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

ANNEX NO.2A

Purpose

(1) Main products in Ube Iron Works.

Pulverized coal combustion equipment for power plant.

Loading and transporting machineries.

Machineries for cement, ammonium sulphate, and soda industories.

Machineries for coal mines and other mines.

(2) Productive expansion.

For productive expansion of the said articles by powerfull demands of consumers.

(3) Arrangement of organization to meet the order and establishment of productive organization of special demanded commodities.

For arrangement of organization to meet the demands of foreign orders and establishment of organization for production of special demanded commodities which are expected to increase, hereafter, by the new situation of the world.

(4) Purpose in progress of work.

Machinereis which are applied, are used to produce the above-mentioned manufactures but main purpose in progress of work, is as next page.

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

LETTER OF ASSENT

Date: September 7, 1950

To: The Ministry of Finance

From: Ube Kosan Co., Ltd.

Sirs:

I, the undersigned, hereby assent for the custodian of Hikari Naval Arsenal (Code No. 45-4) to take burden of the responsibility pertaining to maintenance of the reparation designated machinery and equipment, list of which is attached to the application herein, belong to the above arsenal, after the same are moved into Ube Iron Works, Ube Kosan Co., Ltd.

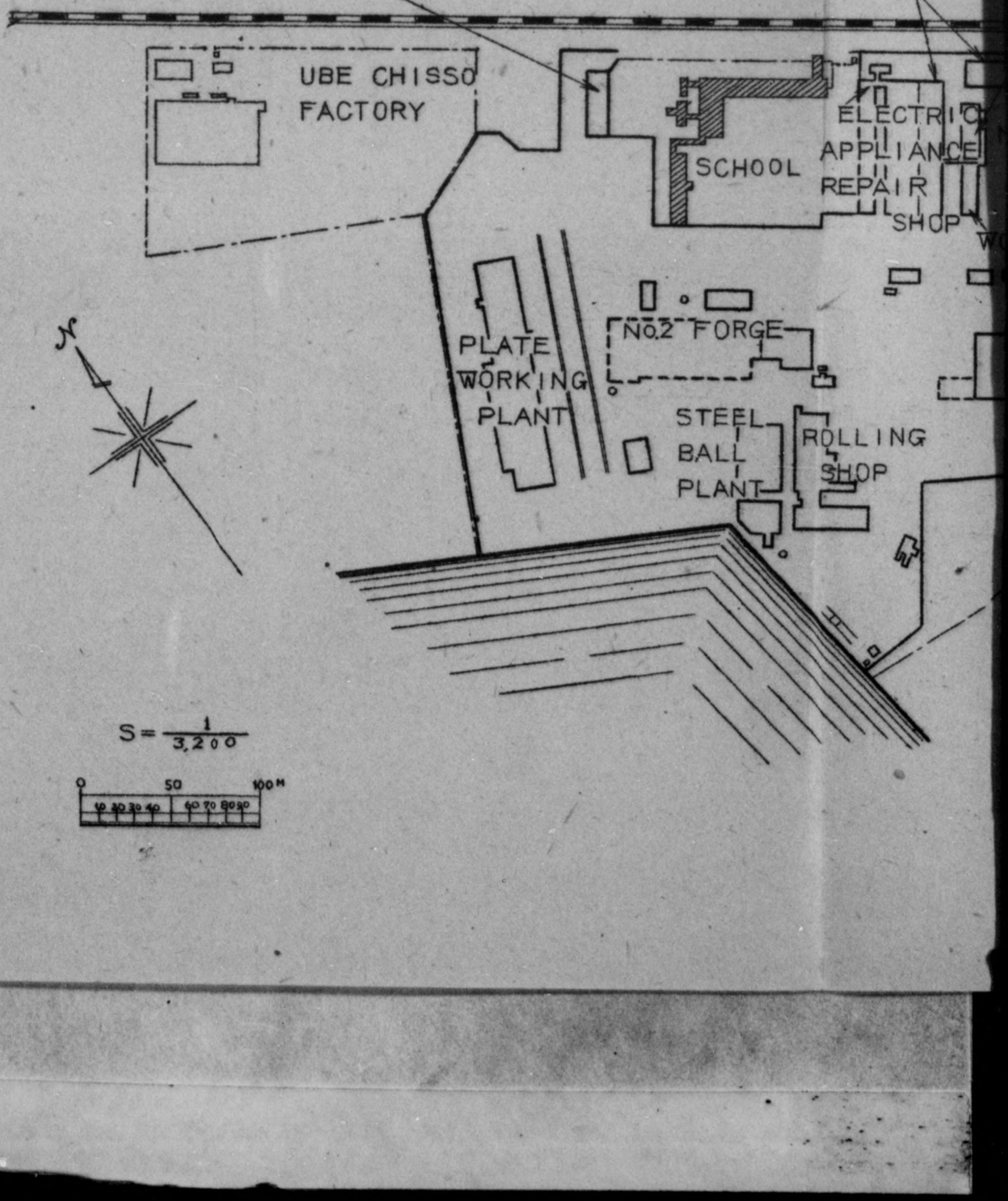
Akira Tawarada

Akira Tawarada
President,
Ube Kosan Co., Ltd.

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

PLAN OF UBE IR

NO.2 WARE HOUSE
MISCELLANEOUS
EQUIPMENT



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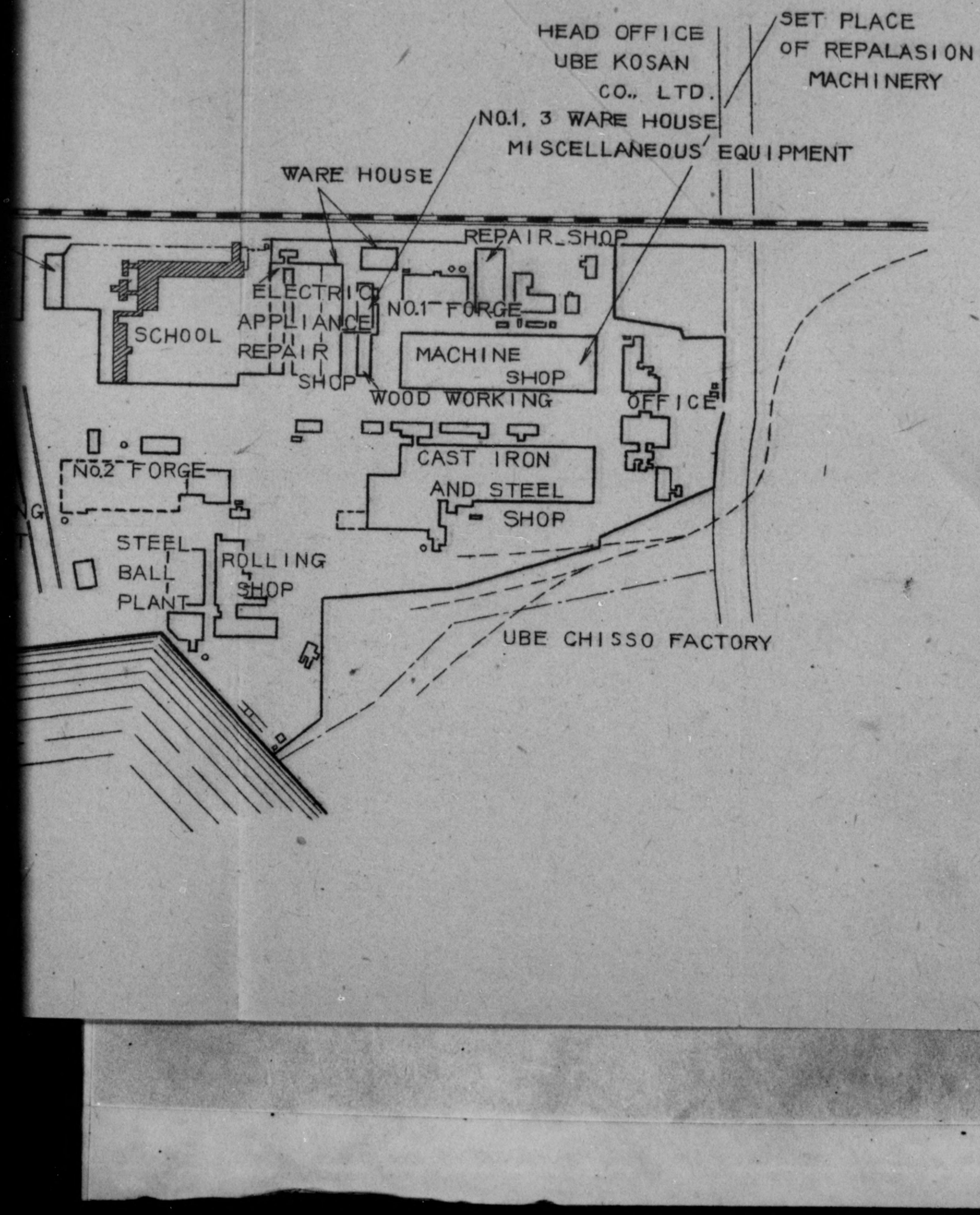
DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

AN OF UBE IRON WORKS



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

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

Date: 6 Aug 1950.

TO: The Rt. Hon. Hayato Ikeda
Minister of Finance

FROM: Yosomatsu Matsubara
President of Hitachi Shipbuilding & Engineering Co., Ltd.

Address: 45, Nipponbashi-suji 3-chome,
Naniwa-ku, Osaka.

MANUFACTURING AND INDUSTRY
FILE 45-4
Sec II

1. Name and location for the plant which intends to use designated reparation machinery and equipment:

Name: Hitachi Shipbuilding & Engineering Co., Ltd., Sakurajima Shipyard

Location: 17, Sakurajima, Minamino-cho, Konohana-ku, Osaka.

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

Name: Former Hikari Naval Arsenal (45 - 4)
Location: Hikari City, Yamaguchi Pref.

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

Please refer to Table III on separate sheet.

Submitted to F. Ministry
18 Sept 1950

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

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

Please refer to Table IV on separate sheet.

For President

Eizo Yamanaka
Managing Director
Hitachi Shipbuilding &
Engineering Co., Ltd.

Attached Documents:

1) List of applying machinery & equipment.

2) Approval of the applicant concerning responsibility of custody for designated reparation machinery & equipment.

3) Reference issued by the competent authorities.

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

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

LIST OF FACILITIES FOR APPLICATION (Table 1)

Code No.: 45 - 4

Name of Plant: Former Hikari Naval Arsenal

Address of Plant: Hikari City, Yamaguchi Pref.

1. Machinery

Inv. No.	Name of Machinery	Brief Specification	Quantity	Remarks
2108	28' Plans Milling machine	12' x 9' x 28' (Karatsu)	1	After permission transfer to Sakurajima Shipyard
	TOTAL		1	

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

LETTER OF ASSENT (Table II)

Date: 1950.

