---|---|
| | | broken for about 3000 $Cm^2$ but patched by cement | | | | |
| 339 (16) | Gas purifier | Box type Dry system Cap. 27 $m^3$ L. 3.00 m. 3.00 m. H. 3.00 m. Wooden grate Iron oxide packed $Fe_2O_3$ Note: For Desulphurizing | 1 | 306 | Ishii Jepan 1934 | |
| 339 (17) | Gas purifier | Box type. Dry system Cap. 27 $m^3$ L. 300 m. W. 3.00 m. H. 3.00 m. Wooden grate Iron Oxide packed $Fe_2O_3$ Note: For Desulphurizing 1 ton chain block is necessary for opening the cover. | 1 | 800 | Ishii Iron Works Japan 1935 | |
| 339 (28) | Gas Holder | Water sealed, Cap. 400 $m^3$ Dia 10 m H. 5 m. | 1 | 800 | Ishii Iron Works Japan 1935 | |

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| Inventory No. | Name of Machinery | Brief Specification | Quantity | Sheet No. | Remarks |
|---|---|---|---|---|---|
| 339 (24) | Gas meter | Horizontal, Cylindrical, Wet type<br>Volume 3m³<br>Dia 1.50 m<br>L. 1.60 m<br>Inlet dia. 8"<br>Outlet 8"<br>Note: For measuring Raw gas | 1 | 307 | Kimmon Japan 1934 |
| 339 (25) | Gas compressor | Horizontal, simplex double acting, 4 stages,<br>Cap. 400 m3/H Suc. press. Atmos.<br>Del. Press 160 kg/Cm² Water cooling 120 RPM<br>Note:(1) For raw gas<br>(2) With 120 HP induction motor & switch box | 1 | 307 | Kobe Seiko Japan 1934 |
| 339 (26) | Gas compressor | Horizontal, Simplex Double acting 4 stages,<br>Cap. 400 m3/H<br>Suc. Press. Atmos. | 1 | 308 | Kobe Seiko Japan 1934 |

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|---|---|---|---|---|---|
| | | Del. Press 160 kg/Cm$^2$ Water cooling<br>120 RPM<br>Note:(1) For raw gas<br>(2) With 120 HP induction motor & switch box | | | |
| 339 (26) | Gas compressor | Horizontal, Simplex<br>Double acting<br>4 stages,<br>Cap. 400 m$^3$/H<br>Suc. Press. Atmos<br>Del. press 160 kg/Cm$^2$<br>Water cooling<br>120 RPM<br>Note:<br>(1) For raw gas<br>(2) With 120 HP induction motor & switch box<br>Gas cooler<br>Shell and coils<br>Tube: inlet 2"<br>outlet 1¼" & 1"<br>Dia 1.00 m H 1.60 m<br>Gas cooler<br>Shell and coils<br>Tube: inlet 2"<br>outlet 2"<br>Dia 1.20 m H 2.00 m | 1 | 308 | Kobe<br>Seiko<br>Japan<br>1934 |

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| Inventory No. | Name of Machinery | Brief Specification | Quantity | Sheet No. | Remarks |
|---|---|---|---|---|---|
| 339 (27) | Gas compressor | Horizontal, simplex<br>Double acting<br>Cap. 3,000 m3/H<br>Del. Press 130 - 160 kg/Cm2<br>Water cooling<br>Note:<br>(1) For circulating Gas<br>(2) With 10 HP induction motor & switch box | 1 | 309 | Kobe Seiko-Sho<br>Japan<br>1934 |
| 339 (28) | Gas Compressor | Horizontal, simplex,<br>Double acting<br>Cap. 300 m3/H<br>Del. press 130 - 160 kg/Cm2<br>200 RPM<br>Water cooling<br>Note:<br>(1) For circulating gas<br>(2) With 10 HP induction motor starter & switch box<br>(3) A pilot lamp of switch box missing | 1 | 309 | Mitsubishi<br>Japan<br>1934 |
| 339 (29) | Gas Compressor | Horizontal,<br>Simplex,<br>Double acting<br>Cap. 3,000 m3/H<br>Del. Press. 165 kg/Cm2 | 1 | 310 | Mitsubishi<br>Japan<br>1934 |

