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

YAMAGUCHI BRANCH
HIROSHIMA FINANCE BUREAU

27 Aug. 1949

SUBJECT: Application for Permission of Transference of Reparations Machines in Authorized Use

TO: Commanding Officer,
Yamaguchi Civil Affairs Team

45-5
IV B

We should like to be granted your permission to move the listed three machines in authorized use to a new location by the following reason, and hereby submit this applications.

The reason is:

The former Miyoshi Chemical Co. Ltd., 2600 Muronoki, Iwakuni-shi, moved in September, 1946, to 1340 Nishi-toyoi Kudamatsu-shi and named itself the Kudamatsu Ship Building Co. Ltd. On 5 May,1949, its name was changed as the Sanyo Industry Co. Ltd., and the same business is being carried on.
The items has been in use at the original location of the former Miyoshi Chemical Co. Ltd. The present location of the three items being inconvenient and worthless for the business, the said company wants to move them to Kudamatsu-shi.

27 Aug '49
OK
EL

K. Onaga

KINTARO ONAGA

Chief,
Yamaguchi Branch,
Hiroshima Finance Bureau

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

LIST OF MACHINES EXPECTED TO BE MOVED

Inventory No.	Name of Machine	Qt.	Present Location	Destination
45-5-499(60)U	Drum Can Adjuster	1	2600 Muronoki Iwakuni-shi	1340 Nishi-toyoi, Kudamatsu-shi
45-5-391-U "45-5-391U"	Air Compressor	1	do	do
45-5-391-2U "45-5-391U"	Air Receiver for Above	1	do	do

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

THE SANYO INDUSTRY CO. LTD.
(Former Kudamatsu Ship Buolding Co. Ltd.)
1340 Nishi-toyoi, Kudamatsu-shi.

27 Aug. 1949

SUBJECT: Application for Permission of Transferring Authorized Use Machines

TO: Chief of Yamaguchi Branch,
Hiroshima Finance Bureau

Since we began our business at Kudamatsu-shi the new location of our company under the changed name, the Industry Co. Ltd., we should like to beg you to grant us permission to move the following three machines under authorized use to the new site of our company, and hereby submit this application for your esteemed consideration.

Inventory No.	Name of Machine	Qt.
45-5-499(60)U "45-5-499(60)U"	Drum Can Adjuster	L
45-5-391-1U "45-5-391U"	Air Compressor	1
45-5-391-2U	Air Receiver for Avove	1

Present Location: 2600 Muronoki, Iwakuni-shi

Destination: 1340 Nishi-toyoi Kudamatsu-shi

Eitaro Watanabe

EITARO WATANABE

Managing Director,
Sanyo Industry Co. Ltd.

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

YAMAGUCHI BRANCH
HIROSHIMA FINANCE BUREAU

27 Aug. 1949

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K. Onaga

KINTARO ONAGA

Chief,
Yamaguchi Branch,
Hiroshima Finance Bureau

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

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

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(Former Kudamatsu Ship Buolding Co. Ltd.)
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27 Aug. 1949

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Present Location: 2600 Muronoki, Iwakuni-shi

Destination: 1340 Nishi-toyoi Kudamatsu-shi

Eitaro Watanabe

EITARO WATANABE

Managing Director,
Sanyo Industry Co. Ltd.

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

27A

5c

Masumoto Gumi Co., Ltd.

14,734 Hiro-cho, Kure-shi, Hiroshima-ken

Date: 29 July, 1947

To: Major Francis T. Justice

95-5
IV B

YAMAGUCHI MILITARY GOVERNMENT TEAM

Subject: Petition for removing private porperty

We shall be much obliged if we could have permission to remove our private property, equipments which were used for construction during war time.

At present, located in Iwakuni Fuel Depot.

Its items are as following:-

Name of Equipment	Quantity
Mixer	1
Winch ¾" wire attached	1
Elevator	1
Motor 10 HP	1

Yours very respectfully,

Masaru Okamoto

Masaru Okamoto
Deputy, Masumoto Gumi Co., Ltd.

We certify that equipments listed above belonged to Masumoto Gumi and were used for construction of our Depot. It is not National Property and also not inventoried for reporations;

Hiroshi Tagaya

Hiroshi Tagaya
Plant Supt., Iwakuni Fuel Depot.

Seiji Yamamoto

Seiji Yamamoto
Chief, Iwakuni Administrative Agency

Yoshiharu Oku

Yoshiharu Oku
Chief, Yamaguchi Branch Office
Hiroshima Finance Bureau

Okd 5 Sep 47

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

IV B

2666.13

BASIC: Ltr. Hq BCOF Re: 953/1088, dtd 8 Oct 46, Subj: Removal of Engineer Equipment and Stores Located in Reparations Area.

5th Ind. D/LAM/lm

HIROSHIMA MILITARY GOVERNMENT TEAM, APO 317, Kure, Honshu, 22 November 1946.

THROUGH: Chugoku Military Government Region, APO 317

TO : Yamaguchi Military Government Team, APO 317

Forwarded as a matter pertaining to your headquarters.

45-5
IV B

KARL L. SPRINGER
Lt. Col., Inf.
Commanding

Incl:

Ltr Hq. BCOF, CE Branch, Re: 953/1088, dtd 8 Oct 46.
" Eighth Army AG 386.3(MG-P) dtd 7 Nov 46.
Both subj: Removal of Eng. Stores and Equipment at Iwakuni Fuel Depot.

6th Ind D/GM/ltn

CHUGOKU MILITARY GOVERNMENT REGION, APO 317, Kure, Honshu, 26 Nov 1946

TO: Commanding Officer, Yamaguchi Military Government Team, APO 317

1. For compliance.

BY ORDER OF COLONEL SNYDER:

ELZA B. NANCE
Major, Inf.
Adjutant

Incl: N/C

5790

8374

5869

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

BASIC: Ltr, Hq BCOF Re: 953/1088,dtd 8 Oct 46, Subj: Removal of Engineer Equipment and Stores Located in Reparations Area.

AG 386.3 (MG-P) 3rd Ind 7 NOV 1946

Headquarters Eighth Army, APO 343

TO: Commanding Officer, Chugoku Military Government Region, APO 317

1. Use by BCOF of materials listed in basic communication is approved, as such materials are not being held for reparations.

2. However it is the responsibility of your headquarters to determine whether or not such materials have been returned to the Home Ministry. In the event it is determined that the materials have been returned to the Home Ministry a procurement demand will be required.

BY COMMAND OF LIEUTENANT GENERAL EICHELBERGER:

R. SCHAFER
Lt. Col., AGD
Asst. Adjutant General

4th Ind D/EMN/hhm

CHUGOKU MILITARY GOVERNMENT REGION, APO 317, Kure, Honshu, 21 Nov 1946

TO: Commanding Officer, Hiroshima Military Government Team, APO 317

BY ORDER OF COMMANDING OFFICER:

ELIZ B. NANCE
Major, Inf.
Adjutant

5790
8314
8240
5669
5363 5864

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

BRITISH FORCES COMMONWEALTH

CE Branch
HEADQUARTERS
British Commonwealth
Occupation Force
JAPAN

RE: 9.53/1088

8 Oct 46

3863

Subject: REMOVAL OF ENGINEER EQUIPMENT AND STORES LOCATED IN REPARATIONS AREA

Commanding Officer
HIROSHIMA MG TEAM

Copy to:
Mil Govt Liaison Section

1. Request approval to remove the following equipment and stores from the IWAKUNI FUEL DEPOT OTAKE.

(a) Equipment required

Lightening arrestor towers ~~No.~~ la 6

(b) Stores required

Water piping mild steel (300 lbs/sq. in. test)

5"	diam	-	1660	ft.
3"	"	-	830	ft.
2"	"	-	3430	ft.
1¼"	"	-	30000	ft.
1"	"	-	13600	ft.
¾"	"	-	2660	ft.

2. The lightening arrestor towers included above are urgently required for re-erection at BCAIR transmitting station IWAKUNI.

3. Request confirmation that a procurement demand must be raised on Japanese Home Ministry to cover the abovequoted stores.

5-790

8374

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

BASIC: Ltr Hq BCOF Re: 953/1088, dated 8 Oct. 46. Subject: Removal of Engineer Equipment and Stores Located in Reparations Area.

1st Ind. D/LAM/lm

8596 HIROSHIMA MILITARY GOVERNMENT TEAM, APO 317, Kure, Honshu, 12 Oct. 1946

THROUGH: Chugoku Military Government Region, Hq & Hq Det., APO 317

TO : Commanding General, Eighth Army, APO 343

Forwarded recommending approval.

KARL L. SPRINGER
Lt. Col., INF
Commanding

Incl:

Ltr Hq BCOF 9.53/1088 - 8 Oct 46.

2nd Ind D/GEH/ltn

CHUGOKU MILITARY GOVERNMENT REGION, APO 317, Kure, Honshu, 15 Oct 1946

TO: Commanding General, Eighth Army, APO 343

1. Recommend approval.

FOR THE COMMANDING OFFICER:

ELZA B. NANCE
Major, Inf.
Adjutant

5-790

Incl: N/c

5470
8240

3880
3911
5363

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

DATE	SUBJECT	ISSUING HEADQUARTERS & [illegible]

IV.C.- DISPERSAL AREAS.

IV

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

DATE	SUBJECT	ISSUING HEADQUARTERS & INDORSEMENTS
14 MAY 1948	PLANT INSPECTION CHECK SHEET. (45-5)	Y.M.G.T.
15 JUL. 1949	INSPECTION OF ARSENALS IN YAMAGUCHI PREF.	G.H.Q, SCAP.
5 6 JAN. 1950	INSPECTION OF REPARATIONS MACHINERY. (45-5)	C.C.A.R.
17 FEB. 1950	INSPECTION OF OIL STORAGE AREA AT 45-5, SETO.	C.C.A.R.
" " "	INSPECTION OF OIL STORAGE AREA AT 45-5, IWAKUNI ARMY FUEL DEPOT.	C.C.A.R.
20 March 1950	Inspection of Reparation Plant at Shinko Kogyo Co. Ltd. Kurayoshi Plant 41-5	C.C.A.R.
27 Feb. 1950	Inspection at Iwakuni Fuel Depot 45-5 and 11th Air Arsenal 45-6	C.C.A.R.
4 May 1950	Inspection of Tokuyama Soda Company	C.C.A.R.
16 June 1950	A conference with Japanese officials of Iwakuni Finance Office (45-5)	C.C.A.R.
31 Aug. 50	Inspection of Iwakuni Fuel Depot.	C.C.A.R.
7 Sept. 50	Inspection of Iwakuni Fuel Depot	C.C.A.R.
16 Oct. 50	Inspection of Iwakuni Army Fuel Depot	CCAR
16 Nov. 50		
30 Nov. 50	Inspection of Reparations Equipment at Iwakuni Fuel Depot 45-5.	CCAR

V

V.- INSPECTION REPORTS.

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

HEADQUARTERS
CHUGOKU CIVIL AFFAIRS REGION
ECONOMICS SECTION

D/RPL/hk

30 November 1950

CCAR 319.1

SUBJECT: Report of Field Trip, Iwakuni City, Yamaguchi Prefecture, 13 November 1950

TO : Chief
Economics Section

PREPARED BY: Robert P. Lord, Distribution & Industry Division

MANUFACTURING AND INDUSTRY FILE 45-5 dec 11

1. REFERENCE:

Paragraph 3b, O.D.11, 10 April 1950

2. PURPOSE:

Inspection of reparations equipment at Iwakuni Fuel Depot 45-8.

3. BACKGROUND:

Routine

4. DISCUSSION:

The consolidation of reparations equipment, funds for which were authorized by this headquarters, from building No. 106 to section 1 of building No. 97 has been completed. Mr. Yamamoto, custodian, requested additional funds for the consolidation of thirty-five (35) items of equipment located in a storehouse across the road from the fuel depot. Mr Yamamoto desires to move this equipment into the fuel depot and store it in building No. 66. However, upon inspecting equipment it was found that seventeen (17) of the thirty-five (35) items requested for consolidation have been applied for scrapping and are considered by the writer to be of only scrap value. In view of this it is not considered practical to consolidate the thirty-five (35) items of equipment at a cost estimated to be ¥54,620. Finance Bureau officials were advised to leave equipment in the present location until action has been taken on their application for scrapping of the seventeen (17) items. When scrapping is approved it is recommended that the remaining eighteen (18) items of equipment be consolidated into

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

building No. 66 of the fuel depot. List of seventeen (17) items applied for scrapping is inclosed herewith.

On 17 August 1950, BCOF relinquished ninety-seven (97) buildings within the fuel depot. Some of these buildings contain no reparations equipment and are not required for storage of reparations equipment. Finance Bureau officials desire the release of the empty buildings but when their application for release of these buildings was submitted to BCOF it was returned without action. Finance Bureau officials were advised to submit the application to Civil Affairs who would in turn forward same to BCOF.

5. CONCLUSION:

Repair of buildings and fencing and maintenance of machinery is being performed with funds authorized by this headquarters under provisions of CPC Memo 387.6, 11 September 1950 subject: "Expenditure of Funds for Maintenance, Centralization of Machines, and Repair of Buildings in Reparations Plants".

Corrective action pointed out to Finance Bureau officials during inspection of this installation on 7 September 1950 has been completed.

Area 53, a part of the Koa Oil Company property, was inspected and equipment contained therein is recommended for scrapping. This area was previously inspected by CPC and recommended for scrapping, but no formal approval has been issued. Koa is desirous of setting up a dewaxing plant and cracking plant in the area. It is recommended that scrap down authorization be given as soon as possible.

6. RECOMMENDATION:

Pointed out in discussion.

R. P. LORD
Distribution & Industry Division

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

List of Equipment Applied For Scrapping Local Outside Arsenal Area

45 - 6 - 344	45 - 6 - 380
" 345	" 383
" 347	" 385
" 348	" 386
" 349	" 387
" 353	" 388
" 354	" 389
" 378	" 395
	" 422

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

HEADQUARTERS
CHUGOKU CIVIL AFFAIRS REGION
ECONOMICS SECTION

CCAR 319.1 (D-St) 16 October 1950

SUBJECT: Report of Field Trip, Iwakuni City, Yamaguchi Prefecture, 10th and 13th October 1950

TO : Chief
Economics Section

PREPARED BY: E. Kawamura, Distribution & Industry Division

1. REFERENCE:

O.D. 11

2. PURPOSE:

A conference with Iwakuni Finance officials and inspection of Iwakuni Army Fuel Depot (Ars. Oil St. 45-05, 45-06) for confirmation of the extent of typhoon damage and correctness of the report.

3. BACKGROUND:

An application had been submitted to this headquarters from Iwakuni Finance Office for the use of reparations fund to repair the damage done by Kezia Typhoon.

4. DISCUSSIONS:

Overall typhoon damage:

Classification	Extent of damage
Building(Housing Reparations items)	18 Bldg
Telephone line	7 places (300 meters)
Fence	18 places (240 meters)
Electric power line	4 places (750 meters)
Telephone pole	15 Pcs
Eletric wire for alarm(3 phases)	5 places (260m x 3)

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

NOTE: Repairs to buildings (not damaged by typhoon) for prevention from theft, 11 Buildings.

Classification	Estimated Amt required for repair
Building	¥145,250
Electric facilities	22,949.50
Fence	47,000
Total	¥215,199.50

NOTE: Repairs to buildings are broken down as follows:

Actual damage by Typhoon	¥103,612.70
Repairs for theft prevention	41,637.30
Total	¥145,250.00

Results of bidding by local contractors:

Name of Contractors	Amount bid for building repairs only
Masuda Gumi	¥260,000
Senuma "	251,500
Iino "	248,900

Mr. Yamamoto, Chief of Iwakuni Finance Office will request these three contractors in Iwakuni City to make rebidding in view of about ¥100,000 over and above the estimated repair cost to buildings by Iwakuni Finance Office.

A total of 942 reparations items have been on application for scrapping down, of which 725 items have been spot checked by CPC field operator Mr. Le Van.

No damage was effected on 45-6 but no items have been moved from 45-6 to 45-5 as yet.

Damage done on buildings:

Classification	Roof	Siding	Criteria used by Iwakuni Finance Office for repairs
Actual damage done by typhoon	159 tsubo (using tar on roof, 320 tsubo)	66 tsubo (1 door & 2 locks)	Roof, ¥361.06 per tsubo Siding, ¥377.20 per tsubo
Repairs needed for theft prevention	Nil	67 tsubo (new doors needed, 9 repairs of doors, 2 locks , 9)	

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

Materials needed for repairs and will be used from its stock on hand:

Items	Quantity
Coal tar	400 Kg.
Brush	10 Pcs.

Estimated repair cost for buildings:

Classification	Amount
Materials (Excluding above mentioned stock on hand)	¥ 43,650
Labor	100,000
Miscellaneous	1,500
Total	¥145,150

Estimated repair cost for electric facilities:

Classification	Amount
Materials	¥16,699.50
Labor	6,190
Miscellaneous	60
Total	¥22,949.50

Estimated repair cost for fences:

Classification	Amount
Materials	¥11,375
Labor	30,625
Miscellaneous	5,000
Total	47,000

Spot inspections have revealed as follows:

Classification	Items stored	Remarks
45-5-3F	Oil heating furnace	Concurred with Mr. Yamamoto that the item does not warrant any future repair of roofing
Building No.41 No.42, No.43	Steam pump rooms (Worthington pumps)	Window frames broken and need wooden boarding for theft prevention

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

Classification	Items stored	Remarks
No. 44	Centrifugal separator	Windows frames broken and need wooden boarding for theft prevention
No.51	Compressors	Leakage on the roof
No.55	Compressors	Windows frames broken and need wooden boarding for theft prevention
No.97	Compressors and motors	A part of roof is blown up
Others places checked		Fences and electric facilities, etc.