To: The Rt. Hon. Hayato Ikeda.
Minister of Finance
From: Hitachi Shipbuilding & Engineering Co., Ltd.

Sirs:

I, the undersigned, herely assent for the custodian of Hikari Naval Arsenal (Code No. 45 - 4) to take burden of the responsibility pertaining to maintenance of the reparation designated machinery and equipment, list of which is attached to the application herein, belong to the above arsenal, after the same moved into Hitachi Shipbuilding & Engineering Co., Ltd. Sakurajima Shipyard.

For President,

E Yamanaka

Eizo Yamanaka
Managing Director
Hitachi Shipbuilding &
Engineering Co., Ltd.

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

KINKI MARITIME BUREAU
MINISTRY OF TRANSPORTATION

Osaka, May 22, 1950

TO : Minister of International Trade and Industry

FROM : Director of Kinki Maritime Bureau

SUBJECT : Application For Permission Of Transfer For The Temporary Use Of Machinery Of The Reparations Designated Hikari Ex-Naval Arsenal (Code No.45-4)

1. Result of the preliminary investigation:

We affirm the contents described in the original application for the above permission are true in every particular.

2. Our view points:

The Sakurajima factory of Hitachi Shipbuilding Co., Ltd., applicant of the above transfer of machinery for the temporary use as seen in the enclosures attached hereto, occupies the first position in the shipbuilding circle under the jurisdiction of our office, engaging in ship-construction and repair ever since its establishment. This company, upon having secured the right of manufacturing and selling the Danish Burmeister and Wain diesel engine to be used for ship's main engine, is now eagerly making every preparation for the promotion of its business. The company is obliged to make this application as a result that when it had applied for the same type planomiller of Kure No.11 Ex-naval Air Arsenal, the request was not satisfied due to there being many other factories looking for the permission of the temporary use of same. Nevertheless, as for the applicant, the machinery under application is the one which is essential for construction and repair of diesel engine, and without big size machinery of this type, it has to face the inefficiency, resulting consequently in great impediment in the course of operation.

We, therefore, wish to ask you for your special consideration so that this company may be able to use the machinery in question.

T Shimasue

TATSUJIRO SHIMASUE
Director
Kinki Maritime Bureau

TK/yy

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

HITACHI SHIPBUILDING CO., LTD.

Attached sheet No. 4

NECESSITY OF THE MACHINERY TO BE MOVED AND USED

A. Use:

Constructing and repairing of B&W-type large marine Diesel engines, marine main and auxiliary engines, equipping parts and machinery for chemical industry.

B. Reason:

Since 1938, we have been engaged in construction of marine Diesel engines totalling 71 sets or 36,849 HP as of to-day.

From the recent world shipping situations and the necessity for securing the self-sufficient economy of our country, the question of constructing large marine Diesel engines was recognized to be very important and then we contracted a sub-license agreement with Mitsui Shipbuilding & Engineering Co., Ltd. on August 24, 1949 as to manufacturing and selling the Diesel engines of the Burmeister and Wain system and now constructing work of this world-famous engine is steadily progressing. On the other hand, however, we are facing to the very difficulty of obtaining enough machinery for such purpose, as such machinery for making large-size marine Diesel engines can hardly be available in the present domestic market, not to speak of in our yards themselves.

The size of the engine which is now under construction is shown in Figure 1 and 2. This engine has the largest cylinder bore and the longest stroke among those ever made in our country which may be a criterion to measure the size of an engine. An engine of this size can rarely be found even in other countries. Our only one and the largest planer which now is being used for big engines is shown in Figure 3. With this unsufficient planer, it is very obvious that we cannot expect the perfect results in constructing such world-known excellent Diesel engines. As already known, constructing work of large Diesel engines requires and explicit technique and very efficient machinery and the plans-miller in this application is a reliable one from its accuracy, which is approved by another plans-miller of the same type on the hand of Kawasaki Heavy Industry Company. This plans-miller could shorten the cutting-hours and would make much contribution to the low cost of the engine and the short time of delivery. The Diesel engine of the Burmeister and Wain system has a history of over a hundred years and the fact that 45 % of Diesel ships in the world are installed with the engines of this type according to the statics of the Lloyd's Register proves its high excellency. Under such circumstances, this plans-miller is our only one hope to sustain ourselves and compete with many manufacturers in other countries; in other words, our success on the B&W Diesel engine entirely depends upon this plans-miller.

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

HITACHI SHIPBUILDING CO., LTD.

Our shipyard has been solely engaged in the construction of merchant vessels and fishing boats since its establishment,, but unfortunately we have suffered from the biggest war-damage among other shipyards in the country and lost almost two thirds of its cutting machineries. It was once so devastated that was to be abandoned and closed. Nevertheless, enormous efforts on both parts of capital and labor since the war end could have rehabilitated it so wonderfully that other first-class shipbuilders are admiring at our rapid and fine reconstruction. But, to our only regret, some of our precious large cutting machinery were lost by the war-raids which could never be supplied again from the domostic market.

Taking the abovesaid circumstances into your good consideration, you might oblige us very much if you permit us to be authorized with the temporary use of this machinery.

For your further reference, the following lists and figures are attached herewith.

List 1. Capacity and dimension of the machinery

List 2. Outline of our construction schedule of the B&W-type Diesel engines

List 3. Comparison of precision

List 4. Comparison of working-hours

List 5. Approximate expenditure for repair and installation

Figure 1.)
Figure 2.) -Diesel engines now under construction

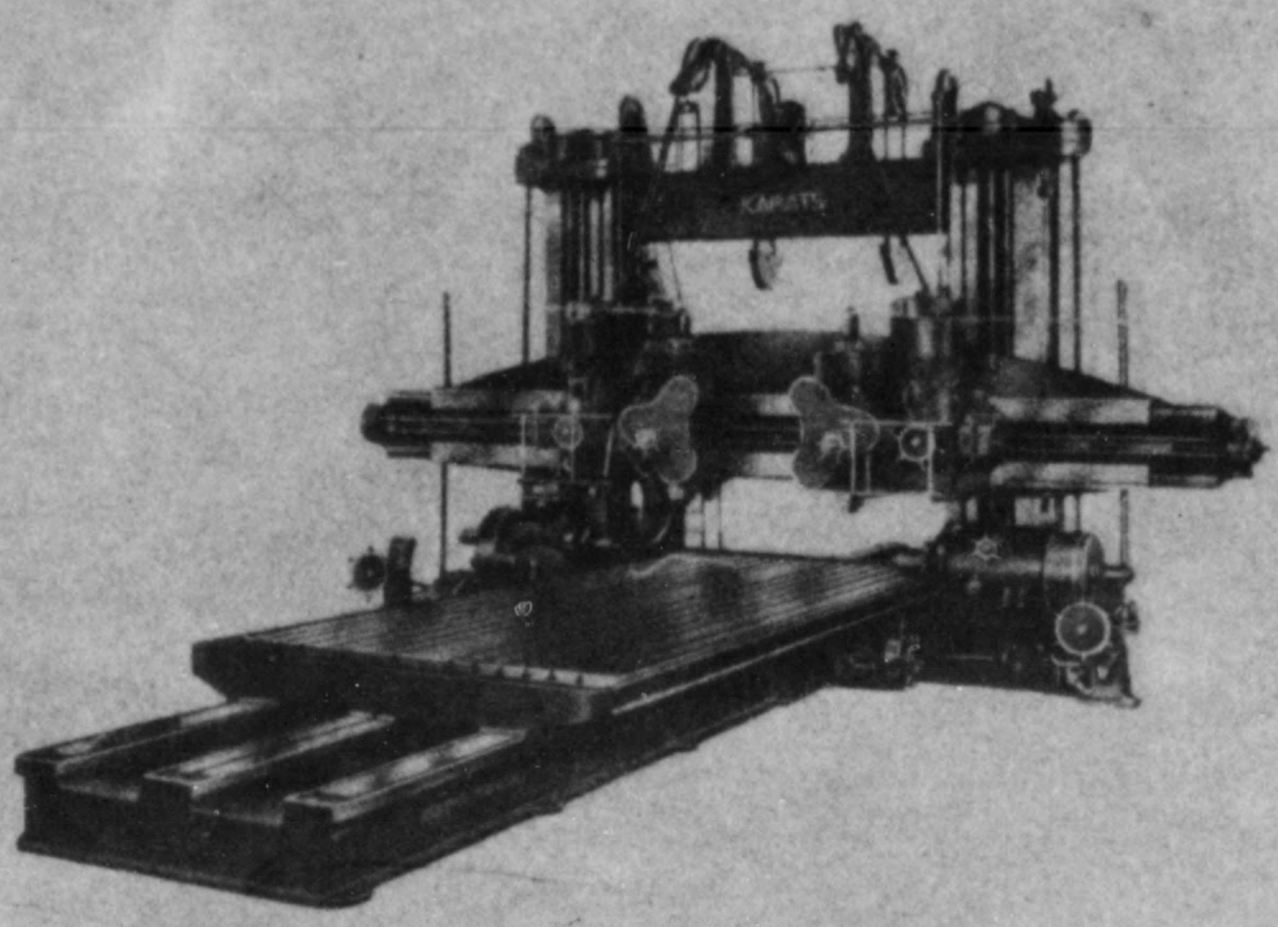
Figure 3. -The biggest planer now on our hand

Figure 4. Parts to be made with this plans-miller

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

Table 1 (½)

KARATSU IRON WORKS



12′ 0″ × 9′ 0″ × 28′ 0″ (3658mm. × 2743mm. × 8534mm.) PLANO MILLING MACHINE, MOTOR DRIVEN, WITH TWO-VERTICAL HEADS & TWO- SIDE HEADS.

Diameter of spindle (driving part)	6″ (152mm.)
Admits in width between upright	14′ 6″ (4420mm.)
Admits in width between horizontal spindle nose	12′ 4″ (3759mm.)
Admits in height under cross rail	10′ 3″ (3124mm.)
Admits in height under vertical spindle nose	9′ 6″ (2896mm.)
Distance from centre of horizontal spindle to top of table	~~9″ to 7′ 6″~~ 9″ to 7′ 6″ (229mm. to 2286mm.)
Taper hole in spindle (dia. at large end)	4″ (102mm.)
Length of table, over all	33′ 0″ (10058mm.)
Width of table	12′ 6″ (3810mm.)
Traverse of table	29′ 0″ (8839mm.)
Length of bed, about	63′ 0″ (19202mm.)
Adjustment of vertical spindles	12″ (305mm.)
Swivel angle of left hand vertical spindle	40 (20° on either side)
Adjustment of horizontal spindles	18″ (457mm.)
Swivel angle of left hand horizontal spindle	40 (20° on either side)
Spindle speed	6 to 24 R.P.M.
Feed, Table	1½″ to 12″ (38.1mm. to 305mm.)