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|---|---|---|---|---|---|---|
| | | Cap. 300 m3/H<br>Del. press 130 - 160 kg/Cm2<br>200 RPM<br>Water cooling<br>Note:<br>(1) For circulating gas<br>(2) With 10 HP induction motor starter & switch box<br>(3) A pilot lamp of switch box missing | | | 1934 | |
| 339 (29) | Gas Compressor | Horizontal,<br>Simplex,<br>Double acting<br>Cap. 3,000 m3/H<br>Del. Press. 165 kg/Cm2<br>Water cooling<br>Note:<br>(1) For circulating gas<br>(2) With 11 H.P. induction motor & switch box | 1 | 310 | Mitsubishi<br>Japan<br>1934 | |
| 333 (83) | Transformer | Indoor, oil immersed self cooling<br>100 K.V.A. 1 phase<br>P.V. 3,300,<br>S.V.210 - 105 V. | 1 | 759 | Meiden<br>Japan<br>1936 | |

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| Inventory No. | Name of Machinery | Brief Specification | Quantity | Sheet No. | Remarks |
|---|---|---|---|---|---|
| 333 (84) | Transformer | Indoor, oil immersed, self cooling, 100 KVA 1 phase P.V. 3,300, S.V. 210 - 105 V. Note: without oil | 1 | 759 | Meiden Japan 1936 |
| 333 (85) | Transformer | Indoor, oil immersed, self cooling 100 K.V.A. 1 phase P. V. 3,300 S. V. 210 - 105 V. Note: without oil | 1 | 759 | Meiden Japan 1936 |
| 339 (33) | Air blower | Turbo, 3 stage, Note: (1) Motor in separately located in bldg. No.27. Made at Meiden Sha. (2) With 5 HP induction motor & switch. | 1 | 311 | Kobukuro Japan 1934 |
| 339 (35) | Induction regulator | Oil immersed, self cooling Hand operated Cap. 50 KVA. 1 phase 60 cycle 220V. | 1 | 312 | Shibaura Japan 1934 |

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|---|---|---|---|---|---|---|
| | | Note:<br>(1) Motor in separately located in bldg. No.27. Made at Meiden Sha.<br>(2) With 5 HP induction motor & switch. | | | Japan 1934 | |
| 339 (35) | Induction regulator | Oil immersed, self cooling<br>Hand operated<br>Cap. 50 KVA. 1 phase 60 cycle 220V.<br>Note: For regulating reaction tower temp. | 1 | 312 | Shibaura Japan 1934 | |
| 339 (36) | Induction regulator | Oil immersed, self cooling<br>Hand operated<br>Cap. 50 K.V.A.<br>1 phase<br>60 cycle 220 V.<br>Note: For Regulating reaction tower temp. | 1 | 312 | Shibaura Japan 1934 | |
| 339 (37) | Induction regulator | Oil immersed, self cooling<br>Hand operated<br>Cap. 50 KVA. 1 phase 60 cycle 220 V.<br>Note: For regulating reaction tower temp. | 1 | 312 | Shibaura Japan 1934 | |
| 339 (34) | Crane | Overhead travelling, Hand, operated lifting Cap, 3tons lift 4.oom<br>Rail span 4.75m | I | 312 | Kobukuro Japan I934 | |

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| Inventory No. | Name of Machinery | Brief Specification | Quantity | Sheet No. | Remarks |
|---|---|---|---|---|---|
| 339 (38) | Induction regulator | Oil immersed, self cooling<br>Hand operated.<br>Cap. 50 KVA.<br>1 phase 60 cycle 220V<br>Note: For regulating reaction tower temp. | 1 | 317 | Shibaura Japan 1934 |
| 339 (39) | Mixing tank | Vertical, Cylindrical<br>Cap. 6m3 Dia. 1.60 m.<br>H. 3.50 m.<br>Body: Wooden<br>Note: With heating coil for catalyst manufactured | 1 | 312 | Unknown Japan 1934 |
| 339 (40) | Mixing Tank | Vertical, Cylindrical<br>Cap. 6 m3 Dia. 1.60 m.<br>H. 3.50 m.<br>Copper lining<br>Note: For catalyst manufactured agitator | 1 | 313 | Unknown 1934 |
| 339 (41) | Distillation still | Vertical, Cylindrical<br>Vessel Cap. 2.5 t/day<br>Dia. 1.85 m.<br>H. 1.85 m<br>Body:<br>(X) Copper<br>Note: (1) For methanol distillation<br>(2) With steam | 1 | 313 | Unknown 1934 |