5. CONCLUSIONS:

a. If approved, the overall repair work could be accomplished within twenty (20) days according to Mr. Yamamoto, Chief of Iwakuni Finance Office.

b. So far as the reparations machines are concerned, no damage has been effected in Iwakuni Ex-army Fuel Depot.

c. Upon approval from Chugoku Finance Office and endorsement by CCAR, Mr. Yamamoto will make the local contractors submit their bid again and try to execute the repair work within the scope of cost estimate recommended to him.

d. Verbal permission was given to the officials to make as much use as possible of the building materials of No. 106 in order to reduce the repair expenses of fences and roofs damaged by Kezia Typhoon.

6. RECOMMENDATIONS:

It was recommended to the officials that:

a. They move the reparations items located in 45-6 to 45-5 for the eventual release of the latter building.

b. As for the Koa Oil Company's "Application for Removal of Designated Reparation Machinery and Equipment in Authorized Use", they advise the Koa Oil Company to submit an application for the transfer of eleven (11) items of Reparations

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

tankage and equipment to ESS, GHQ, SCAP in view of the fact that permit granted from Mr. Glass, ESS, GHQ, SCAP should not be construed to authorize the transfer of the eleven items from the Iwakuni Ex-Army Fuel Depot to the Koa Oil Company which previously applied for the use of the eleven items in question at the original location of the said Fuel Depot.

c. They move the twenty nine (29) Reparations machines housed in the building No.106 to the building No.96 in accordance to permission granted from this headquarters.

d. They employ the custodial personnel as much as possible for the repair work in order to reduce labor cost.

e. They expend a total of ¥200,199.50 for overall repair work reducing the total of ¥215,199.50 as previously claimed by them by ¥15,000. Especially greasing of machinery housed in No.86 and No.83 buildings be maintained in view of rust due to rain leakage.

f. They execute the repair of fences on a basis of unit price of ¥100 per meter or ¥24,000 per 240 meters reducing the previous cost estimate of ¥47,000 to ¥24,000 in view of the overestimation of the fence repair.

g. They conduct the maintenance of about 80 Reparations machines on a basis of ¥100 per machine or within the limit of ¥8,000.

h. They resubmit as soon as possible their cost estimate within the limit of ¥200,199.50 listing the code numbers of Reparations machines that require maintenance work.

R. G. STRADLEY
Chief, Distribution and
Industry Division

D/RGS/hk

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

FIELD TRIP REPORT

R. P. LORD

7 September 1950

1. Purpose:

Inspection of Iwakuni Fuel Depot (Code No. 45-5) and Seto Oil Storage, Iwakuni-shi, Yamaguchi Prefecture.

2. Background:

Surveillance of reparations custody and control in accordance with paragraph 3b O.D. 11, 10 April 1950.

3. Discussion:

No discussion was held with Finance Bureau representatives at this installation as all pertinent problems were discussed the day before this inspection between Chief, Economics Section, CCAR and Iwakuni Branch Finance Bureau chief and his staff.

4. Conclusion:

Inspection of all fuel depot equipment revealed the following discrepancies:

a. Twenty (20) machines in dead storage still marked with letter "U" although withdrawn from use six months ago and reported.

b. Forth (40) machines are assigned two seperate sets of code numbers. Correct code numbers were pointed out to Finance Bureau officials.

c. Building number 106 housing approximately 30 pieces of reparations equipment is in very poor shape. The floor of this building is completely rotten together with large section of side wall. One (1) item has fallen thru side wall and is lying outside biulding covered with sheet metal strips. Instructions were given to Finance Bureau officials to have this machine put back inside the building.

d. Oil storage tanks of Seto Oil Storage appeared in good condition.

5. Recommendations:

Finance Bureau officials were instructed to:

Correct discrepancies pointed out to them during inspection and noted above (a. b. c.).

MANUFACTURING AND INDUSTRY FILE 45-5

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

Mr. Yamamoto, Chief Finance Bureau, Iwakuni Branch was advised to submit application in triplicate to CCAR listing cost of removing equipment from building No. 106 to No. 97. We will in turn forward application to SCAP asking that funds for this movement be authorized.

It is the opinion of this writer that equipment now stored in building No. 106 be moved to safer enclosure which will be provided by building No. 97.

R. P. LORD
Distribution & Industry Division

D/RPL/fk

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

FIELD TRIP REPORT

H.C. KEISEL

Iwakuni
31 August 1950

1. Purpose:

Inspection of Iwakuni Fuel Depot, Iwakuni City, Yamaguchi Prefecture.

2. Reference:

Surveillance in accordance with O.D. 11.

3. Discussion:

Conferees:

Mr. Yamamoto, Chief of Iwakuni Branch of Chugoku Finance Office and his Staff.

"Correction to list of authrorized use items in use by Koa Oil Co., Ltd. and A.U. approved on 15 June 1950 by GHQ, SCAP, Memorandum 387.6 (15 June 50) ESS/IND., 1 August 1950" together with "Plan of Former Iwakuni Army Fuel Depot" indicating inventory number of plants, released area, reparations designated area, released land in use by private company and reparations area in Temporary Use by private company are in our file.

The utilization of the former Iwakuni Fuel Depot is being contested by the following three companies.

Name of Company	No. of Areas on Allication	Main Products to be Produced
Tokuyama Soda Co.	3. 5. 9.	Ammonium (Ammonium chloride at Tokuyama Plant)
Nippon Kogyo Co. (Operates Kawayama Mine, about 30 miles north of Iwakuni City)	3. 5. 9. part of 20 (for Sulphuric Acid)	Sulphuric Acid, Ammonium, Ammonium Sulphate
Nippon Chemical Industry Co. (Kokura, Kyushu)	2, 3, 5. 9. 18, 19, 20.	Urea and Plastics

Of the total of 25 units on application by the three contesting companies, 11 units are duplications.

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

Mr. Yamamoto is of the opinion that from the standpoint of rehabilitation of the Japanese economy it would be most logical to utilize the controversial areas for the production of Ammonium Chloride, and thus to reduce of the costs of Caustic Soda production in this country. However, the Iwakuni Finance Office recommended to the higher Government authorities concerned that Tokuyama Soda Co. and Nippon Kogyo Co. be selected in case two companies should come in and that Nippon Chemical Industry Co. be selected in case of one company only.

As regards the oil refinery facilities, it is rumoured that GHQ, SCAP is going to approve the removal of existing equipment and facilities by the undermentioned four companies:

Name of Company	Main Plant in Question	Location or No. of Areas
Koa Oil Co.	Lubricating Oil Plant	7
Mitsubishi Oil Co.	Solvent extraction plant	23
Toyo Nenryo Co.	Boilers	10
Showa Oil Co.	Water Feeding Plant (Diesel engine and pump)	1

Discussions with the Finance Officials has revealed that:

The water pump facilities in No. 1 area should remain of the area should be put in proper operation.

The lubricant oil plant in No. 7 area should remain if the Nippon Chemical Industry Co. should operate properly as planned.

According to the officials, Mr. Alley (spelled on a basis of their pronounciation), ESS, GHQ, SCAP made complete survey of the Dept on 10th, 11th and 12th on May 1950 and made the following remarks in relation to the future solution to the Depot:

Removal of all reparations equipment and facilities to the claimant nations---- which is impossible he stated.

Scrapping of all items and transforming the Depot area into a farm land.

Inducement of industrial plants to the area for rehabilitation and new operation.

In view of the shortage of electric power in Chugoku Region, it would be economical to use cheap coal in Yamaguchi Prefecture for the operation of the Producer Gas Plant and Water Gas plant in the production of

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Hydrogen and Oxygen to be used for Ammonium production instead of using the water electrolysis plant.

According to Mr. Yamamoto, if the capacity of the existing CO connecter in No. 5 area should be doubled it would be possible to produce about 28,000 tons of ammonium per year, which are equal to the yearly requirement of each one of the three companies mentioned above.

The electric power station in No. 3 area, if rehabilitated, has authorized generation capacity of 8,000 KW and actual capacity of 6,000 KW.

4. Conclusions:

No official information has been received by the Iwakuni Finance Office regarding the GHQ, SCAP or the Japanese Government policies on the utilization of the Iwakuni Fuel Depot.

5. Recommendation:

None.

HENRY C. KEISEL
Chief, Economics Section

D/HCK/fk

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

FIELD TRIP REPORT

R.G. STRADLEY

Iwakuni
16 June 1950

1. Purpose:

A conference with Japanese officials of Iwakuni Finance Office (45-5)

2. Background:

Surveillance in accordance with C.D. 11.

3. Discussion:

Conferees,

Mr. Yamamoto, Chief

Mr. Nunoshige, Liaison Staff, and three others.

a. Applications.

Name of Company	Date of Application	Date of Submittal to Chugoku Finance Office	Remarks
1. Tokuyama Soda Company	27 Dec. 1949	12 Jan. 1950	Use of Iwakuni Plant
2. Nippon Kogyo Company	"	"	"
3. Nippon Chemical Company	"	"	"
4. Koa Oil Company	28 Oct 1949	8 Nov. 1949	"

NOTE: 1, 2 and 3 are under consideration by the Central Japanese Government.

4 was sent to GHQ, SCAP on 23 Jan 1950 but no answer has been received. There are no applications held in this office as all have been forwarded to Chugoku Finance Office.

b. Guards.

Location	No. of Guards
Iwakuni Army Fuel Depot	44

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(Ars. 011 St. 45-5, 45-6)	
Oshima (45-28, 45-29)	5
Ogata (11-36)	5
Seta	5
11th Air Arsenal (11-40) (1 warehouse)	2
Total	61

Iwakuni Finance Office sent dismissal notice to 21 guards on 14 June 1950 reducing a total number of 82 guards to the present 61 guards.

4. Conclusion:

Iwakuni Finance Office is most efficient in reducing surplus guards as compared with Tokuyama and Hikari Finance Offices but there still are surplus guards in the area.

5. Recommendation:

a. It was recommended to Mr. Yamamoto that it is possible to futher reduce the present 61 gyards to around 40 guards.

b. In compliance with the opinion of GHQ, SCAP Mr. Yamamoto was advised to speed up the action taken on application as was pointed out to the chiefs of Tokuyama and Hikari Finance Offices.

R.G. STRADLEY

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

FIELD TRIP REPORT

R.G. STRADLEY

Iwakuni Arsenal 45°-5° 4 May 1950

1. Purpose:

Inspection of Tokuyama Soda Company.

2. Background:

Surveillance in accordance with C.D. 11.

3. Discussion:

Conferees:

Mr. Kageyama, President.
Mr. Nakazawa, Director, Chief Technical Department.
Mr. Eguchi, Auditor.
Mr. Miyoshi, in charge of production

a. Production during April 1950.

Items	Quantity
Ammonium Chloride,	
Industrial use	80 ton
Fertilizer	8.4
Ammonium Sulphate	Nil
Total	88.4 ton

b. Use of Iwakuni Plant.

Negotiations have been going on between Tokuyama Soda Company and Nippon Kogyo Company to find a satisfactory solution as to the use of Iwakuni Plant on the following points:

(1) Both companies concerned have reached the conclusion that a combined use or a joint management of the plant will not be practicable and result in failure as were proved in many cases during the war in Japan.

One of the chief reasons why they are against the joint management is that the rationalization of production process that is keenly required in view of the future abolishment of subsidy on fertilizer will be difficult to carry out under such a joint-management system.

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(2) The establishment of a third company with its shares equally divided between two companies is legally impossible as the Nippon Kogyo was connected with the Zaibatsu during the war and a designated company like Nippon Kogyo can not hold shares of other company unless one year has elapsed after its clearance from such designation.

(3) Tokuyama Soda Company desires to operate the Iwakuni Plant in question unilaterally. Nippon Kogyo Company will give loans to the Tokuyama Soda Company but will not hold any shares but extend its loans to the Tokuyama Soda Company on the condition that the products to be produced will be divided on a 50 - 50 basis. The Nippon Kogyo has not replied to this proposal in the affirmative .

c. Cost involved in the operation of the Iwakuni Plant.

Mr. Nakazawa stated that in order to produce 14,000 tons of ammonium per year or approximately 43 tons of ammonium per day it will entail a total expense of about ¥ 350,000,000 for the rehabilitation of equipment, housing and buildings at the Iwakuni Plant only.

It is estimated that the time required to start the operation at the Iwakuni Plant is approximately one year.

Under the joint-management the production amount must be doubled to make it profitable in which case a total cost of rehabilitation will be doubled because the present Gas unit is capable of producing only about 43 tons per day with the result compressers and synthetic towers must be newly constructed and other facilities need repairing.

d. The Tokuyama Soda Company contends that,

(1) The Nippon Kogyo Company is fundamentally a minning company whereas the Tokuyama Soda Company is a chemical company. Therefore, the Tokuyama Soda Company is more qualified than the Nippon Kogyo Company.

If the Nippon Kogyo Company is intending to produce sulphuric acid using the pyrite from the Katayama Copper Mine located about 30 miles north of Iwakuni the company does not have to use the Iwakuni Plant which has been never used for that purpose. To expand its business the Nippon Kogyo can produce sulphuric acid profitably which is very much required by many industrial plants in this country.

Dividing the equipment in the Iwakuni Plant equally between the two company and moving one half of equipment to the present Tokuyama Soda Plant for the production of ammonium chloride is under contemplation. In this case the Nippon Kogyo

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will operate at the Iwakuni Plant using one half of the equipment. In this case the Tokuyama Soda Company can make use of its already installed pipes and valves and can leave such items in the Iwakuni Plant, therefore the operation at the Iwakuni Plant by the Nippon Kogyo will not be in any way hampered.

4. Conclusions:

The Nippon Kogyo Company's contention should be taken into consideration in order to draw a fair and unbiased conclusion on the controversial question at issue as to the use of the Iwakuni Plant by the respective company.

5. Recommendations:

None.

R.G. STRADLEY

D/RGS/fk

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

Plant File

FIELD TRIP REPORT

R.G. STRADLEY

27 February 1950

1. Purpose:

Inspection at Iwakuni Fuel Depot 45-5 and 11th Air Arsenal 45-6.

2. Background:

Surveillance in accordance with O.O. 51.

3. Discussion:

8 reparation items were deleted from authorized use status and were put back into dead storage. Code Numbers are:

45-5-25 (191)
45-5-25 (192)
45-5-37 (56)
45-5-37 (63)
45-5-47 (27)
45-5-49 (85)
45-5-49 (87)
45-5-49 (92)

337 reparation items were transferred to Hyogo Prefecture Hyogo Branch of the Osaka Finance Bureau and are understood to be released. 940 items have been applied for scrapping, however many of these machines applied for scrapping are obviously in good condition. Some were classified as first class machines when they were inventoried..

Custodian state that all machines with parts missing or that are not in operating condition were applied for scrapping.

4. Conclusion:

The compressed room of topping plant and the roof of the boiler room are in a dilapidated condition.

Building No. 17 (Water Electrolysis plant) also has a bad roof.

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5. Recommendation:

Authorized use of portions of this depot by Tokuyama Soda, Nippon Kogyo, Tekoku Seiyusho and Koa Seiyusho was recommended to SCAP, Civil Arrairs Section.

RGS
R.G. Stradley.

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

FIELD TRIP REPORT

R.G. STRADLEY

20 March 1950

1. Purpose:

Inspection of reparation plant at Shinko Kogyo Co. Ltd. Kurayoshi Plant 41-5.

2. Background:

Surveillance in accordance with O.D. 51.

3. Discussion:

112 items were originally inventoried under code number 41-5, of which 53 items were exempted, 9 items destroyed as special purpose machines, and 1 motor originally attached to one of the S.P. machines were added to inventory and 15 other items added to inventory on evaluation.

One shaper on authorized use (approved 22 July 1948) with code number 41-5-24 was transferred to the Hoki Plant in Agei-cho.

Date of authorization for transfer is 29 July 1949.

137 items under code number 41-9e were originally inventoried of which 75 items were destroyed as Special Purpose machines (62 completely and 13 partially destroyed)

6 items with code numbers 41-9e-115, 116, 134, 135, 175, 176 are in authorized use at the Hoki plant at Agei-cho. Authorization of transfer is dated 29 July 1949.

4. Conclusion:

All machines in this plant are in dead storage. Machines in authorized use were transferred to the Hoki Plant at Agei-cho.

5. Recommendation:

Although machines were in good condition one machine with code number 41-9e-292 was beginning to show rust and the custodian was told to grease it.

RGS

R.G. STRADLEY

D/RGS/st

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

FIELD TRIP REPORT

R.G. STRADLEY

17 February 1950

45-5

1. Purpose:

Inspection of Oil Storage area at 45-5, Iwakuni Army Fuel Depot.

2. Background:

Surveillance in accordiance with C.D. 51.

3. Discussions:

According to Iwakuni Branch Finance Office, several applications have been submittel through Japanese channels for the release of land, chief companies of which are as follows:

Name of Co.	Objective
Tokuyama Soda Co.	Production of Ammonium.
Nippo Industry Co.	" Urea.
Japan Minning Industry Co.	Production of Ammonium Sulphate.

4. Conclusions:

The condition of oil tanks is,

Serviceable	15
Unserviceable	16
Dismantled	4
Bomb Damage	5

These tanks are all idle.

5. Recommendations:

Iwakuni Branch Finance Office was requested to submit to this office a copy each of those applications submitted by various companies for the release of land at Iwakuni Army Fuel Depot together with recommendations.