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Table 1 (2/2)

Feed, Vertical head	1¼" to 12" (38.1mm. to 305mm.)
Feed, Side head	¾" to 6" (19.1mm. to 152mm.)
HP. of motors (D.C.),	
Main drive (variable speed 1; 4)	60
Feed drive	20
Vertical head drive (400 1600 R.P.M.)	30 (on each head)
Cross rail elevating	15
Net weight, about	250 Tons. (254,000 Kg.)
Gross weight, about	260 Tons. (264,200 Kg.)

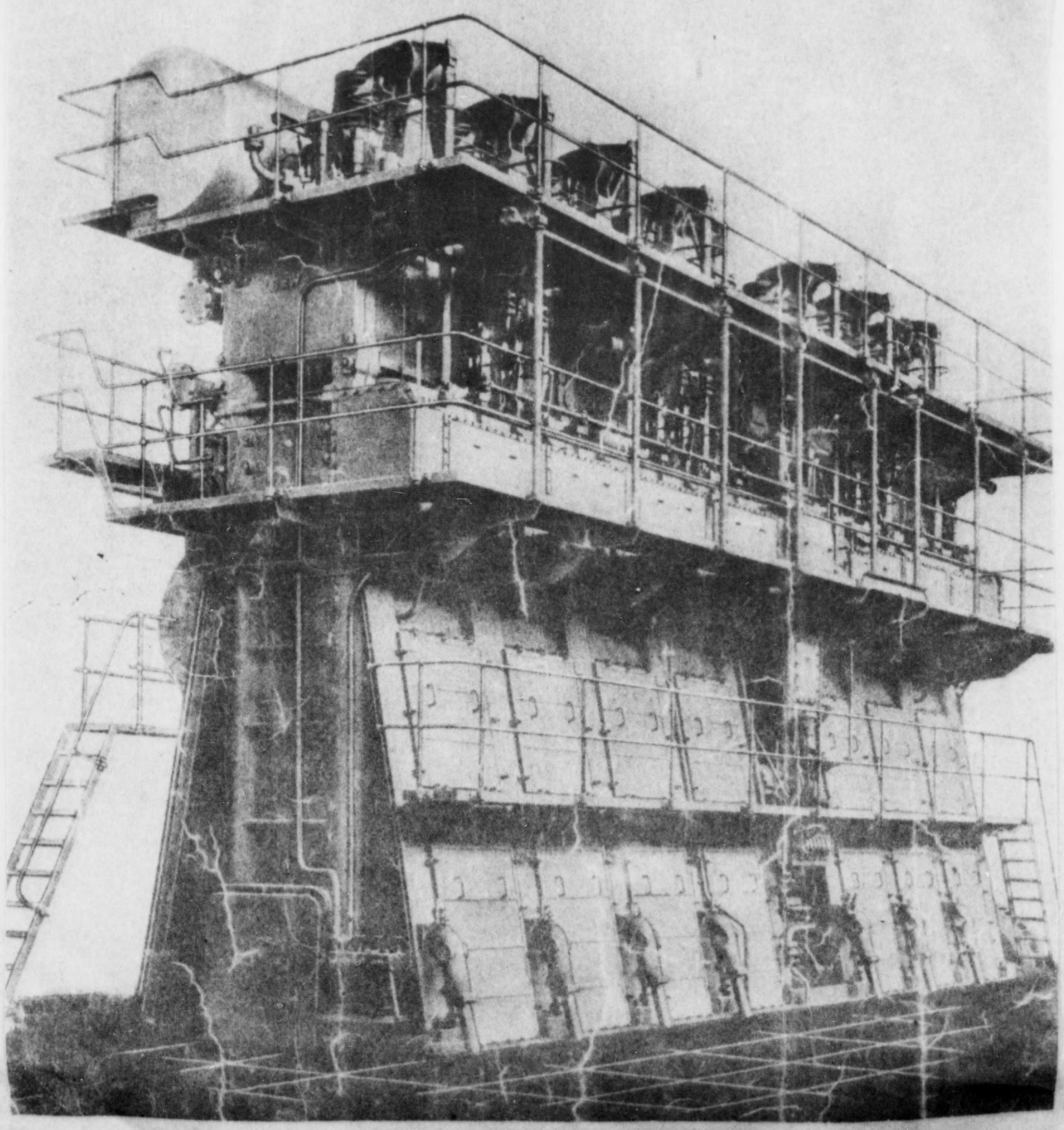
Equipments :—

1 Set—Necessary handles & wrenches.

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

Table 2

HITACH B&W DIESEL ENGINE



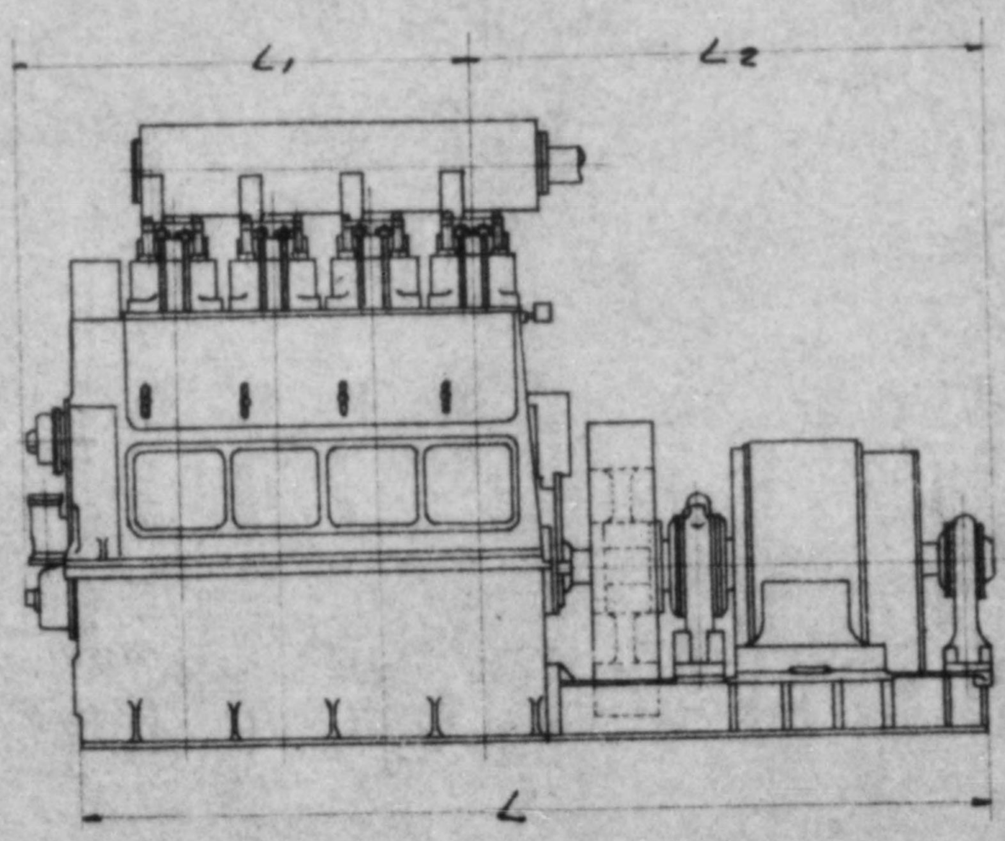
DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

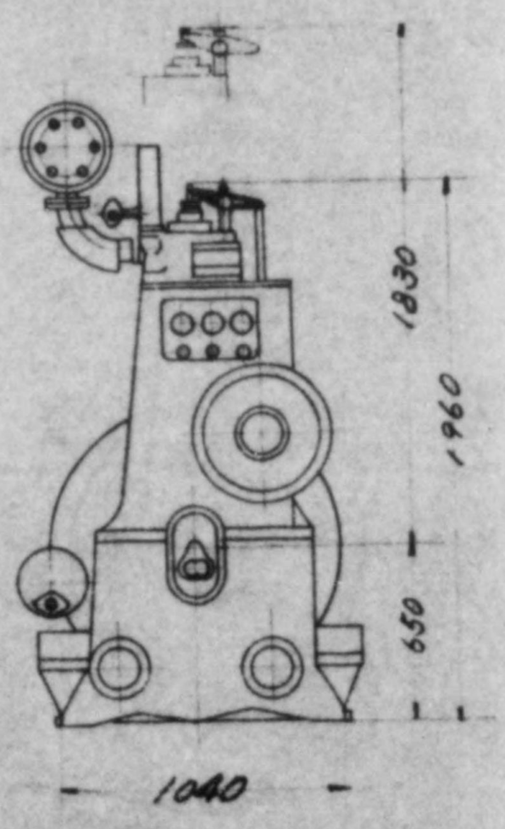
Table 2.

Type of engine 20-MTH-30

Single acting 4 cycle auxiliary diesel engine

Cyl. Bore 205 m/m Piston Stroke 300 m/m





Type	NO. Of Cylinder	R.P.M.	B.H.P	Wt ton With generator	Length MM L	L_1	L_2
220-MTH-30	2	450 540	50 60	6.7	2645	945	1900
320-MTH-30	3	450 540	75 90	7.4	3015	1315	1900
420-MTH-30	4	450 540	100 120	8.4	3385	1685	1900
520-MTH-30	5	450 540	125 150	9.7	3755	2055	1900
620-MTH-30	6	450 540	150 180	11.2	4125	2425	1900