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|---|---|---|---|---|---|
| | | Note: With heating coil for catalyst manufactured | | | |
| 339 (40) | Mixing Tank | Vertical, Cylindrical Cap. 6 m3 Dia. 1.60 m. H. 3.50 m. Copper lining Note: For catalyst manufactured agitator | 1 | 313 | Unknown 1934 |
| 339 (41) | Distillation still | Vertical, Cylindrical Vessel Cap. 2.5 t/day Dia. 1.85 m. H. 1.85 m Body: XX Copper Note: (1) For methanol distillation (2) With steam heater, column, copper bubble tray, copper refluxer & copper condenser | 1 | 313 | Unknown 1934 |
| 339 (42) | Distillation Still | Vertical Cylindrical Vessel Cap. 2.5 T/Day Dia. 1.85 m. H 1.85 m. Body: Copper Column, Bubble, Tray 42 Body: Copper, Refluxer, Vertical Cylindrical Body: Copper, Condenser, Shell and Tubes Cooling Surface 3 $m^2$ Body: Copper Note: For Methanol Distillation | 1 | 314 | Unknown 1934 |

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| Inventory No. | Name of Machinery | Brief Specification | Quantity | Sheet No. | Remarks |
|---|---|---|---|---|---|
| 339 (43) | Steam Pump | Horizontal, Duplex Double Acting Worthington Cap. 1 KL/H Note: For Discharging Residumm | 1 | 314 | Unknown Japan (?) 1922 |
| 339 (44) | Centrifugal Dehydrator | Vertical, open, Note: (1) For Dehydration from catelyst Cake (2) With 3HP induction motor | 1 | 314 | Tanaka Japan 1934 |
| 339 (45) | Plunger Pump | Vertical, Simplex, Single Acting Belt Driven Cap. 3 $m^2$/H Cylinder Dia 3½" Press 6 kg/$Cm^2$ Bore 1½" Note: Motor Missing | 1 | 315 | Unknown Japan 1934 |
| 339 (46) | Hydraulic Pressure Tester | Hand Control Max. Press. 400 kg/$Cm^2$ Body: Steel Note: With two pistons | 1 | 315 | Yoshioka Japan 1934 |
| 339 (47) | Gas Filter | Vertical, Cylindrical Cap. 400 $m^3$/H Press. 150 kg/$Cm^2$ Indic. 9.40 m | 1 | 315 | Kure Navy Arsenal Japan 1934 |

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|---|---|---|---|---|---|
| 339 (45) | Plunger Pump | Vertical, Simplex, Single Acting<br>Belt Driven<br>Cap. 3 $m^2$/H<br>Cylinder Dia 2½"<br>Press 6 kg/$Cm^2$<br>Bore 1½"<br>Note: Motor Missing | 1 | 315 | Unknown<br>Japan<br>1934 |
| 339 (46) | Hydraulic Pressure Tester | Hand Control<br>Max. Press. 400 kg/$Cm^2$<br>Body: Steel<br>Note: With two pistons | 1 | 315 | Yoshioka<br>Japan<br>1934 |
| 339 (47) | Gas Filter | Vertical, Cylindrical<br>Cap. 400 $m^3$/H Press. 150 kg/$Cm^2$<br>India. 0.40 M<br>Out-dia 0.60 M.<br>H. 4.3 M<br>Body: Special Steel<br>Note: For Desulphurizing | 1 | 315 | Kure Navy Arsenal<br>Japan<br>1934 |
| 339 (48) | Gas Filter | Vertical, Cylindrical<br>Cap. 400 $m^3$/H Press. 150 K.G./$Cm^2$<br>India 0.40 m Out-dia. 0.60 m.H. 4.30 m.<br>Body: Special Steel<br>Note: For Desulphurizing | 1 | 315 | Kure Navy Arsenal<br>Japan<br>1934 |

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| Inventory No. | Name of Machinery | Brief Specification | Quantity | Sheet No. | Remarks |
|---|---|---|---|---|---|
| 339 (49) | Receiver | Vertical Cylindrical<br>Cap. 1.2m$^3$ India<br>0.20 m Outdia 0.33 m<br>H 4.30 m Press<br>150 k.G/Cm$^2$<br>Body: Special Steel<br>Note: For Methanol | 1 | 315 | Kure Navy Arsenal<br>Japan<br>1938 |
| 339 (50) | Reaction tower | Vertical Cylindrical<br>Normal Press 150 KG/Cm$^2$<br>Reaction temp 250-300°C<br>India 0.40 m<br>Outdia 0.60 m<br>H. 4.30 m<br>Outlet O.D. 32 mm<br>Inlet O.D. 50 mm<br>Note: Electrical inner Heating | 1 | 316 | Kure Navy Arsenal<br>Japan<br>1938 |
| 339 (51) | Gas Filter | Vertical Cylindrical<br>Cap. 400 m$^3$/H<br>Press 150 KG/Cm$^2$<br>India. 0.20 m<br>Outdia. 0.33 m<br>H. 4.30 m.<br>Body: Special Steel<br>Note: For Desulphurizing | 1 | 316 | Kure Navy Arsenal<br>Japan<br>1938 |
| 339 (52) | Cooler | Shell and Coils<br>Cooling Surface 19 m$^2$<br>Tube Steel | 1 | 316 | Kobe Seiko<br>Japan<br>1938 |