A number of reparations machines are under custody in the separate buildings there and should be checked on next inspection.

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FIELD TRIP REPORT

R.G. STRADLEY

17 February 1950

1. Purpose:

Inspection of Oil Storage Area at 45-5, Seto.

45-5
A

2. Background:

Surveillance in accordance with O.D. 51.

3. Discussion:

There are three(3) oil tanks of which code number and capacity are as follows:

Code No.	Capacity
45-5(112) 1T	13,000 k.l.
45-5(113) 2T	13,000 k.l.
45-5(114) 3T	13,000 k.l.

4. Conclusion:

These tanks were found to be in good condition.

5. Recommendation:

None.

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INSPECTION REPORT

5 -6 January 1950

1. Purpose:

Inspection of Reparations Machinery at 45-5 Iwakuni Ex-Army Fuel Depot.

2. Background:

Surveillance in accordance with OD 51, 27 Sept 49.

45-5

3. Discussion:

There are a total of 40 storage tanks at this location, but none are in use. There is a salt manufacturing factory and a branch of Hiroshima Railway Division operating within the premises. In reference to salt producing factory - this outfit has been out of operation since May 1948. When operating it produced only 15 tons table salt monthly. Custodian at Iwakuni is anticipating re-conversion permit - says building occupied by salt factory will be needed. The activities of Hiroshima Railway Division within the premises consist of receiving coal shipped in from Kyushu and transporting it by rail to other districts. Reparations equipment inspected and found in satisfactory condition.

4. Conclusion:

Building No 17 which houses an electrical cell plant has damaged roof which has resulted in rusting of this equipment.

5. Recommendations:

None.

Robert P Lord, DAC
Economics Section
Chugoku Civil Affairs Region

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

C O P Y

GENERAL HEADQUARTERS
SUPREME COMMANDER FOR THE ALLIED POWERS
CIVIL PROPERTY CUSTODIAN
APO 500

JEV/GM/TT/ow
5 August 1949

45-5
A

MEMORANDUM FOR: Director, Reparations Property Division

SUBJECT: Inspection of Arsenals in Yamaguchi Prefecture, 11 July through 16 July 1949

1. The under-signed proceeded to Yamaguchi for the purpose of checking maintenance and custody of arsenal equipment in that prefecture. Upon arrival, the undersigned reported to Lt Col McNamara, Commanding Officer of the Yamaguchi CAT, and Mr. Ten Eyok Economics Officer. Sgt. Breitback and Mr. Teramoto, both of Yamaguchi CAT, and Mr. Hamoaka, Chief of Reparations Section, Hiroshima Finance Bureau, accompanied the undersigned to five arsenals listed below.

2. Findings:

a. Kure Naval Arsenal, Uba Branch, #45-03, 12 July 1949 (Incl 1, C/S)

(1) This plant has been heavily damaged by incendiary bombing. A total of 336 salvaged items comprises reparations equipment for this plant; 311 of these (approximately 90%) are class 3 machines.

(2) Four machines are on occupation use while 13 others are in authorized use by 5 different private concerns located elsewhere in the prefecture. These, for this reason, were not evaluated.

(3) The manning table for this plant limits the custodial personnel to 1 custodian and 7 guards to be on payroll of the reparations fund. However, there are 2 clerks, 1 engineer and 4 guards in addition to the regular custodial staff of 8 persons, who are also on custodial duties, but on payroll of the administrative fund of the Finance Bureau. (More specifically: Zaimukyoku Gyoseibu Hi, or "Finance Bureau Administration Department Fund.") Mr. Hamoaka of Hiroshima Finance Bureau stated to the undersigned that:

(a) The administrative fund is an entirely separate account from reparations fund.

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(b) The practice of assigning personnel on payroll of the administrative fund to reparations duties has been of long standing in the prefectures under the jurisdiction of the Hiroshima Finance Bureau.

(c) The continuation of such practice has been approved by higher office in Tokyo, and that.

(d) The slashing of personnel on administrative payroll, if effected at all, should be effected only to such extent as that presently effecting personnel in all other agencies of the Japanese Government.

Mr. Ten Byck, Economics Officer, Yamaguchi CAT stated to the undersigned that his only concern was that the reparations personnel be reduced in accordance with the established manning table and the new maintenance standard instructions to the Japanese Government. He added that the responsibility for implementation of directives should rest with the Japanese.

(4) Considerable amount of petroleum products are in stock at this plant. Breakdown is as follows:

Kerosene	750 Ltr
Grease	852 Kg
Engine Oil	777 Ltr
Gasoline	380 Ltr
Light Oil	1860 Ltr

Inview of the new instruction to the Japanese Government requiring no furthur maintenance of reparations equipment, it is recommended that the petroleum products be returned for reallocation.

b. Tokuyama Third Naval Fuel Depot, #45-07 (Ars), 13 July 1949 (Incl 2-C/S)

(1) Evaluation of facilities in this plant is still incomplete; 188 items yet to be evaluated, 7 items are duplicated, and corrections necessary on approximately 500 other items.

(2) Seven items duplicated in the evaluation report are as follows:

Item No.	Description	Page Numbers
683	Accumulator	747 and 753
684	Receiver tank	747 and 753
317(15)	Heat exchanger	690 and 158
317(16)	Heat exchanger	690 and 138
422	Shear	415 and 415
393	Storage tank	457 and 494
520(19)	Distribution panel	539 and 541

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(3) Two "EX" items are included in the available section of the report. Items No. 20(76) and No. 20(77), both receiver tanks, were declared to be "EX" per letter: Yamaguchi MGT, File No. 383-B, date 13 March 1948.

(4) Corrections in the nomenclature, capacity, dimension and weight, etc., are necessary for approximately 500 other items.

(5) Mr. Hamaoka stated to the undersigned that they are unable to conduct a supplementary evaluation due to lack of funds. A written instruction from CAT to this effect would be necessary in obtaining additional funds he stated. Sgt Breitback stated that he will discuss the matter with his superiors.

(6) Included in this plant are a total of 52 items originally belonging to the Osaka Military Arsenal and so, coded #45-32(YB). It is the opinion of the undersigned that of all these class 3 machines and class 1 and class 2 machines as follows: Nos 43, 36, 32, 77, 79, 19, 20, 27, 15, 13 and 6, are only of scrap value even by Japanese standards. These are at least 35 Years old; working surfaces are badly worn, pitted and even scraped off. (See pages 789 through 798 of the evaluation report for a list of class 3 machines.)

c. Hikari Naval Arsenal, #45-04, 14 July 1949. (Incl 3-C/S; Incl 4-List of 70 machines cancelled from AU status; Incl 5-Application for repair of building)

(1) A total of 342 items are presently in authorized use by the following agencies:

Hikari Branch, Hatabu Work Shop, Hiroshima Railway Division, NRC	207
Shimonoseki Engine Region, Hiroshima Railway Division, NRC	14
Takea Pharmaceutical Co.	55
Asahi Salt Manufacturing Co.	51
Hikari Municipal office	8
Occupation Forces	7
Total	342

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(2) The evaluation report for this plant lists a total of 357 items to be in authorized use. This figure does not include 20 items is use by three agencies: Shimonoseki Engine Region, Hiroshima Railway Division, NRC, Hikari Municipal Office, and the occupation forces. The authorized use of 70 items have been cancelled while 4 items have been additionally approved for use since the time of evaluation. See Inclosure 4 for a list of the 70 items for which authorized use status has been cancelled. The custodian was instructed to prepare necessary corrections to the evaluation report and forward copies through Japanese channels.

(3) The gun-barrel shop, utilised as a dead storage warehouse, was pertially damaged by a typhoone on 21 June 1949. The repair work is now under way with the approval of Yamaguchi CAT. Inclosure 3 is a copy of the repair of the building submitted by the custodian to Yamaguchi CAT on 11 July 1949, which is supperted by two photos of the damages to the building.

d. Iwakuni Navy Fuel Depot, #45-~~75~~ 05, 15 July 1949. (Incl G-C/S)

(1) As use the case for the Kure Naval Arsenal, Ube Branch, #45-53, cited in Paragraph 1a above, personnel on payroll of the administrative fund of the Finance Bureau are also being assigned to custodial duties for this plant. Thirty-five persons are on administrative payroll, to which similar explanations were given by Mr. Hamoaka of the Finance Bureau. Mr. Ten Eyck, Economics Officer, is also aware of this situation.

e. 11th Aero Arsenal, Iwakuni Branch, #45-~~98~~ 06, 13 July 1949 (Incl 7-C/S)

(1) A total of 31 items constituted the available reparations equipment for this plant.

(2) The evaluation report of 16 June 1948 included 34 items. Of these, 0 have been designated CPC, while 3 were returned to dead storage from occupation use.

(3) These CPC items have already been shipped to Sasebo on 21 June 1949.

Inv. No.	Description
343	Lathe
350	Lathe
352	Lathe
354	Lathe
339	Milling Machine
340	Milling Machine

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Three lathes, Nos 369, 370 and 371, were returned to dead storage from occupation forces on June 19xx.

(4) Corrections to the evaluation report on above items will be forwarded through Japanese channels.

3. Findings noted in the foregoing paragraphs were either discussed directly with Mr. Ten Eyck, or reported to Sgt Breithack who was to transmit same to his superiors. Upon completion of this inspection at Iwakuni, the undersigned returned directly to Tokyo.

For the Chief, Field Operations Branch:

7 Incls
as above (origs only)

TARO TSUKAHARA
Ind Prop Spec Int
Field Operations Branch

Copies furnished:
CPC Reading
8th A

-C-O-P-Y-

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5.C

45-5

45-5

PLANT INSPECTION CHECK SHEET

Date 14 May 1948

1. Name of Company and Plant: FORMER IWAKUNI ARMY FUEL ARSENAL

2. Code No. of Plant: 45-5 Industrial Group: FUEL DEPOT

3. Address of Plant: 550 SHOZOKU, IWAKUNI-SHI, YAMAGUCHI-KEN

4. Products.

1939 None 1941-1945 Aviation Gasoline, Aviation Lubricant, andIso-octane etc.

1948 None

5. Employee (No. of factory workers on main shift normally at work)

1939 None peak during 1941-1945 4,300 1948 150

6. Plant Data. Year Plant was Established 1940

No. of Buildings: Containing Reparations Equipment 91

Containing Available Reparation Equipment 91

7. Equipment Data; Total No. of Inventoried Items 6,449

	Number of Machine	Estimated Present Average Age
Purchased New	unknown	5
Purchased Second-hand	unknown	5

6. Plant Data. Year Plant was Established 1940

No. of Buildings: Containing Reparations Equipment 91

Containing Available Reparation Equipment 91

7. Equipment Data; Total No. of Inventoried Items 6,449

	Number of Machine	Estimated Present Average Age
Purchased New	unknown	5
Purchased Second-hand	unknown	5

8. Data onMachine Tools(from previous inventory taken under OD 5/4)

	Total	Grade 1	Grade 2	Grade 3
Japanese- Made Machines:				
Available	54	31	23	0
In authorized Use	0	0	0	0
Foreign-MadeMachines:				
Available	1	1	0	0
In authorized Use	0	0	0	0

9. Plant Subdivision

Plant Subdivision	Building Locations	NO. of Items Available Secs. A&B	Invent'd. Auth. use Secs. D&H	Remarks on Completeness of Usability of Available Equipment
1. Lub. Oil Plant	Area VII XVII, XXIII, 38, 39, 40, 41, 42, 43, 44, 45, 62, 73, 90, 97,	828		Usable for Vacuum Distillation, Acid washing & Contact Rerun Dewaxing & Solvent Extraction plant cannot be used.
2. Crude Oil Distillation Plant	Area VI, VIII, 34, 34, 35, 36,	298		Crude Oil Refining, but continuous gasoline treating plant badly damaged.

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Plant Subdivision	Building Locations	No. of Items Available Secs. A&B	Invent'd. Auth. use Secs. D&H	Remarks on Completeness of Usability of Available Equipment
3. Hydro-cracking Plant	Area IX 50, 51	463		i. Aviation gasoline ii. Hydrogeneration of fatty oil.
4. Water Electrolysis	Area V 16, 17, 18	230		Produce of Pure Hydrogen and Oxygen gas.
5. Hydrogen Production Plant	Area V, XX 20, 21, 22, 23, 24, 25, 51, 52, 7	774	16	Purification of Hydrogen Gas from water gas & Methane gas.
6. Alcohol Plant	Area XVIII 79, 80, 84, 87	78		Manufacture of Aquas Ethyl Alcohol.
7. Drum Manufacturing Plant	5, 72	69		Manufacture of Drum.
8. Cracking Plant	Area VI, XI 31, 32, 36, 37, 47, 57, 58, 59, 60, 61, 105	813		Unworthy as plant. Clay treating plant only usable.
9. Hydrogenation Plant	Area XX 51	69		Unworthy as plant.
10. Iso-Octane Plant	Area X, XVIII 54, 55, 81, 77, 78	474		No. 1 Iso-octane plant badly damaged. No. 2 Iso-octane plant usable after repairing.
11. Catalyst Plant	Area XIX			Unworthy as plant.

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8. Cracking Plant	Area VI, XI 31, 32, 36, 37, 47, 57, 58, 59, 60, 61, 105	813		Unworthy as plant. Clay treating plant only usable.
9. Hydrogenation Plant	Area XX 51	69		Unworthy as plant.
10. Iso-Octane Plant	Area X, XVIII 54, 55, 81, 77, 78	474		No. 1 Iso-octane plant badly damaged. No. 2 Iso-octane plant usable after repairing.
11. Catalyst Plant	Area XIX 83, 106	110		Unworthy as plant.
12. Synthetic Lub. Oil Plant	Area XVIII, XIV 79, 80, 99, 100, 101	333	3	Production of Lub. Oil from Rubber.
13. Pitch Coke Plant	Area VI 27, 28, 29, 30	85		Unworthy as plant.
14. Producer Gas Plant	Area XIX 82	72		Usable as Fuel Gas for general industry.
15. High Pressure Experimental Plant	97	81.		Experimental Apparatus for high pressure.
16. Steam Boiler Plant (include High Pressure Steam boiler plant)	Area X 53, 56	138		Generation of steam.
17. Water Feeding & Sea Water Pumping Plant	1, 2, 74, 75	106		Supplying of industrial water and cooling apparatus.
18. Power Station (include elec. substation)	Area III 11, 13, 3	277	18	Supplying of electric power.
19. Miscellaneous Equipment	Area XII, XIV 4, 7, 65, 66, 67, 69,	1,060	4	

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	Plant	51			
10.	Iso-Octane Plant	Area X, XVIII 54, 55, 81, 77, 78	474		No. 1 Iso-octane plant badly damaged. No. 2 Iso-octane plant usable after repairing.
11.	Catalyst Plant	Area XIX 83, 106	110		Unworthy as plant.
12.	Synthetic Lub. Oil Plant	Area XVIII, XIV 79, 80, 99, 100, 101	333	3	Production of Lub. Oil from Rubber.
13.	Pitch Coke Plant	Area VI 27, 28, 29, 30	85		Unworthy as plant.
14.	Producer Gas Plant	Area XIX 82	72		Usable as Fuel Gas for general industry.
15.	High Pressure Experimental Plant	97	81.		Experimental Apparatus for high pressure.
16.	Steam Boiler Plant (include High Pressure Steam boiler plant)	Area X 53, 56	138		Generation of steam.
17.	Water Feeding & Sea Water Pumping Plant	1, 2, ~~74, 75~~	~~105~~		Supplying of industrial water and cooling apparatus.
18.	Power Station (include elec. substation)	Area III 11, 13, 3	~~277~~	18	Supplying of electric power.
19.	Miscellaneous Equipment	Area XII, XIV 4, 7, 65, 66, 67, 69, 71, 62, 63, 80, 96, 98	1,060	4	

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. Plant Layout. Submit 4 copies in all. Make sure that the plant Layout Sheet is legible and in English; that building numbers agree with those used on the evaluation work sheets and that the Location of all plant subdivisions (item 8 above) is shown. If equipment has been moved or stored, show current status of equipment at the time of report. In addition, if the plant's management has plans to modify the status or location of equipment in the future, describe the nature of the planned changes.

<u>See attached Plant and Building Layout Sheet</u>

<u>Plans for Removal in the Future</u>

1) Equipment in Building No. 93	Remove to Building No. 60 and No. 73
2) Equipment in Building No. 94	Remove to Building No. 80
3) Equipment in Building No. 67	Remove to Building No.11, No.70, No.72 and No.73
4) Equipment in Building No. 64	Remove to Building No.86.
5) Equipment in Building No. 63	Remove to Building No. 72 and No.73.
6) Equipment in Building No. 62	Remove to Area XVII
7) Equipment in Building No. 105	Remove to Building No.76.
8) Rails laying near Building No.67 & No.105	

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2) Equipment in Building No. 94	Remove to Building No. 80	
3) Equipment in Building No. 67	Remove to Building No.11, No.70, No.72 and No.73	
4) Equipment in Building No. 64	Remove to Building No.66.	
5) Equipment in Building No. 63	Remove to Building No. 73 and No.73.	
6) Equipment in Building No. 62	Remove to Area XVII	
7) Equipment in Building No. 105	Remove to Building No.76.	
8) Rails laying near Building No.67 & No.105.	Remove to Area XVI	

4. Overall maintenance: Excellent/Good/Fair/Poor Good.

5. Is reconditioning completed? Almost completed. Date of Completeon _____

40 employees; of which 10 are skilled mechanics, are engaged in daily maintonance and reconditioning of equipment.