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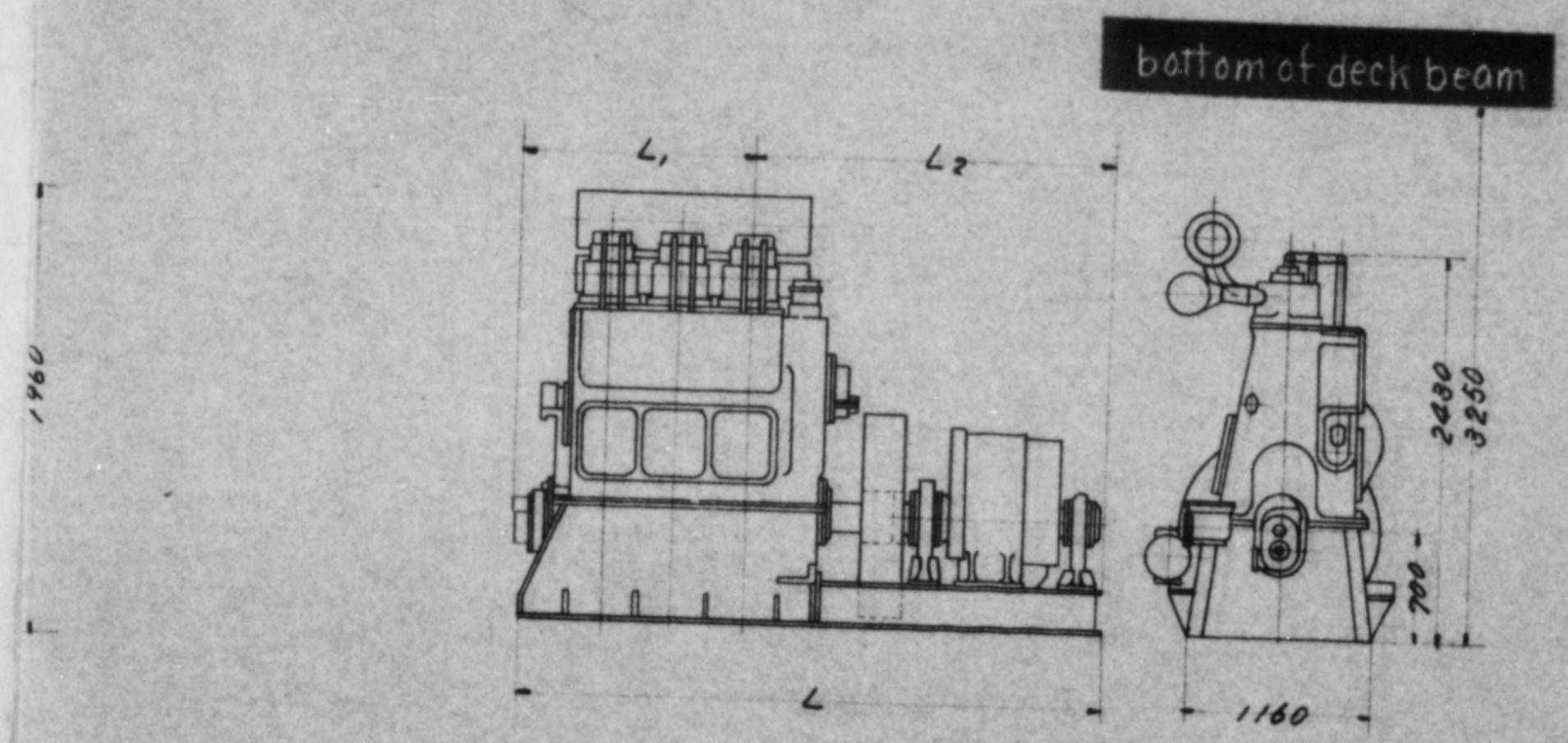
Table 2

Type of engine	25-MTH-40
Single acting	4 cycle auxiliary diesel engine
Cyl. Bore 245 m/m	Piston Stroke 400 m/m



Type	No of Cylinders	r.p.m	B.H.P.	Wt ton with generator	Length MM		
					L	L_1	L_2
225-MTH-40	2	425 500	100 120.	11.50	3040	1040	2110
325-MTH-40	3	425 500	150 180	12.50	3840	1480	2470
425-MTH-40	4	425 500	200 240	15.50	4330	1920	2520
525-MTH-40	5	425 500	250 300	17.00	4790	2360	2540
625-MTH-40	6	425 500	300 360	19.00	5290	2800	2600

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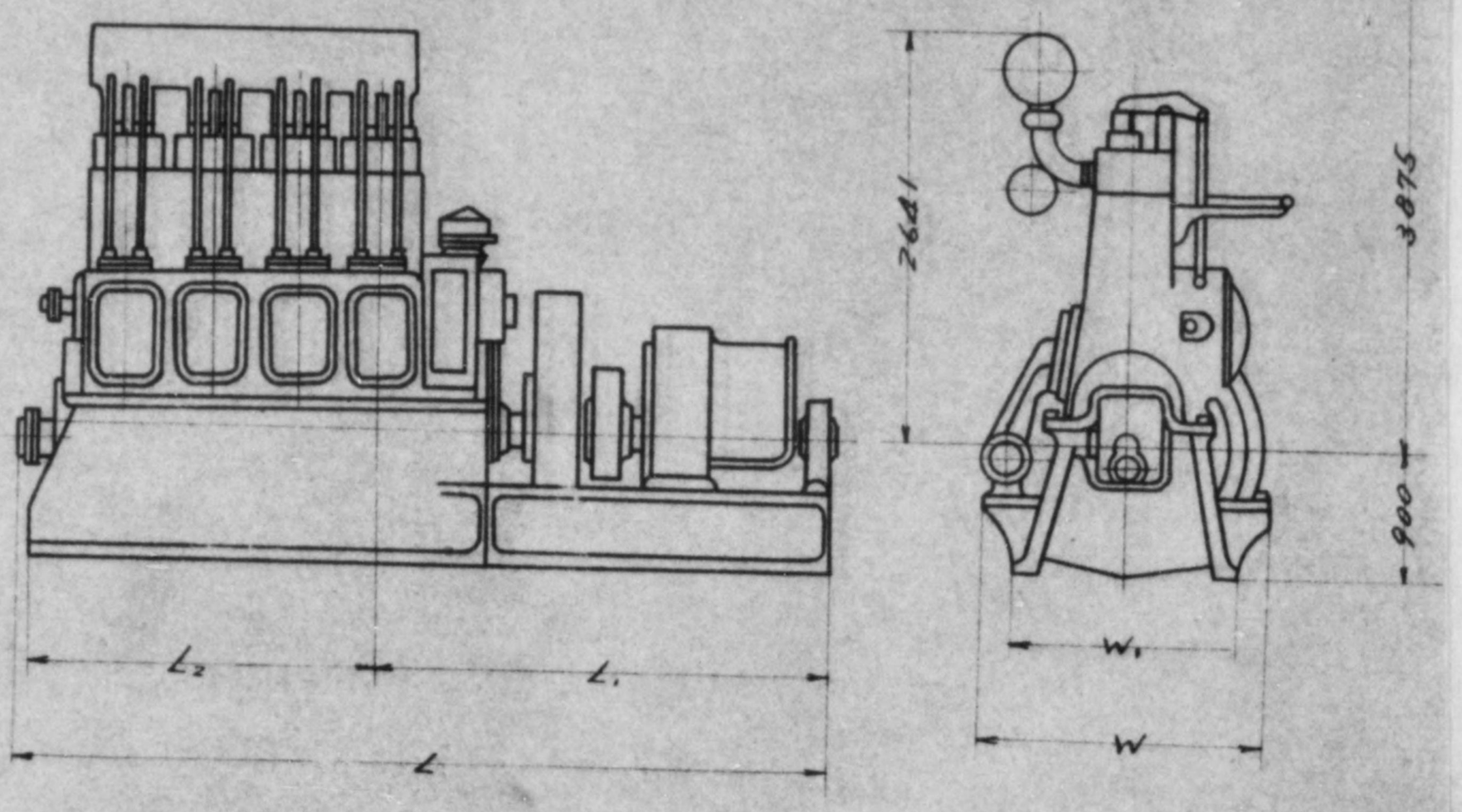
Table 2

Type of engine 33-MTH-48

Single acting 4 cycle auxiliary diesel engine

Cyl. Bore 330 m/m Piston Stroke 480 m/m



Type	No. of Cylinder	R.P.M.	B.H.P	W't ton With generater	Length. L	L_1	L_2	Breadth W	MM W_1
333-MTH-48	3	400	300	26.5	4690	2887	1780	1930	1500
433-MTH-48	4	400	400	32.4	5451	3077	2340	1930	1500
533-MTH-48	5	400	500	35.3	6194	3260	2900	1930	1500
633-MTH-48	6	400	600	41.8	6924	3430	3460	2410	2000
733-MTH-48	7	400	700	46.0	7364	3280	4050	2590	2000
833-MTH-48	8	400	800	50.4	7974	3330	4610	2590	2000

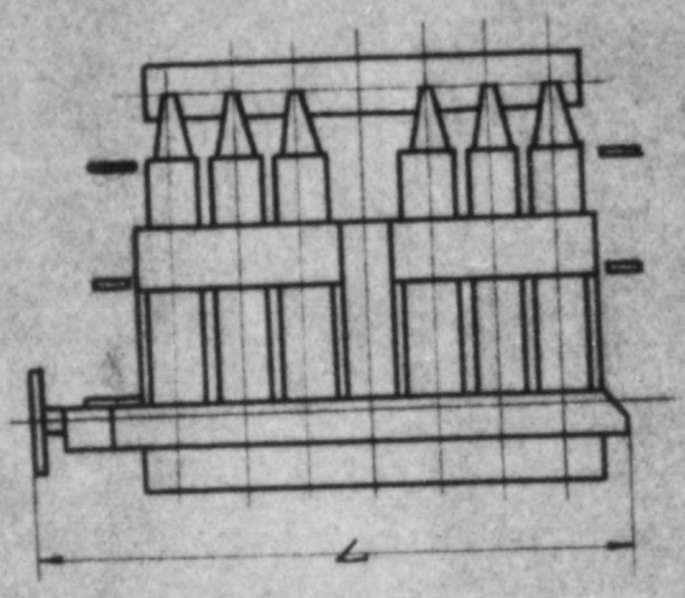
DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

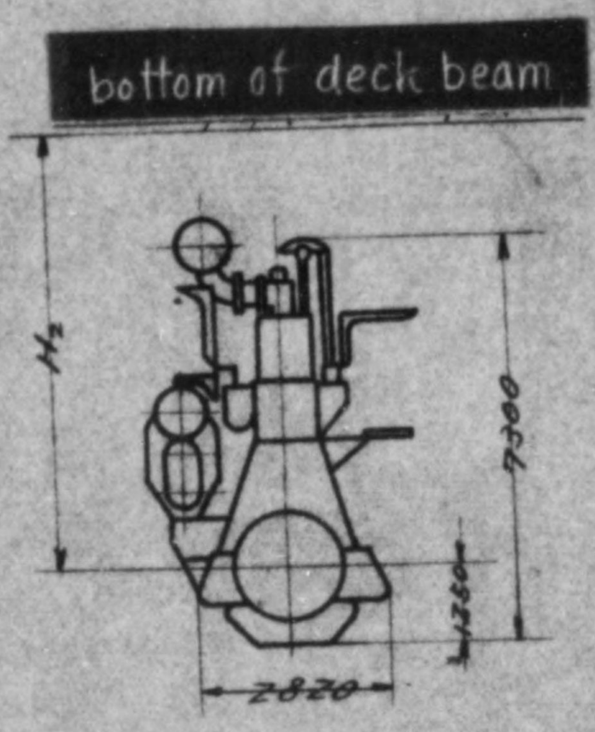
Table 2

Type of Engine 50-VTF-110

Single acting 2 cycle crosshead type self reversing main Engine

cyl. bore 500 m/m Piston stroke 1100 m/m





Type	No. of Cylinder	R.P.M.	mean effective Pressure = 6.5		Engine Wt Ton With Thrust Bearing	MM Length
			I.H.P.	B.H.P.		L
450-VTF-110	4	170	2120	1680	100	5650
550-VTF-110	5	170	2650	2100	118	6550
650-VTF-110	6	170	3180	2520	139	7850
750-VTF-110	7	170	3710	2940	160	8750
850-VTF-110	8	170	4240	3360	181	9650
950-VTF-110	9	170	4770	3780	202	10550
1050-VTF-110	10	170	5300	4200	223	11450
1150-VTF-110	11	170	5830	4620	254	12900