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|---|---|---|---|---|---|---|
| | | Indie 0.40 m<br>Outdia 0.60 m<br>H. 4.30 m<br>Outlet O.D. 32 mm<br>Inlet O.D. 50 mm<br>Note: Electrical inner Heating | | | | 1938 |
| 339 (51) | Gas Filter | Vertical Cylindrical<br>Cap. 400 $m^3$/H<br>Press 150 KG/$Cm^2$<br>India. 0.20 m<br>Outdia. 0.33 m<br>H. 4.30 m.<br>Body: Special Steel<br>Note: For Desul-phurizing | 1 | 316 | Kure Navy Arsenal<br>Japan<br>1938 | |
| 339 (52) | Cooler | Shell and Coils<br>Cooling Surface 19 $m^2$<br>Tube Steel<br>Shell: Steel<br>Dia. 1.20 m.<br>H. 2.00 m<br>Note: For Cooling Gas | 1 | 316 | Kobe Seiko<br>Japan<br>1938 | |
| 339 (53) | Gas Filter | Vertical Cylindrical<br>Cap. 400 m3/H<br>Press 150 KG/$Cm^2$<br>India 0.40 m<br>Outdia 0.60 m<br>H. 4.30 m<br>Body: Special Steel<br>Note: For Desulphu-rizing | 1 | 316 | Kure Navy Arsenal<br>Japan<br>1934 | |

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| Inventory No. | Name of Machinery | Brief Specification | Quantity | Sheet No. | Remarks |
|---|---|---|---|---|---|
| 339 (54) | Gas Filter | Vertical Cylindrical<br>Cap. 400 $m^3$/H<br>Press, 150 KG/$Cm^2$<br>India 0.40 m.<br>Outdia 0.60 m.<br>H. 4.30 m.<br>Body: Special Steel<br>Note: For Desulphurizing | 1 | 317 | Kure Navy Arsenal<br>Japan<br>1934 |
| 339 (55) | Reaction tower | Vertical Cylindrical<br>Normal Temp 250 - 300°C<br>Normal Press. 150 kg/$Cm^2$<br>India 0.315 m.<br>Rise Inlet 32 mm. (O.D.)<br>Body: Forged Special Steel<br>1.5 M.M. Copper Plate Lining<br>Electrical Heater | 1 | 317 | Kure Navy Arsenal<br>Japan<br>1934 |
| 339 (56) | Receiver | Vertical Cylindrical<br>Cap. 0.17 $m^3$<br>India 0.365 m.<br>Outdia 0.55 m.<br>H. 1.70 m.<br>Press 150 kg/$Cm^2$<br>Body: Special Steel Forged<br>Note: For Methanol Receiver | 1 | 317 | Kobe Seiko<br>Japan<br>1934 |

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|---|---|---|---|---|---|---|
| | | Rise inlet 32 mm. (O.D.)<br>Body: Forged Special Steel<br>1.5 M.M. Copper Plate Lining<br>Electrical Heater | | | | |
| 339 (56) | Receiver | Vertical Cylindrical<br>Cap. 0.17 $m^3$<br>India 0.365 m<br>Outdia 0.55 m.<br>H. 1.70 m.<br>Press 150 kg/$Cm^2$<br>Body: Special Steel Forged<br>Note: For Methenol Receiver | 1 | 317 | Kobe Seiko<br>Japan<br>1934 | |
| 339 (57) | Cooler | Vertical Cylindrical tank & coils<br>Cooling Surface 2.5 $m^2$<br>Coil: Copper<br>Shell: Steel<br>Dia. 1.10 m<br>H. 1.50 m.<br>Note: For Cooling gas | 1 | 317 | Kobe Seiko<br>Japan<br>1934 | |
| 339 (58) | Reaction tower | Vertical Cylindrical<br>Normal temp, 250 - 300°C<br>Normal Press 150 kg/$Cm^2$<br>India 0.315 m H. 4.20 m.<br>Body: Special Steel Forged<br>1.5 mm Copper plate Lining Electrical Heater | 1 | 318 | Kure Navy Arsenal<br>Japan<br>1934 | |