6. If major portions of the plant are less useful or less desirable than other sections, or have been damaged, specify the sections (and building locations) and explain reasons:

Name of Plant	Building Locations	Reasons
Duo-sol Solvent Extraction Plant	Area VII 38, 39	Seriously damaged by air-raid.
Barisol Dewaxing Plant	Area VII 40	ditto
Continuous Gasoline Treating Plant	Area VIII 46	ditto
Thermal and Catakytic Cracking Plant	Area VI 32, 36, 37, 31	

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No.105. Remove to Area XVI

4. Overall maintenance: Excellent/Good/Fair/Poor Good.

5. Is reconditioning completed? Almost completed. Date of Completeon _____

40 employees; of which 10 are skilled mechanics, are engaged in daily maintenance and reconditioning of equipment.

6. If major portions of the plant are less useful or less desirable than other sections, or have been damaged, specify the sections (and building locations) and explain reasons:

Name of Plant	Building Locations	Reasons
Duo-sol Solvent Extraction Plant	Area VII 38, 39	Seriously damaged by air-raid.
Barisol Dewaxing Plant	Area VII 40	ditto
Continuous Gasoline Treating Plant	Area VIII 46	ditto
Thermal and Catakytic Cracking Plant	Area VI 32, 36, 37, 31 Area XI 57, 58, 59, 60	ditto
Rerun Topping Plant	Area XI 61	Incompleted

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Name of Plant	Building Locations	Reasons
Hydrogenation Plant	Area IX 51 Area XX	Incompleted .
No. 1 Iso-Octane Plant and attached Gas Refining Plant	Area X 55, 54	Seriously damaged by air-raid.
Plant for production of Lub. oil from paraffine	Area XIX 99, 100, 101, 102, 103, 104	ditto
Pitch coke Plant	Area VI 26, 27, 28, 29, 30	ditto
Catalyst Plant	Area XIX 83, 106	ditto
Ethyl Fluid Blending Plant	Area VIII 49	ditto
Lub. oil and Heavy oil Blending Plant	Area VIII	ditto

4. Suggested Plant Division for Allocation Purposes.

If the plant is large or medium in size and might in the future have to be divided between two or more nations receiving reparations, is there any logical and simple basic for dividing the available equipment of the plant into two units? Yes.

(If the answer is "Yes" give the possible division under the heading shown below. If the contents of any building should be split between two allocation units, state how the dividing line may be drawn or defined. Additional comments bearing on this problem are invited.

Information Requested	Allocation Unit A	Allocation Unit B
Building Numbers:	1, 2, 3, 5, 11, 13, 19, 20 21, 22, 23, 24, 25, 33, 34, 35, 41, 42, 43, 44, 45, 47, 50, 51, 52, 53, 73, 74, 75	4, 7, 16, 17, 18, 27, 28, 29, 30, 31, 32, 36, 37, 38, 39, 40, 46, 48, 49, 54, 55, 56,

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Lub. Oil and Heavy Oil Blending Plant	Area VIII	ditto

4. Suggested Plant Division for Allocation Purposes.

If the plant is large or medium in size and might in the future have to be divided between two or more nations receiving reparations, is there any logical and simple basic for dividing the available equipment of the plant into two units? Yes.

(If the answer is "Yes" give the possible division under the heading shown below. If the contents of any building should be split between two allocation units, state how the dividing line may be drawn or defined. Additional comments bearing on this problem are invited.

Information Requested	Allocation Unit A	Allocation Unit B
Building Numbers:	1, 2, 3, 5, 11, 13, 19, 20, 21, 22, 23, 24, 25, 33, 34, 35, 41, 42, 43, 44, 45, 47, 50, 51, 52, 53, 72, 74, 75, 82, 93, 105	4, 7, 16, 17, 18, 27, 28, 29, 30, 31, 32, 36, 37, 38, 39, 40, 46, 48, 49, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 65, 66, 67, 69, 70, 73, 77, 78, 79, 80, 81, 83, 84, 85, 86, 87, 88, 90, 96, 97, 98, 99, 100, 101, 106
Functional Units: (List by name)	1. Crude Oil Treating Plant 2. Crude Oil Distillation Plant 3 Lub. Oil Plant 4. Hydro-Cracking Plant 5. Hydrogen Production Plant 6. 5 Gals. Can Manufacturing Plant 7. 5 Gals. Can Filling Plant 8. Waste Acid Treating Plant 9. Steam Boiler Plant 10. Drum Manufacturing Plant 11. Clay Treating Plant 12. Water Feeding Pump Plant 13. Sea Water Pumping Plant 14. High Pressure Experimental Plant.	1. Iso-Octane from Butanol Plant 2. High Pressure Steam Boiler Plant 3. Water Electrolysis Plant 4. Synthetic Lub. Oil from Rubber Plant 5. Alcohol Plant 6. Miscellaneous Equipment (except electric substation)

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If the contents of any building should be split between two allocation units, state how the dividing line may be drawn or defined. Additional comments bearing on this problem are invited.

Information Requested	Allocation Unit A	Allocation Unit B
Building Numbers:	1, 2, 3, 5, 11, 13, 19, 20, 21, 22, 23, 24, 25, 33, 34, 35, 41, 42, 43, 44, 45, 47, 50, 51, 52, 53, 72, 74, 75, 82, 93, 105	4, 7, 16, 17, 18, 27, 28, 29, 30, 31, 32, 36, 37, 38, 39, 40, 46, 48, 49, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 65, 66, 67, 69, 70, 73, 77, 78, 79, 80, 81, 83, 84, 85, 86, 87, 88, 90, 96, 97, 98, 99, 100, 101, 106
Functional Units: (List by name)	1. Crude Oil Treating Plant 2. Crude Oil Distillation Plant 3 Lub. Oil Plant 4. Hydro-Cracking Plant 5. Hydrogen Production Plant 6. 5 Gals. Can Manufacturing Plant 7. 5 Gals. Can Filling Plant 8. Waste Acid Treating Plant 9. Steam Boiler Plant 10. Drum Manufacturing Plant 11. Clay Treating Plant 12. Water Feeding Pump Plant 13. Sea Water Pumping Plant 14. High Pressure Experimental Plant. 15. Producer Gas Plant 16. Power Station 17. Electric Substation	1. Iso-Octane from Butanol Plant 2. High Pressure Steam Boiler Plant 3. Water Electrolysis Plant 4. Synthetic Lub. Oil from Rubber Plant 5. Alcohol Plant 6. Miscellaneous Equipment (except electric substation)

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(In suggesting this possible subdivision, factors to be taken into account should be:

(1) Exceptionally large size of facility, (2) The degree of relationship between different available functional subdivisions of the plant, (3) Damage or incompleteness of some plant subdivision which would make it difficult to use, and (4) Simplicity of division. (Normally the equipment in one building should not be split between two allocation units unless this is clearly desirable technically and the division can be made easily and clearly).

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These items approved for use by Koa Oil Co. by ESS/SCAP on 10 Nov. 50 (authorization in Sec. II).

LIST OF FACILITIES FOR APPLICATION

Code No. : 45-5 & 45-32

Name of Plant : Iwakuni ~~Ex-Army~~ Fuel Depot

Address of Plant : Shozoku, Iwakuni-shi, Yamaguchi-ken

1. Machinery

	Code No.		Name of Plant	Set	No. of Item	Page
1	45- 5	F1	Vacuum Distillation Plant	1	93	1
2			Sulphuric Acid Treating Plant	1	59	7
3			Contact Rerun Plant	1	111	11
4			Drum Filling Equipment	1	20	18
5		F7	Drum Manufacturing Equipment	1	16	20
6		F14	High Pressure Steam Boiler Plant	1	56	22
7		6	Duo-Sol Extraction Plant	1	277	26

MANUFACTURING AND INDUSTRY FILE 45-5

1. Machinery

	Code No.		Name of Plant	Set	No. of Item	Page
1	45- 5	F1	Vacuum Distillation Plant	1	93	1
2			Sulphuric Acid Treating Plant	1	59	7
3			Contact Rerun Plant	1	111	11
4			Drum Filling Equipment	1	20	18
5		F7	Drum Manufacturing Equipment	1	16	20
6		F14	High Pressure Steam Boiler Plant	1	56	22
7		6	Duo-Sol Extraction Plant	1	277	26
8		7	Bari-Sol Dewaxing Plant	1	204	42
9	45 - 32		Storage Tanks	32	32	54
10	45 - 32		Accessories for Storage Tanks	1	70	57
11	45 - 5		Miscellaneous Equipment	1	52	60
12			Service Tanks & Gas Holder	40	40	61
Total:				82	1080	--

Subject: Application for movement and Authorized Use of Reparations Equipment of Iwakuni Fuel Depot (Code No. 45-05, 45-32) Filed by Koa Oil Co. Ltd. (Non-reparations plant)

11 October 1950

MANUFACTURING AND INDUSTRY FILE 45-5
dec IV B

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VACUUM DISTILLATION PLANT (45-5-F1)

(Plant evaluation work sheet NO. 1 - 16)

Inv. No.	Name of Machinery	Brief Specification		Quantity	Remarks
1F1	NO. 1 PUMP FOR CRUDE CHARGE WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE : 250X150X250 CAP. : 200GAL/MIN		1	
2F1	NO. 1 A SPARE PUMP FOR CRUDE CHARGE WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE : 250X150X250 HEAD : 100M SUCTION : 150mm		1	
3F1	FURNACE BARGER TYPE OIL HEATING	HEATING SURFACE RADIANC : 76.4 M^2 CONVECTION : 60 M^2 NO. OF TUBES : 104PCS CAP. NORMAL : 13,000,000 B.T.U./H. MAX. : 17,000,000 B.T.U./H.		1	FLOOR TUBE ROOF BROKEN
4F1	VACCUM TOWER BUBBLE CAP TYPE	NO. OF TRAYS : 12 PCS DIA. : 3050 mm HEIGHT : 19,810		1	
5F1	STEEL STRUCTURE PLATFORM FOR VACUUM TOWER	WIDTH : 2,000 mm LENGTH : 6500 mm		1	
6F1	OVER HEAD CONDENSER HORIZONTAL SHELL & TUBE TYPE	DIA. : 700 mm LENGTH : 5,650 mm COOLING SURFACE; 410 M^2		1	
7F1	BOOSTER VERTICAL TYPE	DIA : 400 mm HEIGHT : 720 mm		1	
8F1	BAROMETRIC CONDENSER VERTICAL DI...	...		1	

		CONVECTION :	60 M²		
		NO. OF TUBES :	704POS		
		CAP. NORMAL :	13,000,000 B.T.U./H.		
		MAX. :	17,000,000 B.T.U./H.		
4F1	VACCUM TOWER BUBBLE CAP TYPE	NO. OF TRAYS :	44 POS	1	
		DIA. :	3050 mm		
		HEIGHT :	19,810		
5F1	STEEL STRUCTURE PLATFORM FOR VACCUM TOWER	WIDTH :	5,000 mm	1	
		LENGTH :	8500 mm		
6F1	OVER HEAD CONDENSER HORIZONTAL SHELL & TUBE TYPE	DIA. :	700 mm	1	
		LENGTH :	5,850 mm		
		COOLING SURFACE;	410 M²		
7F1	BOOSTER VERTICAL TYPE	DIA :	400 mm	1	
		HEIGHT :	720 mm		
8F1	BAROMETRIC CONDENSER, VERTICAL DIA: 460mm HEIGHT: 2,500mm			1	
9F1	EJECTOR DOUBLE TYPE	# 15		1	BODY BROKEN
~~8F1~~	~~BARO~~				
10F1	EJECTOR DOUBLE TYPE	# 15		1	
11F1	INTER CONDENSER BOX TYPE	LENGTH :	1,100 mm	1	
		WIDTH :	530 mm		
		HIGHT :	200 mm		
12F1	AFTER CONDENSER BOX TYPE	LENGTH :	650 mm	1	
		WIDTH :	420 mm		
		HEIGHT :	250 mm		
13F1	FLOAT POT (OVER HEAD) HORIZONTAL CYLINDRICAL TYPE	VOLUME :	0,4 M³	1	
		DIA. :	760 mm		
		LENGTH :	915 mm		
14F1	NO. 2 PUMP FOR GAS OIL SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN		1	
		SIZE :	250X180X300		
		VOLUME :	~~0,4~~ 2.6 Gal/min		
15F1	NO. 2A SPARE PUMP FOR GAS OIL SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN		1	
		CAP. :	2.0 GAL/MIN		
		SIZE :	250X180X300		
16F1	WATER SEPARATOR VERTICAL CYLINDRICAL TYPE	DIA. :	660 mm	1	
		CAP. :	1 KL		
		HEIGHT :	3,330 mm		

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6F1	OVER HEAD CONDENSER HORIZONTAL SHELL & TUBE TYPE	DIA : 700 mm LENGTH : 5,050 mm COOLING SURFACE; 410 M²	1	
7F1	BOOSTER VERTICAL TYPE	DIA : 400 mm HEIGHT : 720 mm	1	
8F1	BAROMETRIC CONDENSER, VERTICAL DIA: 460mm HEIGHT: 2,500mm		1	
9F1	EJECTOR DOUBLE TYPE ~~8F1 BARO~~	# 35	1	BODY BROKEN
10F1	EJECTOR DOUBLE TYPE	# 45	1	
11F1	INTER CONDENSER BOX TYPE	LENGTH : 1,100 mm WIDTH : 530 mm HIGHT : 270 mm	1	
12F1	AFTER CONDENSER BOX TYPE	LENGTH : 820 mm WIDTH : 420 mm HEIGHT : 230 mm	1	
13F1	FLOAT POT (OVER HEAD) HORIZONTAL CYLINDRICAL TYPE	VOLUME : 0,4 M³ DIA : 700 mm LENGTH : 915 mm	1	
14F1	NO. 2 PUMP FOR GAS OIL SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE : 250X180X300 VOLUME : ~~0,4 M³~~ 2.6 Gal/min	1	
15F1	NO. 2A SPARE PUMP FOR GAS OIL SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN CAP. : 2.6 GAL/MIN SIZE : 250X180X300	1	
16F1	WATER SEPARATOR VERTICAL CYLINDRICAL TYPE	DIA. : 660 mm CAP. : 1 KL HEIGHT : 3,350 mm	1	

Inv. No.	Name of Machinery	Brief Specification		Quantity	Remarks
17F1	FLOAT POT FOR 1st. SIDE CUT HORIZONTAL, CYLINDRICAL TYPE	VOLOME DIA LENGTH	: 0.4M^3 : 760mm : 915mm	1	LEVEL CONTROLLER BROKEN
18F1	NO.3 PUMP FOR 1st. SIDE CUT SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN CAP SIZE	: 2.6GAL/MIN : 250X180X300	1	
19F1	HEAT EXCHANGER FOR 1st. SIDE CUT HORIZONTAL SHELL & TUBE TYPE	DIA LENGTH HEATING SURFACE	: 600mm : 5,550mm : 57M^2	1	
20F1	COOLER FOR 1st. SIDE CUT HORIZONTAL SHELL & TUBE TYPE	DIA LENGTH COOLING SURFACE	: 600mm : 5,550mm : 33M^2	1	
21F1	FLOAT POT FOR 2nd. SIDE CUT HORIZONTAL CYLINDRICAL TYPE	VOLUME DIA. LENGTH	: 0.4M^3 : 760mm : 915mm	1	
22F1	NO.4 PUMP FOR 2nd. SIDE CUT SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN CAP. SIZE	: 150AL/MIN : 250X180X300	1	
23F1	HEAT EXCHANGER FOR 2nd. SIDE CUT HORIZONTAL SHELL & TUBE TYPE	DIA. LENGTH HEATING SURFACE	: 600mm : 5,650mm : 33M^2	1	
24F1	COOLER FOR 2nd. SIDE CUT HORIZONTAL SHELL & TUBE TYPE	DIA. LENGTH COOLING SURFACE	: 500mm : 5,650mm : 26M^2	1	
25F1	NO.4 FLOAT POT HORIZONTAL,	VOLUME	: 0.4M^3	1	LEVEL CONTROLLER

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19F1	HEAT EXCHANGER FOR 1st. SIDE CUT HORIZONTAL SHELL & TUBE TYPE	DIA : 600mm LENGTH : 5,550mm HEATING SURFACE : 57M2	1	
20F1	COOLER FOR 1st. SIDE CUT HORIZONTAL SHELL & TUBE TYPE	DIA : 600mm LENGTH : 5,550mm COOLING SURFACE : 33M2	1	
21F1	FLOAT POT FOR 2nd. SIDE CUT HORIZONTAL CYLINDRICAL TYPE	VOLUME : 0.4M3 DIA. : 760mm LENGTH : 915mm	1	
22F1	NO.4 PUMP FOR 2nd. SIDE CUT SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN CAP. : 15GAL/MIN SIZE : 250X180X300	1	
23F1	HEAT EXCHANGER FOR 2nd. SIDE CUT HORIZONTAL SHELL & TUBE TYPE	DIA : 600mm LENGTH : 5,650mm HEATING SURFACE : 33M2	1	
24F1	COOLER FOR 2nd. SIDE CUT HORIZONTAL SHELL & TUBE TYPE	DIA. : 500mm LENGTH : 5,650mm COOLING SURFACE : 26M2	1	
25F1	NO.4 FLOAT POT HORIZONTAL, CYLINDRICAL TYPE	VOLUME : 0.4M3 DIA. : 760mm LENGTH : 915mm	1	LEVEL CONTROLLER BROKEN
26F1	NO.5 PUMP FOR BOTTOM SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN C.P. : 7.5GAL/MIN SIZE : 350X250X450	1	
27F1	NO.5A SPARE PUMP FOR BOTTOM SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE : 350X250X450 CAP. : 7.5GAL/MIN	1	
28F1	HEAT EXCHANGER FOR BOTTOM HORIZONTAL SHELL & TUBE TYPE	DIA. : 750mm LENGTH : 5,650mm AREA OF HEATING SURFACE : 102M2	1	
29F1	HEAT EXCHANGER FOR BOTTOM HORIZONTAL SHELL & TUBE TYPE	DIA. : 750mm LENGTH : 5,650mm AREA OF HEATING SURFACE : 102M2	1	
30F1	COOLER FOR BOTTOM HORIZONTAL SHELL & TUBE TYPE	DIA. : 750mm LENGTH : 5,650mm AREA OF COOLING SURFACE :110M2	1	
31F1	HOT WATER TANK VERTICAL CYLINDRICAL TYPE	CAP. : 0.8KL DIA : 915mm HEIGHT : 1,220mm	1	