解放高さは通常 H_2=8200 m/m 但し特殊装置とせば 7350 m/m 迄短縮す

6気筒以上はチェン駆動装置の位置機関中央とす

上記機関重量は半組立型クランク軸使用の場合とす

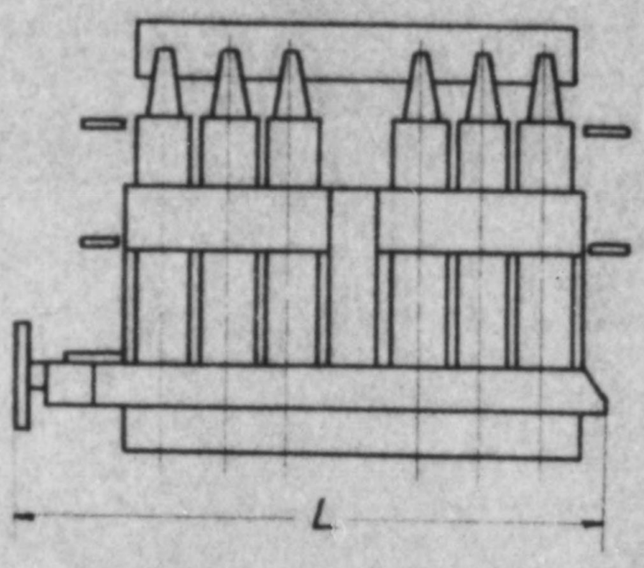
DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

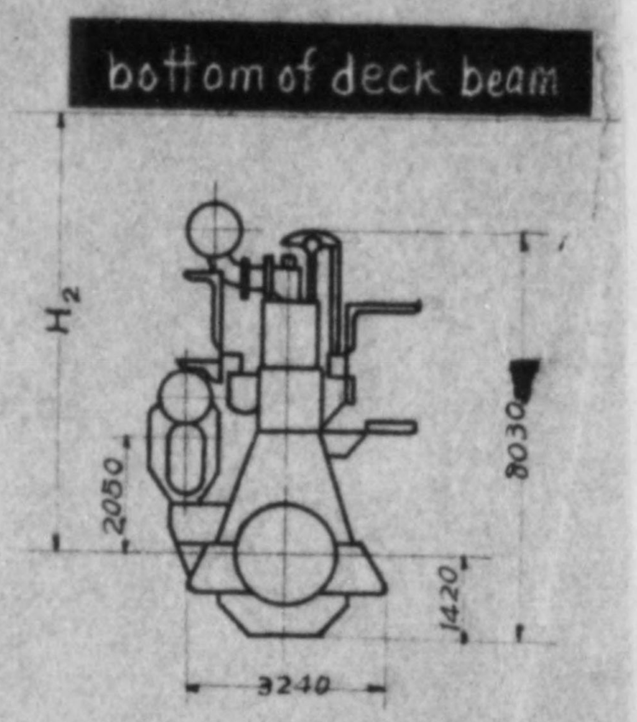
Table 2

Type of Engine 62-VTF-115

Single acting 2 cycle crosshead type self reversing main Engine

Cyl. bore 620 m/m Piston stroke 1150 m/m





Type	No. of Cylinder	r.p.m.	mean effective Pressure = 6.5 I.H.P.	B.H.P.	Engine Wt Ton With Thrust Bearing	MM Length L
462-VTF-115	4	150	3000	2400	193	8300
562-VTF-115	5	150	3750	3000	227	9400
662-VTF-115	6	150	4500	3600	272	10500
762-VTF-115	7	150	5250	4200	308	11600
862-VTF-115	8	150	6000	4800	336	12700
962-VTF-115	9	150	6750	5400	370	13800
1062-VTF-115	10	150	7500	6000	392	15000
1162-VTF-115	11	150	8250	6600	445	16300
1262-VTF-115	12	150	9000	7200	477	17400
1362-VTF-115	13	150	9750	7800	520	18500
1462-VTF-115	14	150	10500	8400	551	19600

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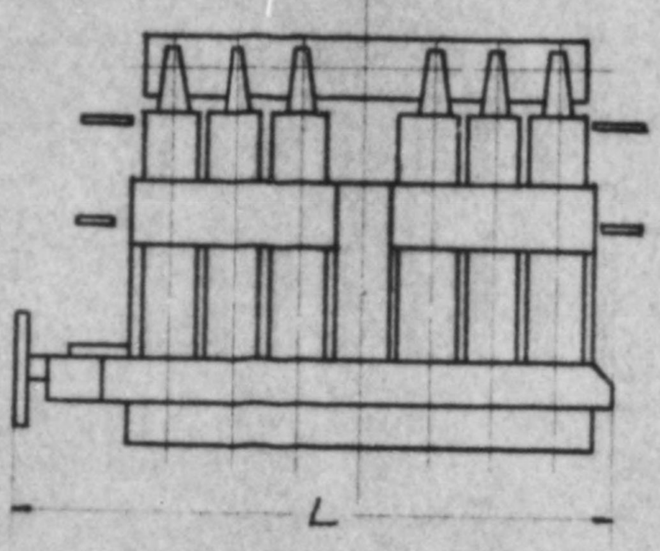
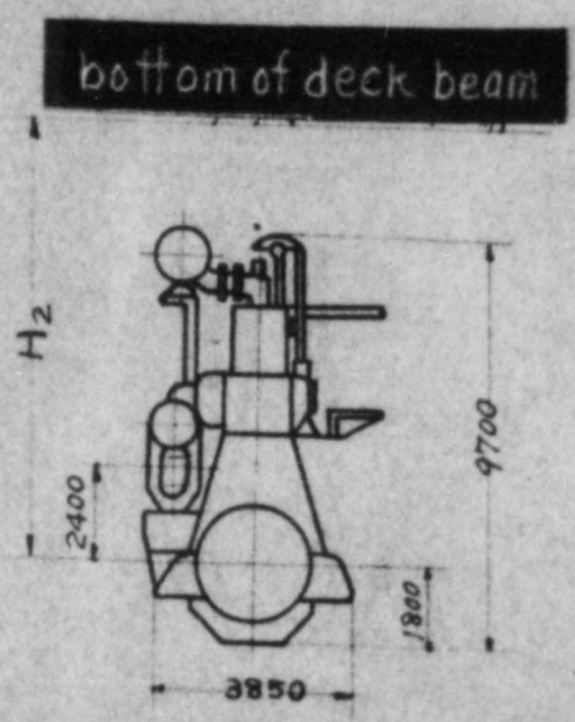
Table 2

Type of Engine 74-VTF-140

Single acting 2 cycle crosshead type self reversing main Engine

Cyl. bore 740 m/m Piston stroke 1400 m/m





Type	No. of Cylinder	R.P.M.	mean effective Pressure = 6.5		Engine Wt Ton With Thrust Bearing	MM Length
			I.H.P.	B.H.P		L
474VTF-140	4	125	4360	3500	309	9000
574-VTF-140	5	125	5450	4375	366	10300
674-VTF-140	6	125	6540	5250	420	12700
774-VTF-140	7	125	7630	6125	485	14000
874-VTF-140	8	125	8720	7000	530	15300
974-VTF-140	9	125	9810	7875	591	16600
1074-VTF-140	10	125	10900	8750	640	17900
1174-VTF-140	11	125	11990	9625	700	19400
1274-VTF-140	12	125	13080	10500	745	20700
1374-VTF-140	13	125	14170	11375	795	
1474-VTF-140	14	125	15260	12250	855	

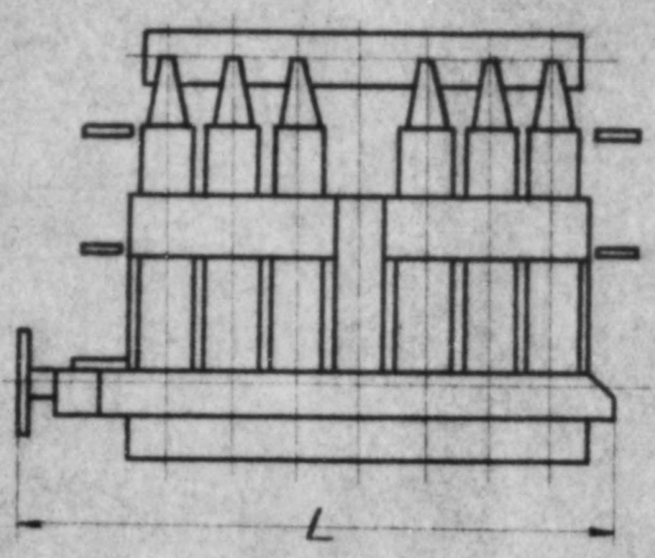
DECLASSIFIED E.O. 12065 SECTION 3-402/NNDG NO. 775013

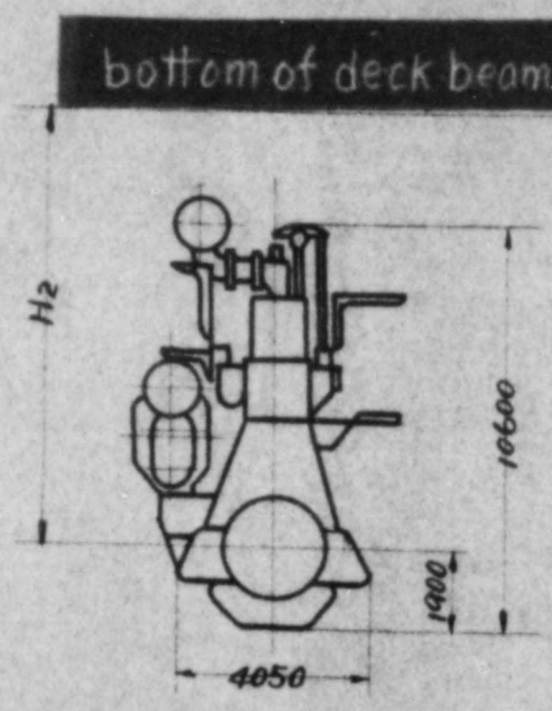
Table 2

Type of Engine 74-VTF-160

Single acting 2 cycle crosshead type self reversing main Engine

Cyl. bore 740 m/m Piston stroke 1600 m/m





Type	No. of Cyl.	r.p.m	mean effective pressure = 6.5 indicating HP	mean effective pressure = 6.5 brake HP	weight TON with thru-st bearing	Length m/m
574-VTF-160	5	115	5720	4600	358	10300
674-VTF-160	6	115	6870	5525	410	12700
774-VTF-160	7	115	8020	6450	472	14000
874-VTF-160	8	115	9170	7375	519	15300
974-VTF-160	9	115	10320	8300	569	16600
1074-VTF-160	10	115	11470	9225	653	17900

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Table.3

Comparison of accuracy

Machine	(Used at Hitachi) Planer	Planomilling m/c
Plane degree	0.01 / ~~1000~~ mm	0.002 / ~~1000~~ mm
Parallel degree	0.015 / ~~1000~~ mm	0.003 / ~~1000~~ mm
Rightange degree	0.02 / ~~1000~~ mm	0.003 / ~~1000~~ mm

Comparison of work time Table 4

Works \ Machine	Planer	Planomiller
Cross girder	259 h	47 h
Beam	135 h	42 h
Column	380 h	85 h
Scavenging box	55 h	25 h
Beambed of thrust	171 h	102 h
Gide plate	467 h	320 h
Blower casing	214 h	115 h

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Table 5

Necessary rough estimate of supplementary repairing and fitting.