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| Inventory No. | Name of Machinery | Brief Specification | Quantity | Sheet No. | Remarks |
|---|---|---|---|---|---|
| 339 (59) | Receiver | Vertical Cylindrical<br>Cap. 0.17 $m^3$<br>India 0.365 m<br>Outdia 0.55 m H.<br>1.70 m<br>Press. 1.50 $kg/Cm^2$<br>Body: Special Steel Forged<br>Note: For Methanol | 1 | 318 | Kobe Seiko<br>Japan<br>1934 |
| 339 (60) | Cooler | Vertical Cylindrical tank & coils<br>Cooling surface 2.5 $m^2$<br>Coils Copper tube<br>Shell. Steel<br>Dia 1.10 m H. 1.50m<br>Note: For cooling gas | 1 | 318 | Kobe Seiko<br>Japan<br>1934 |
| 339 (61) | Reaction tower | Vertical Cylindrical<br>Normal temp. 250 - 300°C<br>Normal Press 150 $kg/Cm^2$<br>India 0.315 m H. 4.20 m.<br>Body: Special Steel Forged<br>1.5 mm. Copper plate Lining<br>Electrical Heater | 1 | 318 | Kure Navy Arsenal<br>Japan<br>1934 |
| | | | 1 | 318 | Kobe Seiko |

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|---|---|---|---|---|---|---|
| | | Die 1.10 m H. 1.50m<br>Note: For cooling gas | | | | |
| 339 (61) | Reaction tower | Vertical Cylindrical<br>Normal temp.<br>250 - 300°C<br>Normal Press 150 kg/Cm²<br>India 0.315 m H. 4.20 m.<br>Body: Special Steel Forged<br>1.5 mm. Copper plate Lining<br>Electrical Heater | 1 | 318 | Kure Navy Arsenal<br>Japan<br>1934 | |
| 339 (62) | Receiver | Vertical Cylindrical<br>Cap. 0.17 m³<br>India 0.365 m<br>Outdia 0.55 m<br>H. 1.70 m<br>Press 150 kg/Cm²<br>Body: Steel Plate Forged<br>Note: For Methanol | 1 | 319 | Kobe Seiko<br>Japan<br>1934 | |
| 339 (63) | Cooler | Vertical Cylindrical Tank & coils<br>Cooling Surface 2.5 m²<br>Coils: Copper<br>Shell: Steel<br>Dia 1.10 m<br>H 1.50 m<br>Note: For Cooling Gas | 1 | 319 | Kobe Seiko<br>Japan<br>1934 | |

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| Inventory No. | Name of Machinery | Brief Specification | Quantity | Sheet No. | Remarks |
|---|---|---|---|---|---|
| 339 (64) | Reaction Tower | Vertical Cylindrical<br>Normal temp.<br>250 - 300° C<br>Normal Press.<br>150 kg/Cm$^2$<br>India 0.315 m<br>H. 4.20 m.<br>Body: Special Steel Forged<br>1.5 mm. Copper plate Lining Electrical Heater | 1 | 319 | Kure Navy Arsenal<br>Japan<br>1934 |
| 339 (65) | Receiver | Vertical Cylindrical<br>Cap. 0.17 m$^3$<br>India 0.365 m.<br>Outdia 0.55 m<br>H. 1.70 m<br>Press 150 kg/Cm$^2$<br>Body: Steel plate Forged<br>Note: For methanol | 1 | 320 | Kobe Seiko<br>Japan<br>1934 |
| 339 (66) | Cooler | Vertical Cylindrical tank & coils<br>Cooling Surface<br>2.5 m$^2$<br>Normal Press usual<br>Coils: copper, shell;steel<br>Dia. 1.10 m<br>H. 1.50 m<br>Note: For cooling gas<br>Shell: Steel | 1 | 320 | Kobe Seiko<br>Japan<br>1934 |
| | | | 1 | 320 | Fukukura |