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	TYPE	COOLING SURFACE : 26M2			
25F1	NO.4 FLOAT POT HORIZONTAL, CYLINDRICAL TYPE	VOLUME DIA. LENGTH	: 0.4M3 : 760mm : 915mm	1	LEVEL CONTROLLER BROKEN
26F1	NO.5 PUMP FOR BOTTOM SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN C.P. SIZE	: 7.5GAL/MIN : 350X250X450	1	
27F1	NO.5A SPARE PUMP FOR BOTTOM SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE C.P.	: 350X250X450 : 7.5GAL/MIN	1	
28F1	HEAT EXCHANGER FOR BOTTOM HORIZONTAL SHELL & TUBE TYPE	DIA. LENGTH AREA OF HEATING SURFACE	: 750mm : 5,650mm : 102M2	1	
29F1	HEAT EXCHANGER FOR BOTTOM HORIZONTAL SHELL & TUBE TYPE	DIA. LENGTH AREA OF HEATING SURFACE	: 750mm : 5,650mm : 102M2	1	
30F1	COOLER FOR BOTTOM HORIZONTAL SHELL & TUBE TYPE	DIA. LENGTH AREA OF COOLING SURFACE	: 750mm : 5,650mm : 110M2	1	
31F1	HOT WATER TANK VERTICAL CYLINDRICAL TYPE	CAP. DIA. HEIGHT	: 0.8KL : 915mm : 1,220mm	1	
32F1	SUMP TANK HORIZONTAL CYLINDRICAL TYPE	CAP. DIA. LENGTH	: 150LITER : 450mm : 910mm	1	

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Inv. No.	Name of Machinery	Brief Specification	Quantity	Remarks
33F1	INSTRUMENT BOARD	WIDTH : 2,440mm HEIGHT : 2,660mm	1	
34F1	FUEL TANK VERTICAL, CYLINDRICAL TYPE	CAP. : 30KL DIA. : 2,500mm HEIGHT : 6,000mm	1	
35F1	FUEL TANK VERTICAL, CYLINDRICAL TYPE	CAP. : 30KL DIA : 2,500mm HEIGHT : 6,000mm	1	
36F1	SEMI PRODUCT TANK VERTICAL CYLINDRICAL TYPE	CAP. : 1,000KL DIA. : 13,500mm HEIGHT : 9,000mm	1	IRON PLATE 16 SHEETS BROKEN
37F1	SEMI PRODUCT TANK VERTICAL, CYLINDRICAL TYPE	CAP. : 1,000KL DIA. : 13,500mm HEIGHT : 9,000mm	1	IRON PLATE 16 SHEETS BROKEN
38F1	SERVICE PUMP FOR SEMI PRODUCT OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE : 250X150X250 CAP. : 290GAL/MIN	1	
39F1	SERVICE PUMP FOR SEMI PRODUCT OIL WORTHINGTON DUPLEX RECIPROCATINGTYPE	STEAM DRIVEN SIZE : 250 150X250 CAP. : 290GAL/MIN	1	
40F1	SERVICE PUMP FOR SEMI PRODUCT OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE : 250X150X250 CAP. : 290GAL/MIN	1	
41F1	SERVICE PUMP FOR SEMI PRODUCT OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE : 250X150X250 CAP. : 290GAL/MIN	1	
42F1	SERVICE PUMP FOR SEMI PRODUCT OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE : 250X150X250 CAP. : 290GAL/MIN	1	
43F1	SERVICE PUMP FOR SEMI PRODUCT OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE : 198 X 130 X 150 ~~250X150X250~~ CAP. : 160GAL/MIN	1	

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37F1	SEMI PRODUCT TANK VERTICAL, CYLINDRICAL TYPE	DIA. HEIGHT	: 13,500mm : 9,000mm		
38F1	SERVICE PUMP FOR SEMI PRODUCT OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE CAP.	: 250X150X250 : 290GAL/MIN	1	
39F1	SERVICE PUMP FOR SEMI PRODUCT OIL WORTHINGTON DUPLEX RECIPROCATINGTYPE	STEAM DRIVEN SIZE CAP.	: 250 150X250 : 290GAL/MIN	1	
40F1	SERVICE PUMP FOR SEMI PRODUCT OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE CAP.	: 250X150X250 : 290GAL/MIN	1	
41F1	SERVICE PUMP FOR SEMI PRODUCT OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE CAP.	: 250X150X250 : 290GAL/MIN	1	
42F1	SERVICE PUMP FOR SEMI PRODUCT OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE CAP.	: 250X150X250 : 290GAL/MIN	1	
43F1	SERVICE PUMP FOR SEMI PRODUCT OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE CAP.	190 X 130 X 150 : ~~250X150X250~~ : 160GAL/MIN	1	
44F1	SERVICE PUMP FOR SEMI PRODUCT OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE CAP.	: 190X130X150 : 160GAL/MIN	1	
45F1	SERVICE PUMP FOR SEMI PRODUCT OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE CAP.	: 190X130X150 : 160GAL/MIN	1	
46F1	SERVICE PUMP FOR SEMI PRODUCT OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE CAP.	: 190X130X150 : 160GAL/MIN	1	
47F1	SERVICE PUMP FOR SEMI PRODUCT OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE CAP.	300 X 200 X 200 : ~~200X130X200~~ : 190GAL/MIN	1	

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Inv. No.	Name of Machinery	Brief Specification	Quantity	Remarks
48F1	10" GATE VALVE	FACE TO FACE : 420mm BODY : CAST STEEL	1	
49F1	8" GATE VALVE	FACE TO FACE : 290mm BODY : CAST IRON	1	
50F1	8"GATE VALVE	FACE TO FACE : 290mm NOMINAL SIZE : 200mm	1	
51F1	6" GATE VALVE	FACE TO FACE : 270mm BODY : CAST STEEL	1	
52F1	6" GATE VALVE	FACE TO FACE : 270mm BODY : CAST STEEL	1	
53F1	6" GATE VALVE	FACE TO FACE : 270mm BODY : CAST STEEL	1	
54F1	6" GATE VALVE	FACE TO FACE : 270mm BODY : CAST IRON	1	
55F1	6" GATE VALVE	FACE TO FACE : 270mm BODY : CAST IRON	1	
56F1	6" GATE VALVE	FACE TO FACE : 270mm BODY : CAST IRON	1	
57F1	6" GATE VALVE	FACE TO FACE : 270mm BODY : CAST IRON	1	
58F1	6" GATE VALVE	FACE TO FACE : 270mm BODY : CAST IRON	1	
59F1	6" GATE VALVE	FACE TO FACE : 270mm BODY : CAST IRON	1	
60F1	6" GATE VALVE	FACE TO FACE : 270mm BODY : CAST IRON	1	
61F1	6" GATE VALVE	FACE TO FACE : 270mm BODY : CAST IRON	1	
62F1	6" GATE VALVE	FACE TO FACE : 270mm BODY : CAST IRON	1	

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		BODY	: CAST IRON	
55F1	6" GATE VALVE	FACE TO FACE BODY	: 270mm : CAST IRON	1
56F1	6" GATE VALVE	FACE TO FACE BODY	: 270mm : CAST IRON	1
57F1	6" GATE VALVE	FACE TO FACE BODY	: 270mm : CAST IRON	1
58F1	6" GATE VALVE	FACE TO FACE BODY	: 270mm : CAST IRON	1
59F1	6" GATE VALVE	FACE TO FACE BODY	: 270mm : CAST IRON	1
60F1	6" GATE VALVE	FACE TO FACE BODY	: 270mm : CAST IRON	1
61F1	6" GATE VALVE	FACE TO FACE BODY	: 270mm : CAST IRON	1
62F1	6" GATE VALVE	FACE TO FACE BODY	: 270mm : CAST IRON	1
63F1	6" GATE VALVE	FACE TO FACE BODY	: 270mm : CAST IRON	1
64F1	6" GATE VALVE	FACE TO FACE BODY	: 270mm : CAST IRON	1
65F1	6" GATE VALVE	FACE TO FACE BODY	: 270mm : CAST IRON	1
66F1	6" GATE VALVE	FACE TO FACE BODY	: 270mm : CAST IRON	1
67F1	6" GATE VALVE	FACE TO FACE BODY	: 500mm : CAST STEEL	1
ITEM No. None 68	4" GATE VALVE	FACE TO FACE BODY	: 230mm : CAST STEEL	15 25

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Inv. No.	Name of Machinery	Brief of Specification	Quantity	Remarks
ITEM #0 None 67	~~38 pcs. of~~ 4" GATE VALVE	FACE TO FACE : 215mm BODY : CAST IRON	38 ~~38~~	
"	~~4" GLOBE VALVE~~	~~FACE TO FACE : 360mm~~ ~~BODY : CAST IRON~~	~~1~~	
71 ~~#~~ "	~~6 pcs. of~~ 4" GLOBE VALVE	FACE TO FACE : 360mm BODY : CAST IRON	6 ~~6~~	
"	~~4" GLOBE VALVE~~	~~FACE TO FACE : 360mm~~ ~~BODY : GUN METAL~~	~~4~~	
"	~~3" GATE VALVE~~	~~FACE TO FACE : 200mm~~ ~~BODY : CAST STEEL~~	~~11~~	
"	~~3" GATE VALVE~~	~~FACE TO FACE : 200mm~~ ~~BODY : CAST IRON~~	~~8~~	
75 ~~#~~	~~8 pcs. of~~ 3" GLOBE VALVE	FACE TO FACE : 240mm BODY : CAST IRON	8 ~~8~~	
76 ~~#~~	~~1 pc. of~~ 3" GLOBE VALVE	FACE TO FACE : 290mm BODY : GUN METAL	1	
77 ~~#~~	~~5 pcs. of~~ 2" GATE VALVE	FACE TO FACE : 230mm BODY : CAST STEEL	5 ~~5~~	
78 ~~#~~	~~12 pcs. of~~ 2" GATE VALVE	FACE TO FACE : 230mm BODY : CAST IRON	~~12~~ 12	
79 ~~#~~	~~8 pcs. of~~ 2" GLOBE VALVE	FACE TO FACE : 230mm BODY : CAST IRON	8 ~~8~~	
80 ~~#~~	~~14 pcs. of~~ 2" GLOBE VALVE	FACE TO FACE : 240mm BODY : GUN METAL	14 ~~14~~	
81 ~~#~~	~~6 pcs. of~~ 1½" GATE VALVE	FACE TO FACE : 240mm BODY : CAST STEEL	6 ~~6~~	
82 ~~#~~	~~3 pcs. of~~ 1½" GATE VALVE	FACE TO FACE : 240mm BODY : CAST IRON	3 ~~3~~	
83 ~~#~~	~~18 pcs. of~~ 1" GLOBE VALVE	FACE TO FACE : 130mm BODY : GUN METAL	18 ~~18~~	
84 ~~#~~	~~12 pcs. of~~ 1" GATE VALVE	FACE TO FACE : 115mm	12 ~~12~~	

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		BODY	: GUN METAL	
77 #	~~5 pcs. of~~ 2" GATE VALVE	FACE TO FACE BODY	: 230mm : CAST STEEL	5
78 #	~~12 pcs. of~~ 2" GATE VALVE	FACE TO FACE BODY	: 230mm : CAST IRON	~~12~~ 12
79 #	~~8 pcs. of~~ 2" GLOBE VALVE	FACE TO FACE BODY	: 230mm : CAST IRON	8
80 #	~~14 pcs. of~~ 2" GLOBE VALVE	FACE TO FACE BODY	: 240mm : GUN METAL	14
81 #	~~6 pcs. of~~ 1½" GATE VALVE	FACE TO FACE BODY	: 240mm : CAST STEEL	6
82 #	~~3 pcs. of~~ 1½" GATE VALVE	FACE TO FACE BODY	: 240mm : CAST IRON	3
83 #	~~18 pcs. of~~ 1" GLOBE VALVE	FACE TO FACE BODY	: 130mm : GUN METAL	18
84 #	~~12 pcs. of~~ 1" GATE VALVE	FACE TO FACE BODY	: 115mm : IRON (CAST)	12
85 #	~~46 pcs. of~~ 1" GLOBE VALVE	FACE TO FACE BODY	: 120mm : GUN METAL	46
86 #	~~28 pcs. of~~ 3/4" GLOBE VALVE	FACE TO FACE NOMINAL SIZE	: 75mm : 20mm	28
87 #	~~2 pcs. of~~ 5/8" GLOBE VALVE	FACE TO FACE BODY	: 70mm : GUN METAL	2
88 #	~~2 pcs. of~~ ½" GATE VALVE	FACE TO FACE BODY	: 65mm : CAST IRON	2

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Inv. No.	Name of Machinery	Brief Specification	Quantity	Remarks
~~None~~ ITEM No	~~½" GLOBE VALVE~~	~~FACE TO FACE : 65mm~~ ~~BODY : GUN METAL~~	~~35~~	
90 "	10" GAS PIPE	OUT DIA : 267mm TOTAL LENGTH : ~~15M~~ 14M	1	
91 "	8" GAS PIPE	OUT DIA : 216mm TOTAL LENGTH : 15M	1	
92 "	6" GAS PIPE	OUT DIA : 165mm TOTAL LENGTH : 370M	1	
93 "	4" GAS PIPE	OUT DIA : 114.3mm TOTAL LENGTH : ~~400M~~ 625 M	1	
94 "	3" GAS PIPE	OUT DIA : 89mm TOTAL LENGTH : ~~1,400M~~ 897 M	1	
~~"~~	~~2½" GAS PIPE~~	~~OUT DIA : 76mm~~ ~~TOTAL LENGTH : 170M~~	~~1~~	
96 "	2" GAS PIPE	OUT DIA : 60.5mm TOTAL LENGTH : ~~500M~~ 633 M	1	
97 "	1½" GAS PIPE	OUT DIA : 48mm TOTAL LENGTH : ~~150M~~ 312 M	1	
98 "	1" GAS PIPE	OUT DIA : 34mm TOTAL LENGTH : ~~150M~~ 271 M	1	
99 "	3/4" GAS PIPE	OUT DIA : 27mm TOTAL LENGTH : ~~500M~~ 92 M	1	
~~8F1~~	~~BAROMETRIC CONDENSER~~	~~VERTICAL~~ ~~DIA : 460mm~~ ~~HEIGHT : 2,500mm~~		

~~Sub~~ Total

~~Quantity 368 3/2~~

~~Item 93 99 93~~

S 310

~~96~~				
"	2" GAS PIPE	OUT DIA : 60.5mm TOTAL LENGTH : ~~500M~~ 633 M		1
~~97~~				
"	1½" GAS PIPE	OUT DIA : 48mm TOTAL LENGTH : ~~150M~~ 312 M		1
~~98~~				
"	1" GAS PIPE	OUT DIA : 34mm TOTAL LENGTH : ~~150M~~ 271 M		1
~~99~~				
"	3/4" GAS PIPE	OUT DIA : 27mm TOTAL LENGTH : ~~500M~~ 92 M		1
~~8F1~~	~~BAROMETRIC CONDENSER~~	~~VERTICAL~~ ~~DIA : 460mm~~ ~~HEIGHT : 2,500mm~~		

~~Sub~~ Total

~~Quantity 368 2/2~~

~~Item 95 99 97~~

~~S 310.~~

Sub Total

Item 310. (310 pieces)

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SULPHRIC ACID TREATING PLANT (45-5-F1)

(Plant evaluation No. 17 - 29 & and Additionally Evaluated)

Inv. No.	Name of Machinery	Brief Specification	Quantity	Remarks
68F1	PUMP FOR CHARGE WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN PUMP SIZE : 250X150X250 CAP. : 290 GAL/MIN	1	
69F1	PUMP FOR CHARGE WORTHINGTON DUPLEX RECIPROCAPING TYPE	STEAM DRIVEN PUMP SIZE : 250X150X250 CAP. : 290GAL/MIN	1	
70F1	HEATER VERTICAL SHELL AND TUBE TYPE	AREA OF HEATING SURFACE : 7.41M^2 HEATER DIA : 470 mm. HEIGHT : 3,000 mm	1	WITHDRAWAL
71F1	HEATER VERTICAL, SHELL AND TUBE TYPE	AREA OF HEATING SURFACE : 7.41M^2 HEATER DIA. ; 470 mm. HEIGHT : 3,000 mm	1	WITHDRAWAL
72F1	MIXER HORIZONTAL, BOX TYPE	LENGTH : 500 mm. WIDTH : 260 mm. HEIGTH : 300 mm.	1	WITHDRAWAL (I.M.D. MOTOR : MISSING
73F1	MIXER HORIZONTAL, BOX TYPE	LENGTH : 500 mm. WIDTH : 260 mm. HEIGTH : 300 mm.	1	WITHDRAWAL (I M.D.) MOTOR : MISSING
74F1	MIXER HORIZONTAL BOX TYPE	LENGTH : 500mm WIDTH : 260mm HEIGTH : 300mm	1	WITH DRAWAL (I.M.D.) MOTOR : MISSING
75F1	MIXER HORIZONTAL, BOX TYPE	LENGTH : 500mm WIDTH : 260mm HEIGTH : 300mm	1	WITH DRAWAL (I.M.D.) MOTOR : MISSING
76F1	MIXER HORIZONTAL, BOX TYPE	LENGTH : 500mm WIDTH : 260mm HEIGTH : 300mm	1	WITH DRAWAL (I.M.D.) MOTOR : MISS
77F1	STORAGE TANK FOR SUL- PHORIC ACIDHORIZONTAL,	CAPACITY : 50KL DIA. : 2,350mm	1	