(1) Plant of repair — Karatu iron work.

(2) Cost of repair

beds. lead screws. gear box on column one column parts etc	repair	¥ 3.000,000.00
repair for switch boad		¥ 2,000,000.00
Cost for material		¥ 6 000,000.00
Cost for transport		¥ 1.500,000.00
Total cost for repairing		¥ 12.000,000.00

(3) Cost for foundation ¥ 800,000.00

(4) Date to be complete. April. 1951.

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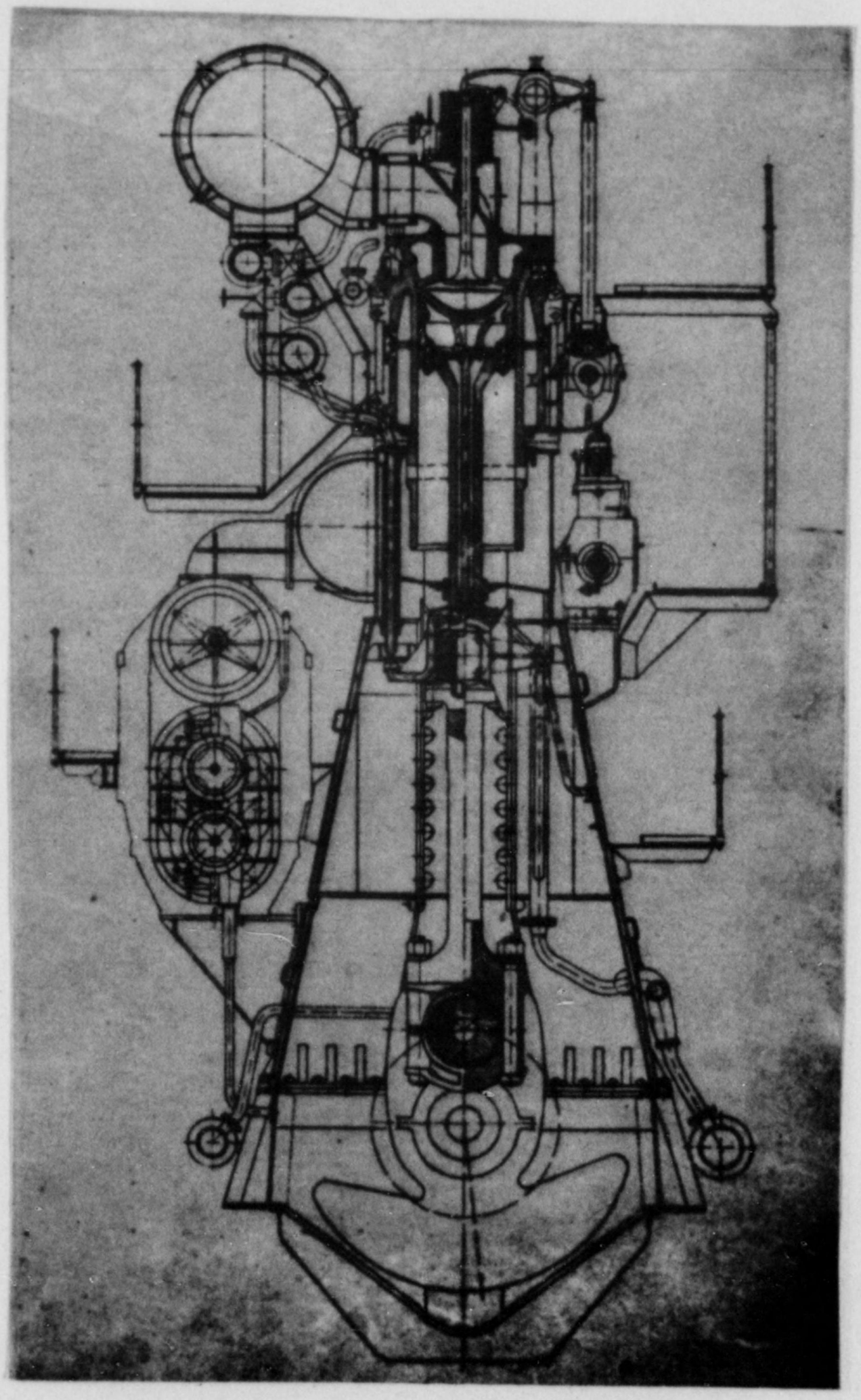
HITACHI SHIPBUILDING CO., LTD.

Fig. 1 & 2

SECTION OF B & W TYPE 74 VTF 160 DIESEL ENGINE



ENGINES UNDER CONSTRUCTION

TYPE	HP	NO.
574 VTF 160	4600	1
974 VTF 160	8300	1

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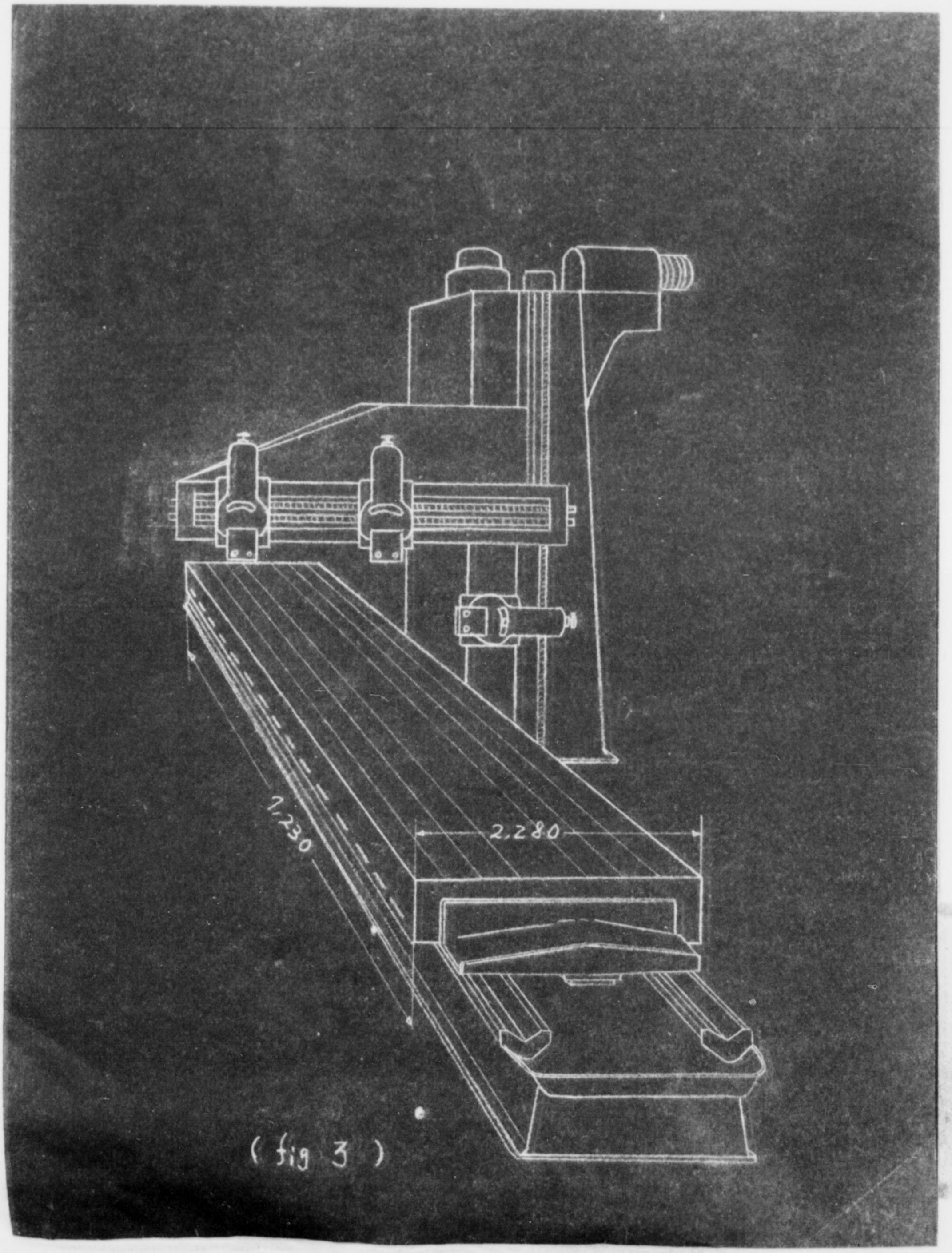

(fig 3)