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|---|---|---|---|---|---|
| | | Outdia 0.55 m<br>H. 1.70 m<br>Press 150 kg/Cm$^2$<br>Body: Steel plate Forged<br>Note: For methanol | | | |
| 339 (66) | Cooler | Vertical Cylindrical tank & coils<br>Cooling Surface 2.5 m$^2$<br>Normal Press usual<br>Coils: copper, shell; stael<br>Dia. 1.10 m<br>H. 1.50 m<br>Note: For cooling gas<br>Shell: Steel | 1 | 320 | Kobe Seiko<br>Japan<br>1934 |
| 339 (67) | Crane | Overhead travelled<br>Hand operated 10 tons.<br>Lift 8 m.<br>Span 6.8 m.<br>Length of Rail 24 m. | 1 | 320 | Kobukuro<br>Japan<br>1934 |
| 339 (68) | Induction Regulator | Oil immersed Self Cooling<br>Hand operated<br>Cap. 15 K.V.A.<br>1 phase 220 V.<br>Note: For Regulating Reaction Tower Temp. | 1 | 320 | Shibsura<br>Jepan<br>1934 |

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| Inventory No. | Name of Machinery | Brief Specification | Quantity | Sheet No. | Remarks |
|---|---|---|---|---|---|
| 339 (69) | Induction Regulator | Oil Immersed Self Cooling<br>Hand operated<br>Cap. 15 K.V.A.<br>1 phase 220 V.<br>Note: For Regulating Reaction Tower temp | 1 | 320 | Shibaura<br>Japan<br>1934 |
| 339 (70) | Induction Regulator | Oil Immersed, Self-cooling Hand operated<br>Cap. 15 K.V.A.<br>1 phase 220 V.<br>Note: For regulating reaction tower temp. | 1 | 321 | Shibaura<br>Japan<br>1934 |
| 339 (71) | Induction Regulator | Oil Immersed Self cooling<br>Hand operated<br>Cap. 15 KVA 1 phase 220 V.<br>Note: For regulating reaction tower temp. | 1 | 321 | Shibaura<br>Japan<br>1934 |
| 339 (72) | Induction Regulator | Oil Immersed, Self cooling Hand operated<br>Cap. 25 KVA 1 phase 220 V.<br>Note: For regulating reaction tower temp.<br>Switch board<br>Panel marble, pipe frame<br>W 0.45 m. H. 1.50 m.<br>O.C.B. 600 V. 300A<br>Note: Voltmeter missing | 1 | 321 | Hitachi<br>Japan<br>1944 |

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| | | | | | | |
|---|---|---|---|---|---|---|
| | | Regulator | cooling<br>Hand operated<br>Cap. 15 KVA 1 phase<br>220 V.<br>Note: For regulating reaction tower temp. | ... | | Japan<br>1934 |
| | 339 (72) | Induction Regulator | Oil Immersed, Self cooling Hand operated<br>Cap. 25 KVA 1 phase<br>220 V.<br>Note: For regulating reaction tower temp.<br>Switch board<br>Panel marble,<br>pipe frame<br>W 0.45 m. H. 1.50 m.<br>O.C.B. 600 V. 300A<br>Note: Voltmeter missing | 1 | 321 | Hitachi<br>Japan<br>1944 |
| | 339 (73) | Switch board | Direct control board<br>Vertical, panel<br>Size of panel<br>L. 0.45 m.<br>W. 0.30 m.<br>H. 2.10 m.<br>Steel plate A.C.<br>3,500 V.<br>100 A 600 KW<br>3 phase<br>Note: 20, L. Relay<br>4.1/kwh, meter missing | 1 | 321 | Nissin<br>Japan<br>1934 |

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| Inventory No. | Name of Machinery | Brief Specification | Quantity | Sheet No. | Remarks |
|---|---|---|---|---|---|
| 339 (74) | Switch board | Direct Control board<br>vertical, panel, marble<br>A.C. 400V. 3 phase<br>Note: Volt meter & KWH meter missing | 1 | 322 | Oseke Denki<br>Japan<br>1934 |
| 339 (75) | Switch board | Direct control board<br>Vertical, panel, marble<br>A.C. 400 V. pipe frame works<br>Note: 4 panels 1 set<br>3 knife switch<br>2 ammeter & 2 C.T. 5/75 A missing | 1 | 322 | Nissin<br>Japan<br>1934 |
| 339 (76) | Converting furnace | Naval type<br>Cap. 75 l/H.<br>Normal temp. 400°C<br>L 8.00 m. W. 2.75 m.<br>H. 5.00 m.<br>Note: For converting gas<br>2 Heat exchanger<br>Converter<br>Vertical, Cylindrical | 1 | 322 | Unknown<br>Japan<br>1934 |
| 339 (77) | Stack | Dia. 1.00 m.<br>H. 23.00 m.<br>Constr. riveted | 1 | 323 | Unknown<br>Japan<br>1934 |

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