	HORIZONTAL, BOX TYPE	HEIGTH	: 300 mm.		
73F1	MIXER HORIZONTAL, BOX TYPE	LENGTH	: 500 mm.	1	WITHDRAWAL
		WIDTH	: 280 mm.		(1 M.D.) MOTOR
		HEIGTH	: 300 mm.		: MISSING
74F1	MIXER HORIZONTAL BOX TYPE	LENGTH	: 500mm	1	WITH DRAWAL
		WIDTH	: 280mm		(I.M.D.) MOTOR
		HEIGTH	: 300mm		: MISSING
75F1	MIXER HORIZONTAL, BOX TYPE	LENGTH	: 500mm	1	WITH DRAWAL
		WIDTH	: 280mm		(I.M.D.) MOTOR
		HEIGTH	: 300mm		: MISSING
76F1	MIXER HORIZONTAL, BOX TYPE	LENGTH	: 500mm	1	WITH DRAWAL
		WIDTH	: 280mm		(I.M.D.) MOTOR
		HEIGTH	: 300mm		: MISSING
77F1	STORAGE TANK FOR SULPHURIC ACIDHORIZONTAL, CYLINDRICAL TYPE	CAPACITY	: 50KL	1	
		DIA.	: 2,250mm		
		LENGTH	: 7,500mm		
78F1	BLOW CASE FOR SULPHURIC ACID HORIZONTAL, CYLINDRICAL TYPE	CAPACITY	: 2KL		
		DIA.	: 1,000mm		
		LENGTH	: 3,000mm		
79F1	AIR COMPRESSOR HORIZONTAL, SINGLE CYLINDER RECIPROCATING TYPE	CYLINDER DIA.	: 250mm	1	
		STROKE	: 250mm		
		CAPACITY	: 150M³/HR.		
			: 50 HP		
80F1	MOTOR FOR 79F1 A.C. INDCTIONMOTOR, SEMICLOSED TYPE	50H.P. 220V. 60Cycle 860R.P.M.		1	
81F1	AIR CHAMBER VERTICAL, CYLINDRICAL TYPE	DIA.	: 750mm	1	WITHDRAWAL
		HEIGTH	: 2,600mm		
		VOLUME	: 1,2M³		
82F1	AIR CHAMBER VERTICAL, CYLINDRICAL TYPE	DIA.	: 750mm	1	WITH DRAWAL
		HEIGTH	: 2,600mm		
		VOLUME	: 1.2M³		
83F1	MEASURING TANKFOR SULPHURIC ACID VERTICAL, CYLINDRICAL TYPE	DIA.	: 750mm	1	WITH DRAWAL
		HEIGTH	: 3,000mm		
		CAPACITY	: 2KL		

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Inv. No.	Name of Machinery	Brief Specification		Quantity	Remarks
84F1	MEASURING TANK FOR SULPHURIC ACID VERTICAL, CYLINDRICAL TYPE	DIA. HEIGHT CAPACITY	: 750mm : 3,000mm : 2KL	1	WITH DRAWAL
85F1	MEASURING TANK FOR SULPHURIC ACID VERTICAL, CYLINDRICAL TYPE	DIA. HEIGHT CAPACITY	: 750mm : 3,000mm : 2KL	1	WITH DRAWAL
86F1	MEASURING TANK FOR SULPHORIC ACID VERTICAL, CYLINDRICAL	DIA. HEIGHT CAPACITY	: 460mm : 3,000mm : 0.5KL	1	WITH DRAWAL
87F1	MEASURING TANK FOR SULPHORIC ACID VERTICAL, CYLINDRICAL TYPE	DIA. HEIGHT CAPACITY	: 460mm : 3,000mm : 0.5KL	1	WITH DRAWAL
88F1	CENTRIFUGE VERTICAL, HITACHI 3-SVR TYPE	2HP MOTOR DRIVEN CAPACITY BOWL DIA 15,000R.P.M.	: 0.5KL/Hr. : 105mm	1	MOTOR : MISSING
89F1	CENTRIFUGE VERTICAL, HITACHI 3-SVR CLOSED TYPE	2HP. MOTOR DRIVEN CAPACITY BOWL DIA 15,000R.P.M.	: 0.5KL/HR. : 105mm	1	MOTOR : MISSING
90F1	CENTRIFUGE VERTICAL, HITACHI 3-SVR CLOSED TYPE	2HP. MOTOR DRIVEN CAPACITY BOWL DIA 15,000R.P.M.	: 0.5KL/HR : 105mm	1	MOTOR MISSING
91F1	CENTRIFUGE VERTICAL, HITACHI 3-SVR CLOSED TYPE	2HP. MOTOR DRIVEN CAPACITY BOWL DIA 15,000R.P.M.	: 0.5KL/HR : 105mm	1	MOTOR : MISSING
92F1	CENTRIFUGE VERTICAL, HITACHI3-SVR CLOSED TYPE	2HP. MOTOR DRIVEN CAPACITY BOWL DIA 15,000R.P.M.	: 0.5KL/HR : 105mm	1	MOTOR MISSING
93F1	CENTRIFUGE VERTICAL, HITACHI 3-SVR CLOSED TYPE	2HP. MOTOR DRIVEN CAPACITY	: 0.5KL/HR	1	MOTOR MISSING

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87F1	MEASURING TANK FOR SULPHURIC ACID VERTICAL, CYLINDRICAL TYPE	DIA. : [illegible] HEIGHT : 3,000mm CAPACITY : 0.5KL		
88F1	CENTRIFUGE VERTICAL, HITACHI 3-SVR TYPE	2HP MOTOR DRIVEN CAPACITY : 0.5KL/Hr. BOWL DIA : 105mm 15,000R.P.M.	1	MOTOR : MISSING
89F1	CENTRIFUGE VERTICAL, HITACHI 3-SVR CLOSED TYPE	2HP. MOTOR DRIVEN CAPACITY : 0.5KL/HR. BOWL DIA : 105mm 15,000R.P.M.	1	MOTOR : MISSING
90F1	CENTRIFUGE VERTICAL, HITACHI 3-SVR CLOSED TYPE	2HP. MOTOR DRIVEN CAPACITY : 0.5KL/HR BOWL DIA : 105mm 15,000R.P.M.	1	MOTOR MISSING
91F1	CENTRIFUGE VERTICAL, HITACHI 3-SVR CLOSED TYPE	2HP. MOTOR DRIVEN CAPACITY : 0.5KL/HR BOWL DIA : 105mm 15,000R.P.M.	1	MOTOR : MISSING
92F1	CENTRIFUGE VERTICAL, HITACHI3-SVR CLOSED TYPE	2HP. MOTOR DRIVEN CAPACITY : 0.5KL/HR BOWL DIA : 105mm 15,000R.P.M.	1	MOTOR MISSING
93F1	CENTRIFUGE VERTICAL, HITACHI 3-SVR CLOSED TYTE	2HP. MOTOR DRIVEN CAPACITY : 0.5KL/HR BOWL DIA : 105mm 15,000R.P.M.	1	MOTOR MISSING
94F1	CENTRIFUGE VERTICAL, HITACHE 3-SVR CLOSED TYPE	2HP. MOTOR DRIVEN CAPACITY : 0.5KL/HR BOWL DIA : 105mm 15,000R.P.M.	1	MOTOR MISSING
95F1	CENTRIFUGE VERTICAL, HITACHI 3-SVR CLOSED TYPE	2HP. MOTOR DRIVEN CAPACITY : 0.5KL/HR 15,000R.P.M. BOEL DIA : 105mm	1	MOTOR MISSING

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Inv.No.	Name of Machinery	Brief Specification	Quantity	Remarks
96F1	CENTRIFUGE VERTICAL, HITACHI 3-SVR CLOSED TYPE	2HP. MOTOR DRIVEN CAPACITY : 0.5KL/HR BOWL DIA. : 105mm 15,000R.P.M.	1	MOTOR MISSING
97F1	CENTRIFUGE VERTICAL, HITACHI 3-SVR CLOSED TYPE	2HP. MOTOR DRIVEN CAPACITY : 0.5KL/HR BOWL DIA : 105mm 15,000R.P.M.	1	MOTOR MISSING
98F1	CENTRIFUGE VERTICAL, HITACHI 3-SVR CLOSED TYPE	2HP. MOTOR DRIVEN CAPACITY : 0.5KL/HR BOWL DIA : 105mm 15,000R.P.M.	1	MOTOR MISSING
99F1	CENTRIFUGE VERTICAL, HITACHI 3-SVR CLOSED TYPE	2HP. MOTOR DRIVEN CAPACITY : 0.5KL/HR BOWL DIA : 105mm 15,000R.P.M.	1	MOTOR MISSING
100F1	SOUR OIL RECEIVER VERTICAL CYLINDRICAL TYPE	DIA : 1,900mm HEIGHT : 2,000mm CAPACITY : 5KL	1	WITH DRAWAL
101F1	SOUR OIL RECEIVER VERTICAL CYLINDRICAL TYPE	DIA : 1,900mm HEIGHT : 2,000mm CAPACITY : 5KL	1	WITH DRAWAL
102F1	PUMP FOR SOUR OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN PUMP SIZE : 250X150X250 CAP : 290GAL/MIN	1	
103F1	PUMP FOR SOUR OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN PUMP SIZE : 250X150X250 CAP : 290 GAL/MIN	1	
104F1	TANK FOR SOUR OIL VERTICAL, CONICAL TYPE	DIA : 4,650mm HEIGHT : 1,440mm CAPACITY : 20KL	1	
105F1	STEEL STRUCTURE FOR 104F1	VERTICAL IRON FRAME TYPE	1	
106F1	TANK FOR SOUR OIL	DIA : 4,650mm	1	

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99F1	HITACHI 3-SVR CLOSED TYPE	CAPACITY BOWL DIA 15,000R.P.M.	: 0.9KL/HR : 105mm		
100F1	SOUR OIL RECEIVER VERTICAL CYLINDRICAL TYPE	DIA HEIGHT CAPACITY	: 1,900mm : 2,000mm : 5KL	1	WITH DRAWAL
101F1	SOUR OIL RECEIVER VERTICAL CYLINDRICAL TYPE	DIA HEIGHT CAPACITY	: 1,900mm : 2,000mm : 5KL	1	WITH DRAWAL
102F1	PUMP FOR SOUR OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN PUMP SIZE CAP	: 250X150X250 : 290GAL/MIN	1	
103F1	PUMP FOR SOUR OIL WORTHINGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN PUMP SIZE CAP	: 250X150X250 : 290 GAL/MIN	1	
104F1	TANK FOR SOUR OIL VERTICAL, CONICAL TYPE	DIA HEIGHT CAPACITY	: 4,650mm : 1,440mm : 30KL 20	1	
105F1	STEEL STRUCTURE FOR 104F1	VERTICAL IRON FRAME TYPE		1	
106F1	TANK FOR SOUR OIL VERTICAL, CONICAL TYPE	DIA HEIGHT CAPACITY	: 4,650mm : 1,440mm : 30KL 20	1	
107F1	STEEL STRUCTURE FOR 106F1	VERTICAL IRON FRAME TYPE		1	
108F1	TANK FOR CAUSTIC TREATING VERTICAL CONICAL TYPE	DIA HEIGHT CAPACITY	: 5,570mm : 2,350mm : 100KL	1	
109F1	TANK FOR CAUSTIC TREATING VERTICAL, CONICAL TYPE	DIA HEIGHT CAPACITY	: 5,570mm : 2,350mm : 100KL	1	
110F1	TANK FOR CAUSTIC SODA HORIZONTAL, CYLINDRICAL TYPE	DIA LENGTH CAPACITY	: 2,200mm : 7,500mm : 30KL 20	1	

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Inv. No.	Name of Machinery	Brief Specification		Quantity	Remarks
111F1	BLOW CASE HORIZONTAL, CYLINDRICAL TYPE	DIA LENGTH VOLUME	: 960mm : 3,000mm : 2.2M^3	1	
112F1	SLUDGE TANK BOX HORN BOTTOM TYPE	LENGTH WIDTH HEIGHT CAPACITY	: 5,060mm : 1,200mm : 600mm : 4KL	1	
113F1	SLUDGE TANK VERTICAL, CYLINDRICAL TYPE	DIA HEIGHT CAPACITY	: 1,170mm : 1,170mm : 1.2KL	1	
114F1	SOUDGE CARRIER DAMP CAR TYPE	CAPACITY	: 0.63M^3	1	
ITEM No ~~None~~ 151	~~30 pcs. of~> 4" GATE VALVE	FACE TO FACE BODY	: 215mm : CAST IRON	30 ~~26~~	
" 152	~~9 pcs. of~> 4" COCK	FACE TO FACE BODY	: 290mm : CAST IRON	9 4	
"	~~3" GLOBE VALVE~~	~~FACE TO FACE~~ ~~BODY~~	~~: 290mm~~ ~~: GUN METAL~~	~~1~~	
154 "	~~4 pcs. of~> 3" COCK	FACE TO FACE BODY	: 290mm : CAST IRON	4 ~~3~~	
155 "	4" GAS PIPE	OUT DIA TOTAL LENGTH	: 114.3mm : ~~180M~~ 250 M	1	Total Lengths are each incorrected
156 "	3" GAS PIPE	OUT DIA TOTAL LENGTH	: 89mm : ~~140M~~ 107 M	1	
157 "	2" PIPE GAS PIPE, ABOVE GROUND	OUT DIA TOTAL LENGTH	: 60.5mm : ~~340M~~ 400 M	1	
158 "	L½" PIPE GAS PIPE, ABOVE GROUND	OUT DIA TOTAL LENGTH	: 48mm : ~~20M~~ 50 M	1	
159 "	1" PIPE GAS PIPE ABOVE GROUND	OUT DIA TOTAL LENGTH	: 34mm : ~~70M~~ 100 M	1	
160					

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~~#152~~	4" COCK	BODY	: CAST IRON		
~~"~~	~~3" GLOBE VALVE~~	~~FACE TO FACE~~	~~: 290mm~~	~~1~~	
		~~BODY~~	~~: GUN METAL~~		
154 ~~"~~	~~4 pcs. of~~ 3" COCK	FACE TO FACE BODY	: 290mm : CAST IRON	4 ~~3~~	
155 ~~"~~	4" GAS PIPE	OUT DIA TOTAL LENGTH	: 114.3mm : ~~180M~~ 250 M	1	Total Lengths are each incorrected
156 ~~"~~	3" GAS PIPE	OUT DIA TOTAL LENGTH	: 89mm : ~~140M~~ 107 M	1	
157 ~~"~~	2" PIPE GAS PIPE, ABOVE GROUND	OUT DIA TOTAL LENGTH	: 60.5mm : ~~340M~~ 400 M	1	
158 ~~"~~	L½" PIPE GAS PIPE, ABOVE GROUND	OUT DIA TOTAL LENGTH	: 48mm : ~~20M~~ 50 M	1	
159 ~~"~~	1" PIPE GAS PIPE ABOVE GROUND	OUT DIA TOTAL LENGTH	: 34mm : ~~70M~~ 100 M	1	
160 ~~"~~	3/4" PIPE GAS PIPE, ABOVE GROUND	OUT DIA TOTAL LENGTH	: 27mm : 75M	1	
279F1	6" SLUICE VALVE	BODY	: CAST STEEL	1	
280F1	DITTO	DITTO		1	
281F1	DITTO	DITTO		1	

~~Sub Total~~

~~Quantity : 95 99~~

~~Items : 57 60 59~~

~~99~~

Sub Total

Item 59 (99 Pices)

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CONTACT RERUN PLANT (45-5-F1)

WORK SHEET

(PLANT EVALUATION NO. 30 - 48 & 4 ADDITIONALLY EVALUATED)

Inv. NO.	Name of Machinery	Brief Specification		Quantity	Remarks
115F1	PUMP FOR CRUDE CHARGE WORTHINGTON DUPLEX RECIPROCATINGTYPE	STEAM DRIVEN SIZE CAP	: 190X125X150 : 30KL/H	1	
116F1	SPARE PUMP FOR CRUDE CHARGE WORTHINGTON RECIPROCATING DUPLEX TYPE	STEAM DRIVEN SIZE CAP.	: 190X125X150 : 30KL/H	1	
117E1	FURNACE BOTTOM CONVECTION TYPE	AREA OF HEATING SURFACE RADIANT CONVECTION WIDTH LENGTH HEIGHT	: ~~115.M²~~ 12.5 M² : 29.7M² : 3,620mm : 4,620mm : 3,300mm	1	
118F1	VACUUM TOWER BUBBLE CAP TYPE	NO. OF TRAY DIA HEIGHT	: 17PCS : 2,740mm : 18,300mm	1	
119F1	STEEL STRUCTURE FOR ABOVE	LENGTH WIDTH WEIGHT	: 1,240mm : 1,200mm : 23,000mm	1	
120F1	BAROMETRIC CONDENSER HORIZONTAL SHELL & TUBE TYPE	DIA LENGTH TUBE DIA TUBE LENGTH	: 480mm : 2,000mm : ~~480mm~~ 20 mm : 1,830mm	1	
121F1	HOT WATER TANK VERTICAL, CYLINDRICAL TYPE	CAP DIA HEIGHT	: 0.5KL : 610mm : 1,220mm	1	
122F1	CONDENSER FOR OVER HEAD HORIZONTAL SHELL & TUBE TYPE	DIA LENGTH	: 740mm : 3,240mm	1	