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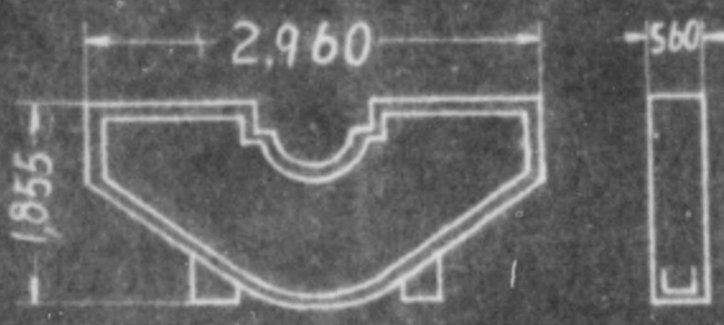
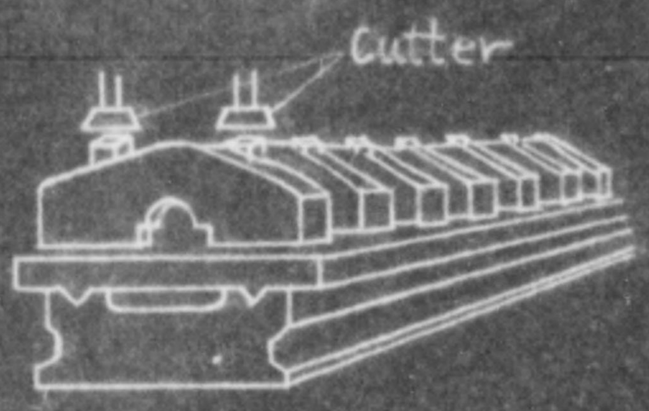
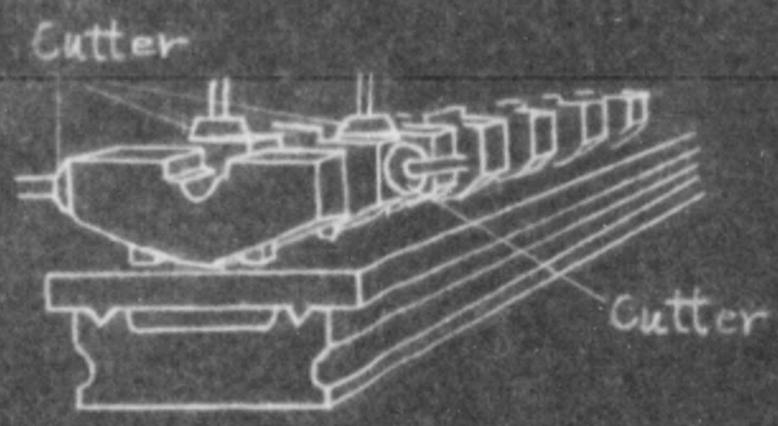
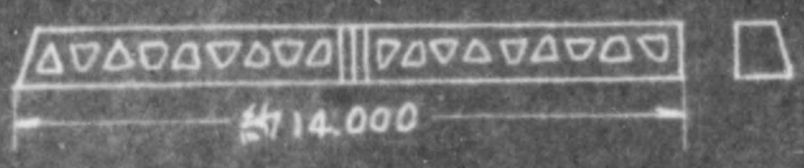
① Machining of Cross girder (11 Pieces)

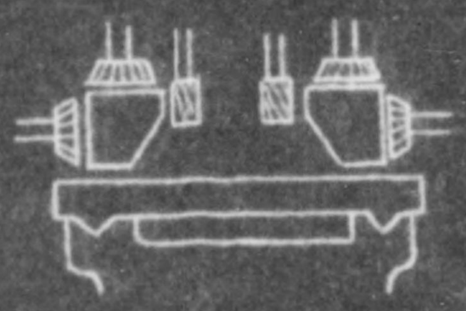


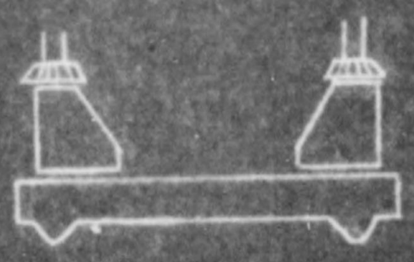




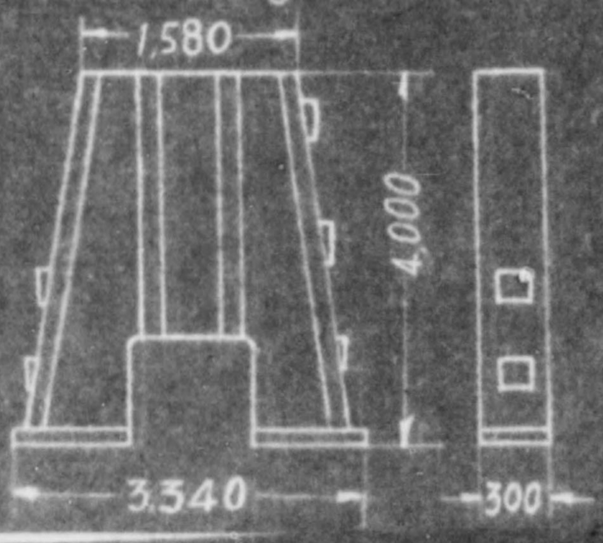
② Machining of Beam (4 Pieces)

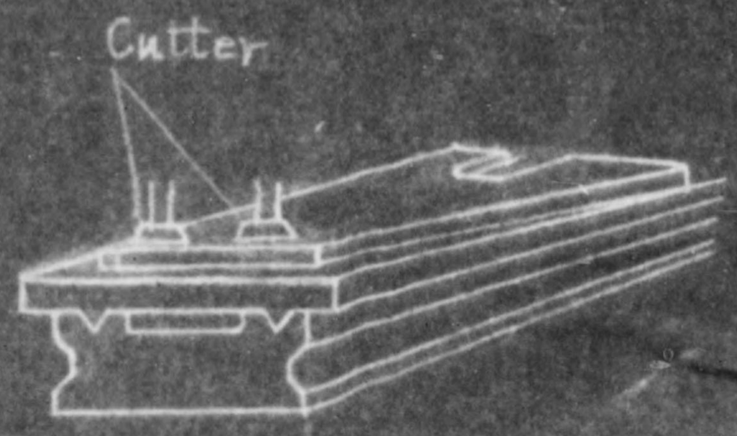






③ Machining of Column (11 Pieces)





④ The other parts machined by this Planomiller:
Guide plate, Guide shoe, Cylinder liner port, Cylinder jucket, Suction & exhaust cam, Body of bearing, Distance piece, Scaveng-ing box, Bed & crown of thrust bearing, Brower casing, Flywheel etc. of B & W Diesel Engine, & Bed, Column, Cylinder Jucket, etc. of Hitachi Diesel Engine.

(fig 4)

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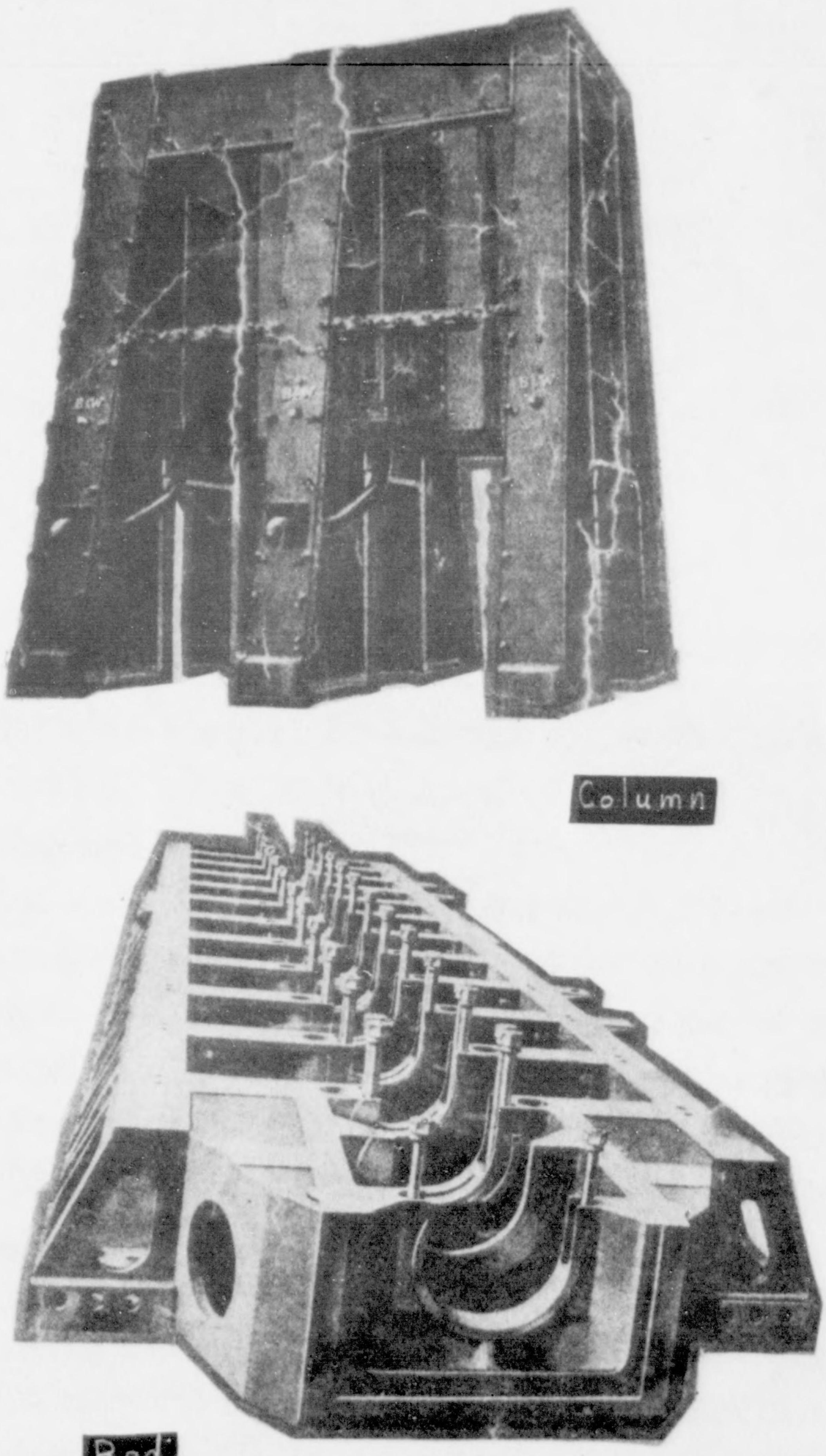
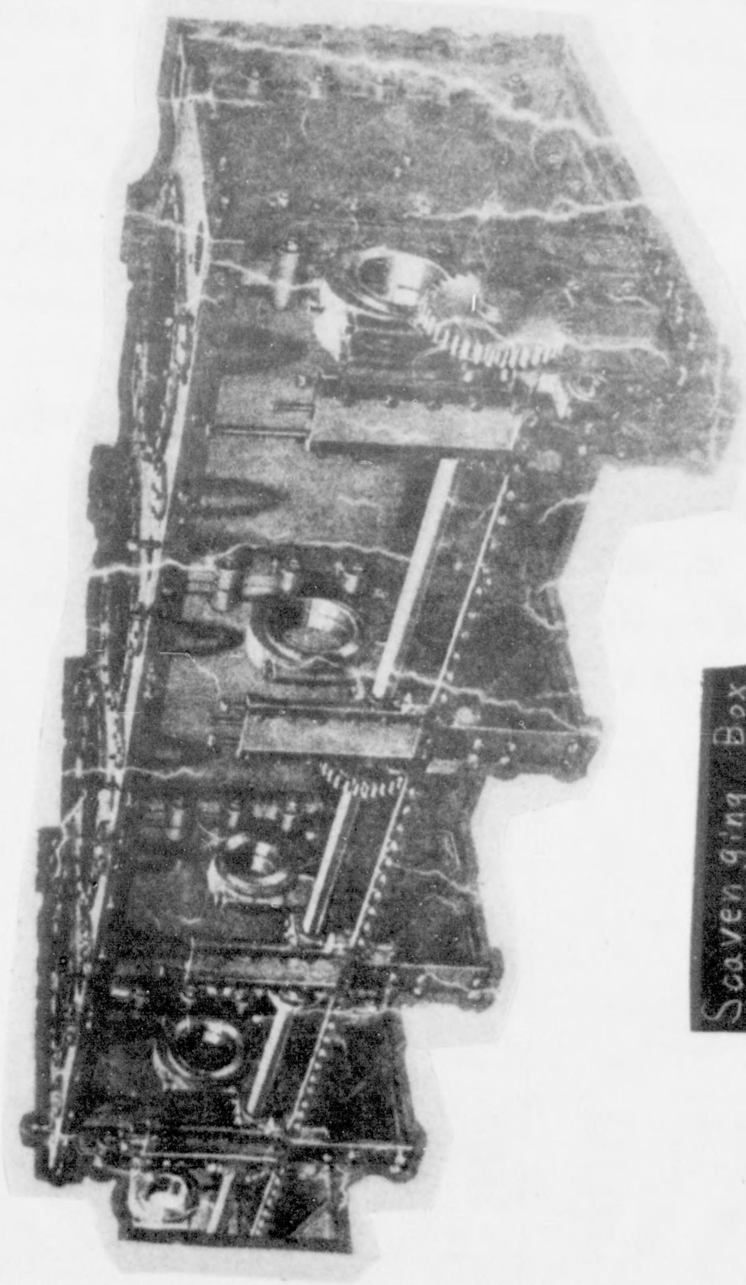