118F1	VACUUM TOWER BUBBLE CAP TYPE	NO. OF TRAY DIA HEIGHT	: 17PCS : 2,740mm : 18,300mm	1
119F1	STEEL STRUCTURE FOR ABOVE	LENGTH WIDTH WEIGHT	: 1,240mm : 1,200mm : 23,000mm	1
120F1	BAROMETRIC CONDENSER HORIZONTAL SHELL & TUBE TYPE	DIA LENGTH TUBE DIA TUBE LENGTH	: 480mm : 2,000mm : ~~480mm~~ 20 mm : 1,830mm	1
121F1	HOT WATER TANK VERTICAL, CYLINDRICAL TYPE	CAP DIA HEIGHT	: 0.5KL : 610mm : 1,220mm	1
122F1	CONDENSER FOR OVER HEAD HORIZONTAL SHELL & TUBE TYPE	DIA LENGTH	: 740mm : 3,240mm	1
123F1	CONDENSER FOR OVER HEAD HORIZONTAL SHELL & TUBE TYPE	DIA LENGTH	: 740mm : 3,240mm	1
124F1	HEAT EXCHANGER FOR OVER HEAD HORIZONTAL SHELL & TUBE TYPE	DIA LENGTH	: 1,015mm : ~~2,440mm~~ 2,445 mm	1
125F1	FLOAT POT. HORIZONTAL, CYLINDRICAL TYPE	VOLUME DIA LENGTH	: 0.267M^3 : 610mm : 915mm	1
126F1	PUMP FOR OVER HEAD SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE	: 250X150X300mm	1
127F1	STRIPPING TOWER BUBBLE CAP TYPE	NO. OF TRAYS DIA HEIGHT	: 14PCS : 760mm : 15,000mm	1
128F1	PUMP FOR 1st. SIDE CUT SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE CAP	: 250X150X300mm : 3.41M^3/HR	1

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Inv. No.	Name of Machinery	Brief Specification	Quantity	Remarks
129F1	COOLER FOR 1st. SIDE CUT HORIZONTAL SHELL AND TUBE TYPE	DIA : 480mm LENGTH : 5,550mm COOLING SURFACE : 38.4M^2	1	
130F1	NO.4 PUMP FOR 2nd.SIDE CUT SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE : 250X150X300mm^3 CAP : 3.41M^3/HR	1	
131F1	COOLER FOR 2nd. SIDE CUT HORIZONTAL SHELL AND TUBE TYPE	DIA : 480mm LENGTH : 5,550mm COOLING SURFACE : 38.4M^2	1	
132F1	NO.5 PUMP FOR 3rd. SIDE CUT SIMPLEX RECIPROCATING TYPE	STEAMDRIVEN SIZE : 250X150X300mm^3 CAP : 3.41M^3/HR	1	
133F1	NO.6 STARE PUMP SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZI : 250X150X300mm^3 CAP : 3.41M^3/HR	1	
134F1	HEAT EXCHANGER FOR 3rd. SIDE CUT HORIZONTAL SHELL AND TUBE TYPE	DIA : 340mm LENGTH : 5,470mm HEATING SURFACE : 33.3M^2	1	
135F1	COOLER FOR 3rd. SIDE CUT HORIZONTAL SHELL AND TUBE TYPE	DIA : 480mm LENGTH : 5,550mm COOLING SURFACE : 38.4M^2	1	
136F1	NO.7 PUMP FOR BOTTOM OIL SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN CAP : 5.7M^3/H SIZE : 250X150X300mm	1	
137F1	~~HEAT EXCHANGER~~ WORTHINGTON PUMP FOR BOTTOM SIMPLEX RECIPRECATING TYPE	STEAM DRIVEN SIZE : 250X150X300mm^3 CAP : 5.7M^3/HR	1	
138F1	HEAT EXCHANGER FOR BOTTOM HORIZONTAL SHELL AND TUBE TYPE	DIA : 340mm LENGTH : 5,480mm HEATING SURFACE : 33.3M^2	1	
139F1	HEAT EXCHANGER FOR BOTTOM HORIZONTAL SHELL AND TUBE TYPE	DIA : 340mm LENGRH : 5,480mm HEATING SURFACE : 33.3M^2	1	

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133F1	NO.6 STARE PUMP SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZI CAP	: 250X150X300mm^3 : 5.341M^3/HR	1
134F1	HEAT EXCHANGER FOR 3rd. SIDE CUT HORIZONTAL SHELL AND TUBE TYPE	DIA LENGTH HEATING SURFACE	: 340mm : 5,470mm : 33.3M^2	1
135F1	COOLER FOR 3rd. SIDE CUT HORIZONTAL SHELL AND TUBE TYPE	DIA LENGTH COOLING SURFACE	: 480mm : 5,550mm : 38.4M^2	1
136F1	NO.7 PUMP FOR BOTTOM OIL SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN CAP SIZE	: 5.7M^3/H : 250X150X300mm	1
137F1	~~HEAT EXCHANGER~~ WORTHINGTON PUMP FOR BOTTOM SIMPLEX RECIPRECATING TYPE	STEAM DRIVEN SIZE CAP	: 250X150X300mm^3 : 5.7M^3/HR	1
138F1	HEAT EXCHANGER FOR BOTTOM HORIZONTAL SHELL AND TUBE TYPE	DIA LENGTH HEATING SURFACE	: 340mm : 5,480mm : 33.3M^2	1
139F1	HEAT EXCHANGER FOR BOTTOM HORIZONTAL SHELL AND TUBE TYPE	DIA LENGRH HEATING SURFACE	: 340mm : 5,480mm : 33.3M^2	1
140F1	COOLER FOR BOTTOM HORIZONTAL SHELL & TUBE TYPE	DIA LENGRH COOLING SURFACE	: 300mm : 5,500mm : 17.6M^2	1
141F1	BOTTOM RECEIVER VERTICAL, CYLINDRICAL TYPE	CAP DIA HEIGHT	: 13KL : 2,300mm : 3,180mm	1
142F1	BOTTOM RECEIDER VERTICAL , CYLINDRICAL TYPE	CAP DIA HEIGHT	: 13KL : 2,300mm : 3,180mm	1
143F1	TANK FOR FUEL VERTICAL, CYLINDRICAL TYPE	CAP DIA HEIGHT	: 15KL : 1,600mm : 6,500mm	1

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Inv. No.	Name of Machinery	Brief Specification		Quantity	Remarks
144F1	TANK FOR FUEL VERTICAL, CYLINDRICAL TYPE	CAP DIA HEIGHT	: 15KL : 0.019M^3/MIN : 1,800mm : 6,500mm	1	
145F1	NO.9 PUMP FOR FUEL GEAR PUMP	CAP HEAD DELIVERY HERSE POWER	: 0.019M^3/MIN : 60M : 25mm : 1HP	1	A.C. INDUCTION MOTOR MISSING
146F1	NO.94 SPARE PUMP FOR FUEL WORTH-INGTON DUPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE CAP	: ~~150~~ 115X70X100 : 0.019M^3/MIN	1	
147F1	TANK FOR CLAY FEED VERTICAL CYLINDRICAL TYPE	CAP. DIA. HEIGHT	: 2.7KL : 1,170mm : 2,500mm	1	
148F1	TANK FOR CLAY FEED VERTICAL TYPE	CAP. DIA. HEIGHT	: 2.7KL : 1,170mm : 2,500mm	1	
149F1	TANK FOR CLAY FEED VERTICAL CYLINDRICAL TYPE	CAP. DIA. HEIGHT	: 2.7KL : 1,170mm : 2,500mm	/	
150F1	CLAY HOPPER GAGE TYPE	LENGTH HEIGHT WIDTH	: 8,500mm : 3,950mm : 2,400mm	1	
151F1	AUTOMATIC CLAY FEEDING MACHINE SYNTON TYPE	DIA. LENGTH	: 200mm : 7500mm	/	
152F1	MIXING TANK FOR CLAY VERTICAL CYLINDRICAL TYPE	CAP. DIA. HEIGHT	: 0.85M^3 : 920mm : 1,300mm	1	A.C. INDUCTION MOTOR : MISSING HOPPER BROKEN
153F1	SLURRY PUMP VERTICAL PLUNGER TRIPLEX TYPE	MOTOR DRIVEN SIZE CAP.	: 50mmX100mm : 4GAL/MIN	1	A.C. INDUCTION MOTOR : MISSING

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148F1	TANK FOR CLAY FEED VERTICAL TYPE	CAP. DIA. HEIGHT	: 2.7KL : 1,170mm : 2,500mm	1	
149F1	TANK FOR CLAY FEED VERTICAL CYLINDRICAL TYPE	CAP. DIA. HEIGHT	: 2.7KL : 1,170mm : 2,500mm	1	
150F1	CLAY HOPPER GAGE TYPE	LENGTH HEIGHT WIDTH	: 8,500mm : 3,950mm : 2,400mm	1	
151F1	AUTOMATIC CLAY FEEDING MACHINE SYNTON TYPE	DIA. LENGTH	: 200mm : 7500mm	1	
152F1	MIXING TANK FOR CLAY VERTICAL CYLINDRICAL TYPE	CAP. DIA. HEIGHT	: 0.85M^3 : 920mm : 1,300mm	1	A.C. INDUCTION MOTOR : MISSING HOPPER BROKEN
153F1	SLURRY PUMP VERTICAL PLUNGER TRIPLEX TYPE	MOTOR DRIVEN SIZE CAP.	: 50mmX100mm : 4GAL/MIN	1	A.C. INDUCTION MOTOR : MISSING
154F1	SLURRY PUMP VERTICAL PLUNGER TRIPLEX TYPE	MOTOR DRIVEN SIZE CAP.	: 50mmX100mm : 4GAL/MIN	1	A.C. INDUCTION MOTOR : MISSING
155F1	NO. 10 PUMP FOR FILTER CHARGE SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE CAP.	: 250X180X300 mm ; 40GAL/MIN	1	
156F1	NO. 10A SPARE PUMP FOR F... FILTER CHARGE SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE CAP.	: 250X180X300 mm : 40GAL/MIN	1	
157F1	OLIVER FILTER OLIVER TYPE	DIA OF DRUM LENGTH OF DRUM: FILTER AREA	: 1600mm 1830mm : 9.35 M^2	1	3A.C. INDUCTION MOTORS : MISSING
158F1	OLIVER FILTER OLIVER TYPE	DIA OF DRUM LENGTH OF DRUM: FILTER AREA	: 1,600mm 1,830mm : 9.35 M^2	1	3 A.C. INDUCTION MOTORS : MISSING

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M/C No.	Name of Machinery	Brief Specification		Quantity	Remarks
159F1	TANK FOR FILTRATE VERTICAL CYLINDRICAL TYPE	CAP. DIA. HEIGHT	: 1.7KL : 950mm : 2,440mm	1	
160F1	TANK FOR FILTRATE VERTICAL CYLINDRICAL	HEIGHT CAP. DIA.	: 2,440mm : 1.7KL : 950mm	1	
161F1	NO. 11 PUMP FOR FILTRATE SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE CAP.	: 250mmX180mmX300mm : 25GAL/MIN	1	
162F1	NO. 11A SPARE PUMP FOR FILTRATE SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE CAP.	: 250mmX180mmX300mm 25GAL/MIN	1	
163F1	COOLER FOR FILTRATE HORIZONTAL SHELL AND TUBE TYPE	DIA. LENGTH COOLING SURFACE	: 350mm : 5,550mm : 27.8M^2	1	
164F1	COOLER FOR FILTRATE HORIZONTAL SHELL AND TUBE TYPE	DIA. LENGTH COOLING SURFACE	: 350mm : 5,550mm : 27.8M^2	1	
165F1	MIXING TANK FOR PRECOAT VERTICAL CYLINDRICAL TYPE	VOLUME DIA. HEIGTH	: 3.3M^3 : 1,530mm : 1,830mm	1	A.C.INDUCTION MOTOR FOR AGITATOR MISSING
166F1	TANK FOR WASH OIL VERTICAL CYLINDRICAL TYPE	CAP. DIA. HEIGTH	: 1.4KL : 930mm : 2,140mm	1	
167F1	PUMP FOR PRECOAT SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE CAP.	: 250mmX180mmX300mm :25GAL/MIN	1	
168F1	COMPRESSOR VERTICAL RECIPROCATING TYPE	SIZE HORSE POWER	: ~~50~~ 70mmX~~50~~ 100MM : 5 H.P.	1	A.C. INDUCTION MOTOR MISSING
169F1	AIR RECEIVER VERTICAL CYLINDRICAL TYPE	VOLUME DIA. HEIGHT	: 2 M^3 : 915mm : 3,050mm	1	
				1	ROOF & SIDE PLATE

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	AND TUBE TYPE	COOLING SURFACE			
164F1	COOLER FOR FILTRATE HORIZONTAL SHELL AND TUBE TYPE	DIA. LENGTH COOLING SURFACE	: 350mm : 5,550mm : 27.8M^2	1	
165F1	MIXING TANK FOR PRECOAT VERTICAL CYLINDRICAL TYPE	VOLUME DIA. HEIGTH	: 3.3M^3 : 1,530mm : 1,830mm	1	A.C.INDUCTION MOTOR FOR AGITATOR MISSING
166F1	TANK FOR WASH OIL VERTICAL CYLINDRICAL TYPE	CAP. DIA. HEIGTH	: 1.4KL : 920mm : 2,140mm	1	
167F1	PUMP FOR PRECOAT SIMPLEX RECIPROCATING TYPE	STEAM DRIVEN SIZE CAP.	: 250mmX150mmX300mm :25GAL/MIN	1	
168F1	COMPRESSOR VERTICAL RECIPROCATING TYPE	SIZE HORSE POWER	: ~~50~~ 70 X ~~50~~ 100MM : 5 H.P.	1	A.C. INDUCTION MOTOR MISSING
169F1	AIR RECEIVER VERTICAL CYLINDRICAL TYPE	VOLUME DIA. HEIGHT	: 2 M^3 : 915mm : 3,050mm	1	
170F1	TANK FOR PRODUCT OIL VERTICAL CYLINDRICAL TYPE	CAP. DIA. HEIGHT	: 100KL :6.204mm : 4,500mm	1	ROOF & SIDE PLATE BROKEN
171F1	TANK FOR PRODUCT OIL VERTICAL, CYLINDRICAL TYPE	CAP. DIA. HEIGHT	: 100KL : 6,204mm : 4,500mm	1	ROOF & SIDE PLATE BROKEN
172F1	INSTRUMENT ~~DIAID~~ BOARD	HEIGHT WIDTH	: 2,350mm : 2,350mm	1	ALL METERS MISSING
173F1	LOOK BOX PLATE	HEIGHT WIDTH	: 1,650mm : 2500mm	1	ALL METERS MISSING
174F1	DISTRIBUTER BOX TYPE	LENGTH WIDTH HEIGRT	: 150mm : 910mm : 1,320mm	1	6 SWITCHS FITTED

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Inv. No.	Name of Machinery	Brief Specification			Quantity	Remarks
175F1	DISTRIBUTER BOX TYPE	LENGTH WIDTH HEIGHT	: : :	1,000mm 650mm 140mm	1	5 SWITCHES FITTED
176F1	DISTRIBUTER BOX TYPE	LENGTH WIDTH HEIGHT	: : :	[illegible]mm 660mm 140mm	1	5 SWITCHES FITTED
177F1	DISTRIBUTER BOX TYPE	LENGTH WIDTH HEIGHT	: : :	1,300mm 960mm 150mm	1	8 SWITCHES FITTED
178F1	SWITCH BOX BOX TYPE	LENGTH WODTH HEIGHT	: : :	590mm 950mm 200mm	1	5 SWITCHES FITTED
179F1	8" GATE VALVE	FACE TO FACE BODY	: :	290mm CAST STEEL	1	
180F1	8" GATE VALVE	FACE TO FACE BODY	: :	290mm CAST STEEL	1	
181F1	8" GATE VALVE	FACE TO FACE BADY	: :	290mm CAST STEEL	1	
182F1	8" GATE VALVE	FACE TO EACE BODY	: :	290mm CAST STEEL	1	
183F1	6" GATE VALVE	FACE TO FACE BODY	: :	270mm CAST STEEL	1	
184F1	6" GATE VALVE	FACE TO FACE BODY	: :	270mm CAST STEEL	1	
185F1	6" GATE VALVE	FACE TO FACE BODY	: :	270mm CAST STEEL	1	
ITEM No. 233	~~6 pcs of~~ 4" GATE VALVE	FACE TO FACE BODY	: :	215mm CAST IRON	6/6	
#234	~~7 pcs. of~~ 4" GATE VALVE	FACE TO FACE BODY	: :	230mm CAST STEEL	7/7	
#235	~~6 pcs. of~~ 4" GLOBE VALVE	FACE TO FACE BODY	: :	350mm CAST STEEL	6/6	

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179F1	8" GATE VALVE	BODY	:	CAST STEEL	1
180F1	8" GATE VALVE	FACE TO FACE BODY	: :	290mm CAST STEEL	1
181F1	8" GATE VALVE	FACE TO FACE BADY	: :	290mm CAST STEEL	1
182F1	8" GATE VALVE	FACE TO FACE BODY	: :	290mm CAST STEEL	1
183F1	6" GATE VALVE	FACE TO FACE BODY	: :	270mm CAST STEEL	1
184F1	6" GATE VALVE	FACE TO FACE BODY	: :	270mm CAST STEEL	1
185F1	6" GATE VALVE	FACE TO FACE BODY	: :	270mm CAST STEEL	1
ITEM No. None 233	~~6 pcs of~~ 4" GATE VALVE	FACE TO FACE BODY	: :	215mm CAST IRON	6/6
#234	~~7 pcs. of~~ 4" GATE VALVE	FACE TO FACE BODY	: :	230mm CAST STEEL	7/7
#235	~~6 pcs. of~~ 4" GLOBE VALVE	FACE TO FACE BODY	: :	350mm CAST STEEL	6/6
#236	~~2 pcs. of~~ 3" GATE VALVE	FACE TO FACE BODY	: :	200mm CAST IRON	2/2
#237	~~22 pcs. of~~ 3" GATE VALVE	FACE TO FACE BODY	: :	200mm CAST STEEL	22/22
#238	~~1 pc. of~~ 3" GLOBE VALVE	FACE TO FACE BODY	: :	180mm CAST STEEL	1
#239	~~3 pcs. of~~ 2½" GATE VALVE	FACE TO FACE BODY	: :	190mm CAST STEEL	3/3
#240	~~1 pc. of~~ 2½" GLOBE VALVE	FACE TO FACE BODY	: :	190mm GUN METAL	1

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Inv. No.	Name of Machinery	Brief Specification			Quantity	Remarks
ITEM No	~~35 pcs. of~~				35	
~~None~~ 241	2"GATE VALVE	FACE TO FACE BODY	: :	230mm CAST IRON	35	
" 242	~~65 pcs. of~~ 2" GATE VALVE	FACE TO FACE BODY	: :	230mm CAST STEEL	65 ~~65~~	
" 243	~~22 pcs. of~~ 2" GATE VALVE	FACE TO FACE BODY	: :	140mm GUN METAL	22 ~~22~~	
" 244	~~11 pcs. of~~ 1½" GATE VALVE	FACE TO FACE BODY	: :	240mm CAST IRON	11 ~~11~~	
" 245	~~22 pcs. of~~ 1½" GATE VALVE	FACE TO FACE BODY	: :	240mm CAST STEEL	22 ~~22~~	
" 246	~~9 pcs. of~~ 1½" GLOBE VALVE	FACE TO FACE BODY	: :	200mm CAST STEEL	9 ~~8~~	
" 247	~~51 pcs. of~~ 1½" GLOBE VALVE	FACE TO FACE BODY	: :	130mm GUN METAL	51 ~~42~~	
" 248	~~13 pcs. of~~ 1" GATE VALVE	FACE TO FACE BODY	: :	130mm CAST IRON	13 ~~13~~	
" 249	~~3 pcs of~~ 1" GATE VALVE	FACE TO FACE BODY	: :	130mm GUN METAL	3 ~~3~~	
" 250	~~36 pcs. of~~ 1" GLOBE VALVE	FACE TO FACE BODY	: :	100mm GUN METAL	26 ~~26~~	
" 251	~~9 pcs. of~~ 3/4" GLOBE VALVE	FACE TO FACE BODY	: :	65mm GUN METAL	9 ~~9~~	
" 252	~~2 pcs. of~~ 5/8" GATE VALVE	FACE TO FACE BODY	: :	100mm CAST STEEL	2 ~~2~~	
" 253	~~20 pcs. of~~ 5/8" GLOBE VALVE	FACE TO FACE BODY	: :	100mm GUN METAL	20 ~~20~~	
" 254	~~14 pcs. of~~ ½" GLOBE VALVE	FACE TO FACE BODY	: :	72mm GUN METAL	14 ~~14~~	
" 255	8" GAS PIPE	OUT DIA.	:	216.3mm	1	

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	1⅛" GLOBE VALVE	BODY	:	GUN METAL	
# 248	~~13 pcs. of~~ 1" GATE VALVE	FACE TO FACE BODY	: :	130mm CAST IRON	13 ~~13~~
# 249	~~3 pcs of~~ 1" GATE VALVE	FACE TO FACE BODY	: :	130mm GUN METAL	3 ~~3~~
# 250	~~36 pcs. of~~ 1" GLOBE VALVE	FACE TO FACE BODY	: :	160mm GUN METAL	26 ~~26~~
# 251	~~9 pcs. of~~ 3/4" GLOBE VALVE	FACE TO FACE BODY	: :	65mm GUN METAL	9 ~~9~~
# 252	~~2 pcs. of~~ 5/8" GATE VALVE	FACE TO FACE BODY	: :	100mm CAST STEEL	2 ~~2~~
# 253	~~20 pcs. of~~ 5/8" GLOBE VALVE	FACE TO FACE BODY	: :	100mm GUN METAL	20 ~~20~~
# 254	~~74 pcs. of~~ ½" GLOBE VALVE	FACE TO FACE BODY	: :	72mm GUN METAL	14 ~~14~~
# 255	8" ~~GAS~~ GAS PIPE	OUT DIA. TOTAL LENGTH	: :	216.3mm ~~110M~~ 43 M	1
# 256	6" GAS PIPE	OUT DIA. TOTAL LENGTH	: :	165.2mm ~~60M~~ 84 M	1
# 257	4" GAS PIPE	OUT DIA. TOTAL LENGTH	: :	114.3mm ~~290M~~ 147 M	1
# 258	3" GAS PIPE	OUT DIA. TOTAL LENGTH	: :	89.1mm ~~380M~~ 249 M	1
# 259	2" GAS PIPE	OUT DIA. TOTAL LENGTH	: :	60.5mm 510M	1
# 260	1½" GAS PIPE	OUT DIA. TOTAL LENGTH	: :	48.6mm ~~1200M~~ 661 M	1

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Inv. No.	Name of Machinery	Brief Specification	Quantity	Remarks
~~None~~ ITEM NO 261	1" GAS PIPE	OUT DIA : 340mm TOTAL LENGTH : ~~420 M~~ 159 M	1	
" 262	3/4" GAS PIPE	OUT DIA : 27.2mm TOTAL LENGTH : ~~300M~~ 63 M	1	
" 263	½" GAS PIPE	OUT DIA : 21.7mm TOTAL LENGTH : ~~500M~~ 99 M	1	
186F1	LEVEL CONTROLLER	AIR ACTING FLOAT TYPE	1	FLOAT BROKEN
187F1	LEVEL CONTROLLER	AIR ACTING FLOAT TYPE	/	
188F1	LEVEL CONTROLLER	AIR ACTING FLOAT TYPE	1	FLOAT BROKEN
189F1	LEVEL CONTROLLER	AIR ACTING FLOAT TYPE	1	FLOAT BROKEN
190F1	LEVEL CONTROLLER	AIR ACTING FLOAT TYPE	1	FLOAT BROKEN
275F1	HOPPER	STEEL WORKS LENGTH : 2,000mm WIDTH : 2,100mm HEIGHT : 2,600mm	1	
276F1	HOPPER	DITTO	1	
277F1	STRAINER	VERTICAL & CYLINDRICAL UNDERGROUND, FLANGED TYPE DIA : 360mm HEIGHT : 600mm	1	
278F1	STRAINER	DITTO	1	

~~Sub Total~~

~~Quantity: 428~~

~~Item : 111~~
~~117~~

Sub Total

Item (428 Pieces)

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		HEIGHT : 2,800mm	
276F1	HOPPER	DITTO	1
277F1	STRAINER	VERTICAL & CYLINDRICAL UNDERGROUND, FLANGED TYPE DIA : 360mm HEIGHT : 600mm	1
278F1	STRAINER	DITTO	1

~~Sub Total~~

~~Quantity: 428~~

~~Item : 111~~
~~437~~

Sub Total

Item 111 (437 Pices)

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DRUM FILLING EQUIPMENT (45-5-F1)

Work sheet

(Plant evaluation No. 65 - 69)

Inv. No.	Name of Machinery	Brief Specification	Quantity	Remarks
256F1	AUTOMATIC DRUM FILLING MACHINE VERTICAL, ROTARY TYPE	4 DRUMS ~~1~~ DRUM FILLING, MOTOR DRIVEN CAPACITY 60 DRUM/HR	1	WITH DRAWAL REDUCTION GEAR MISSTIN
257F1	DRUM FILLING MACHINE VERTICAL HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUNDATION~~
258F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUNDATION~~
259F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUNDATION~~
260F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUNDATION~~
261F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO. FOUDATION~~
262F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUNDATION~~
263F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUNDATION~~
264F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUNDTION~~

260F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUNDATION~~
261F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO. FOUDATION~~
262F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUNDATION~~
263F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUNDATION~~
264F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUNDTION~~
265F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUNDATION~~
266F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUNDATION~~
267F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUND TION~~
268F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	BALANCE BROKEN ~~NO FOUNDATION~~
269F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUNDATION~~
270F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUNDATION~~

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Inv. No.	Name of Machinery	Brief Specification	Quantity	Remarks
271F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUNDATION~~
272F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM 1 DRUM FILLING	1	~~NO FOUNDATION~~
273F1	DRUM FILLING MACHINE VERTICAL, HALF AUTOMATIC TYPE	BALANCE SYSTEM	1	~~NO FOUNDATION~~
ITEM No ~~None~~ 358	4" GATE VALVE	FACE TO FACE : 300mm BODY : CAST STEEL	1	
" 359	~~14 pcs. of~~ 3" GATE VALVE	FACE TO FACE : 210mm BODY : CAST IRON	~~14~~ 1K	

~~Sub-total, Quantity 33 33~~

~~Item 20 20~~

~~33~~

SubTotal

Item 20 (33 pices)

DRUM MANUFACTURING EQUIPMENT (45-5-F9)

Work sheet

(Plant evalution NO. 253 - 258)

Inv. No.	Name of Machinery	Brief Specification	Quantity	Remarks
1F7	ROLL BENDING MACHINE	MAX. PLATE THK. : 3.2mm MAX. PLATE WIDTH : 1,800mm FIX ROLLER : 2PCS DIA. : 185mm ADJUSTING ROLLER DIA : 230mm	1	MOTOR MISSING
~~2F7~~	~~HEMMING MACHINE~~	~~DRUM PLATE~~ ~~PLATE THICK : 2mm~~ ~~CAPACITY : 2 DRUMS.MIN~~	~~1~~	~~MOTOR MISSING~~
3F7	HEMMING MACHINE	DRUM PLATE PLATE THICK : 2mm CAPACITY : 2 DRUMS/MIN	1	MOTOR MISSING
~~4F7~~	~~CORRUGATION ROLL~~	~~DRUM SHELL~~ ~~DRUM DIA : 600mm~~ ~~LENGTH : 1,000mm~~ ~~CAPACITY : 2 DRUMS/MIN~~	1	~~MOTOR MISSING~~
5F7	CORRUGATION ROLL	DRUM SHELL DRUM DIA : 600mm LENGTH : 1,000mm CAPACITY : 2 DRUMS/MIN	1	MOTOR MISSING
6F7	FLASH BUTT WELDING MACHINE	DRUM SHELL LENGTH : 1,000mm CAPACITY : 80 DRUMS/MIN	1	MOTOR MISSING
7F7	FLASH BUTT WELDING MACHINE	DRUM SHELL LENGTH : 1,000mm CAPACITY : 80 DRUMS/MIN	1	MOTOR MISSING
8F7	GENERATOR ELECTRIC I.M.D. MOTOR	CAPACITY : 90 KW 60 V. 1,500 AMP.	1	
9F7	MOTOR FOR ABOVE A.C. INDUCTION	150 HP 3,300 V. ~~24~~ 24A NO. OF POLES : 6 1,175 R.P.M.	1	

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		~~CAPACITY : 2 DRUMS/MIN~~		
5F7	CORRUGATION ROLL	DRUM SHELL DRUM DIA : 600mm LENGTH : 1,000mm CAPACITY : 2 DRUMS/MIN	1	MOTOR MISSING
6F7	FLASH BUTT WELDING MACHINE	DRUM SHELL LENGTH : 1,000mm CAPACITY : 80 DRUMS/MIN	1	MOTOR MISSING
7F7	FLASH BUTT WELDING MACHINE	DRUM SHELL LENGTH : 1,000mm CAPACITY : 80 DRUMS/MIN	1	MOTOR MISSING
8F7	GENERATOR ELECTRIC I.M.D. MOTOR	CAPACITY : 90 KW 60 V. 1,500 AMP.	1	
9F7	MOTOR FOR ABOVE A.C. INDUCTION	150 HP 3,300 V. ~~24~~ 24A NO. OF POLES : 6 1,175 R.P.M.	1	
10F7	PLUG MANUFACTURING PRESS MACHINE	ONE POINT VERTICAL CAPACITY : 500 PCS/DAY	1	MOTOR MISSING
11F7	PLUG SEAMING PRESS MACHINE	ONE POINT VERTICAL STROKE : 38mm CAPACITY : 1,600 DRUMS/10 HR	1	MOTOR MISSING
12F7	PLUG SEAMING PRESS MACHINE	ONE POINT VERTICAL STROKE : 38mm CAPACITY : 1,600 DRUMS/10 HR	1	MOTOR MISSING
~~13F7~~	~~DRUM RADIAL WELDING MACHINE~~	~~AUTOMATIC ELECTRIC CAPACITY : 8 DRUMS/HR WITH AUTOMATIC WELDING ROD FEED CONTROLLER 600A 60V~~	~~1~~	~~ELECTRIC BOARD BROKEN~~
~~14F7~~	~~PHEOSTAT~~	~~100 AMP. WITH 6 SWITCHES~~	~~1~~	~~MOROT MISSING SWITCH BROKEN~~

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Inv. No.	Name of Machinery	Brief Specification	Quantity	Remarks
15F7	DRUM RADIAL WELDING MACHINE	AUTOMATIC ELECTRIC CAPACITY : 8 DRUMS/HR WITH ARTOCATIC WELDING ROD FEED CONTROLLER 600 A 60V	1	2 GUIDE ROLLER MISSING ELECTRIC BOARD BROKEN
16F7	RHEOSTAT	100 AMP. WITH 6 SWITCHES	1	MOTOR MISSING SWITCH BROKEN
17F7	DRUM RADIAL WELDING MACHINE	AUTOMATIC ELECTRIC CAPACITY 8 DRUMS/HR WITH AUTOMATIC WELDING ROD FEED CONTROLLER 600A60V	1	ELECTRIC BOARD BROKEN
18F7	RHOSTAT	10 - 200 AMP 6 SWITCHES	1	MOTOR MISSING SWITCH BOARD BROKEN
19F7	DRUM RADIAL WELDING MACHINE	AUTOMATIC ELECTRIC CAPACITY : 8 DRUMS/HR	1	ELECTRIC BOARD BROKEN WELDING ~~RATECONT ROLLER~~ RATE CONTROLLER MISSING RHOSTAT MISSING MOTOR MISSING
20F7	SEAMING MACHINE	DRUM TOP AND BOTTOM PLATE CAPACITY : 800 DRUMS/10 HR	1	MOTOR MISSING

~~Sub Total~~

~~Quantity 20~~ 16

~~Items 20~~

Sub Total

Item 16 (16 Pieces)

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				RHOSTAT MISSING MOTOR MISSING
20F7	SEAMING MACHINE	DRUM TOP AND BOTTOM PLATE CAPACITY : 800 DRUMS/10 HR	1	MOTOR MISSING

~~Sub Total~~

~~Quantity 20~~ 16

~~Items 20~~

Sub Total

Item 16 (16 Pieces)

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

HIGH PRESSURE STEAM BOILER PLANT (45-5-F14)

work sheet

(Plant evaluation No. 333 - 336)

Inv. No.	Name of Machinery	Brief Specification	Quantity	Remarks
1F14	TAKUMAS BOILER WATER TUBE TYPE	WORKING PRESSURE : 30Kg/Cm^2 CAP : 6TON/HR HEATING AREA : 217.3M^2	1	
2F14	TAKUMA'S BOILER WATER TUBE TYPE	WORKING PRESSURE : 30Kg/Cm^2 CAP : 6TON/HR HEATING AREA : 217,3M^2	1	
3F14	FURNACE BOX TYPE	COMBUSSION CHAMBER : 31.2M^3 LENGTH : 6,000MM WIDTH : 4,000MM HEIGHT : 6,800MM	1	
4F14	FURNACE BOX TYPE	COMBUSSION CHANBER : 31.2M^3 LENGTH : 6,000MM WIDTH : 4,000MM HEIGHT : 6,800MM	1	
5F14	STEAM SUPER HEATER	VERTICAL CAPACITY : 6TON/HR PRESSURE : 30Kg/Cm^2 TEMP. : 300C HEATING AREA : 28M^2	1	
6F14	STEAM SUPER HEATER	VERTICAL CAPACITY : 6TON/HR PRESSURE : 30Kg/Cm2 TEMP. : 300C HEATING AREA : 28M^2	1	
7F14	ECONOMIZER	HORIZONTAL HEATING AREA : 82M^2 DIA : 80MM LENGTH : 3,500MM TEMP. : 20C ROOF PIPE : 32	1	