Fig 4.

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



Scavenging Box

Fig 4

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

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

Date: 10 July 1950

TO : MINISTRY OF FINANCE

FROM : TOYO KOGYO KABUSHIKI KAISHA

Address : 6047, Aza-Shinchi, Fuchu-machi, Aki-gun, Hiroshima-ken

1) Name (Code No.) and location of the Plant which intends to use designated reparation machinery and equipment.
   Name : Toyo Kogyo Kabushiki Kaisha
   Code No. : 11-18 (Machine Tool Plant), 11-28 (Private Munition Plant)
   Location : 6047, Aza-Shinchi, Fuchu-machi, Aki-gun, Hiroshima-Ken

2) Name (Code No. Category) and location of the plant where designated reparation machinery and equipment to be used actually exist.
   Name : Hikari Naval Arsenal
   Code No. : 45-04
   Category : Arsenal
   Location : Yamaguchi-ken

3) List of designated reparation machinery and equipment to be moved and used.
   Two (2) Fine Boring Machines, Two (2) Gear Shapers, Five (5) Heavy Duty Lathes, One (1) Vertical Turret Lathe and One (1) Shearing Machine, total Eleven (11) Units presently under custody as Dead Storage and located at the Hikari Naval Arsenal, Yamaguchi-ken.

4) Necessity for movement and use of machinery and equipment.
   (a) To be used for the present production of 3-wheel and 4-wheel motor cars authorized under our reconversion permits.
   (b) For reinforcing the various gear cutting process and also to surmount the existing critical difficulty in the fine boring process of the major parts of the engine and heavy cutting jobs of the axle shafts and other parts.
   Further, in general, since the lathes manufactured by the Toyo Kikai as compared to other makes are characterized with a larger swing in comparison to the bed length and the main spindle revolution have a wider range of selectivity plus high speed and also while the Horse-power of other makes ordinarily range from 2 to 3 HP this h the having 7.5 HP makes it adaptable to heavy cutting jobs.
   (c) It is difficult to avail ourselves of similar type machineries from other Private Plants.
   (d) To insert the proposed machineries into our production line it is necessary to move them to our Plant from their present location.

(Signed) FOR THE PRESIDENT:

Tokinosuke Murao

Tokinosuke MURAO
Managing Director
Toyo Kogyo Kabushiki Kaisha

Attached documents:
Approval of the applicant, concerning responsibility of custody for designated reparation machinery and equipment.

NOTE: Submitted to F. Ministry 1 Aug. 1950

MANUFACTURING INDUSTRY FILE 45-4 Sec. II

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

Attached Sheet

LIST OF THE DESIRED REPARATION
DESIGNATED MACHINERY AND EQUIPMENT

Code No. 45-04 Applicant: Toyo Kogyo Kabushiki Kaisha

Name of Items	Name of Mfg. Co.	Type and Dimension	Inventory No.	Operation or Idle	No. of Items	Evaluation Work Sheets Sheet No.
MACHINE TOOL						
BORING MACHINE 2-Spindle Horizontal	E-XCE-LL-O	Capacity (Dia.xDepth) 150 x 500mm	1763	Idle	1	225
"	"	"	2070	"	1	225
GEAR SHAPER External & Internal	Fellows	Max. External Dia. of Gear x Max. width of Face 213 x 50mm	1796	"	1	244
"	"	"	1797	"	1	244
LATHE Engine	Toyo Kikai	Swing over Bed 440mm Bed Length 2030mm	1399	"	1	343
"	"	"	1824	"	1	389
"	"	"	1856	"	1	385
"	"	Swing over Bed 520mm Bed Length 2270mm	1571	"	1	366
"	"	"	1868	"	1	
LATHE Turret Vertical Type	Karatsu Tekkosho	Swing over Bed 855mm Max. Distance Spindle to Turret Face 720mm	2219	"	1	417
Total					12	
INDUSTRIAL MACHINES						
SHEARING MACHINE Square	Unknown	Cutting Capacity Thickness 12mm Width 1560mm	1876	"	1	247
Total					1	
GRAND TOTAL					11	

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LETTER OF ASSENT

Date: 1 July 1950

TO : The Ministry of Finance

FROM : Toyo Kogyo Kabushiki Kaisha

6047 Aza-Shinchi, Fuchu-machi, Aki-gun, Hiroshima-ken

Sirs:

I, the undersigned, hereby assent for the custodian of Hikari Naval Arsenal (Code No. 45-04) to take burden of the responsibility pertaining to maintenance of the reparation designated machinery and equipment, list of which is attached to the application herein, belong to the above Arsenal, after the same were moved into Hiroshima Plant, Toyo Kogyo Kabushiki Kaisha.

FOR THE PRESIDENT:

Tokinosuke Murao

Tokinosuke MURAO
Managing Director,
Toyo Kogyo Kabushiki Kaisha
(Person who desires to use the reparation designated machinery and equipment.)

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

APPLICATION FOR CONVERSION OF

DESIGNATED REPARATION PLANT

31 August 1950

TO: The Ministry of International Trade and Industry

FROM: Tokuyama Teppan Kabushiki Kaisha
(Tokuyama Steel Sheet Company, Limited)
34 Oaza Kuriya, Tokuyama, Yamaguchi Prefecture

MANUFACTURING AND INDUSTRY
FILE 45-4
Sec I

1. Name of plant and code number:

   Ex Hikari Naval Arsenal, No. 45-4

2. Location of plant:

   Oaza Mitsui, Hikari, Yamaguchi Prefecture

3. Category; Naval arsenal

4. Production:

	Description of Product	Monthly Production
Present:	None	None
Planned:	Sheet bars and billets	
	1st project, 15 months after authorized conversion	7,000 tons
	2nd project, 25 months after authorized conversion	10,500 tons
	3rd project, 33 months after authorized conversion	13,300 tons

5. Additional reparation items needed for the above production:

   Please refer attached separate sheets.

6. Necessity for conversion:

Thirty two years ago, the Tokuyama Steel Sheet Company made its debut into the realm of irom and steel industries in Japan. Its productions of steel sheets and hoops credited the company with the oldest history along its line in Japan and expanded to the extent of becoming the largest iron and steel firm in the Chugoku Region. Thusly, wide recognitions for its steel sheet bearing the " Moon-Star" trade mark were won not only

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from the domestic markets but from the overseas markets as well for its superb quality.

After commencing its initial productions in August, 1918 with but 4 complete units of sheet mills, its facilities were increased to 7 units by April, 1935 in order to coordinate the productions with the market demands. In March, 1935, the Krupp's continuous steel hoop mill was newly installed and production was commenced for the first time in Japan of steel hoop which also was labled with the traditional "Moon-Star" trade mark for its unsurpassed quality. Its production today aggregates 40 % of the total national output. On the strength of its excellent records to date for overseas and domestic consumptions, greater prospects are being anticipated by us as one of the most promising items in the field of overseas markets.

Keeping further pace with the prosperity of our firm, the production of drums were started in January, 1939; the installations of 2 electric arc furnaces and a unit of three high sheet bar and billet mill commenced the manufacturing and rolling operation of special steel in September, 1935; and with the completion of our Tonda Works in December, 1947 added to the list of our products of polished hoop with the installation of 5 units of cold rolling mills, and in January, 1949, our manufacturing program included the production of galvanized iron sheet.

In order to cope with the pressing post-war economic situation, the mechanization of 2 rolling mills as the first stage of the program for the rationalization of our enterprise was carried out for the purposes of (1) improving the quality of products and production effeciencies, and (2) in lowering of the production costs. As the second stage of our project, a preparation is now being made for similar streamlining of additional rolling mills.

Due to ever-increasing demands for the domestic and overseas markets, the gross output for the current production year was set at 150,000 tons. The proportion of our ability to fulfill orders against the recent demands, for the period covering 1 July 1950 through 15 August 1950 inclusive, were as follows:

Description	Domestic Market(unit:ton)		Overseas Market(unit;ton)	
	Demand	Able to Fulfill Order	Demand	Able to Fulfill Order
Steel plate	11,799	1,336	100	100
Steel sheet	52,937	4,902	2,330	200
Steel hoop	14,620	6,852	1,900	1,900
Galvanized iron sheet	-	-	9,587	3,500
Polished hoop	-	-	150	-
Total	79,356	13,096	14,058	5,700

Actual annual production in relative to our full production capacity-
(April, 1949 - March, 1950 inclusive) :

Description	Production Capacity	Actual Production	Percentage of Operation
Steel sheet	145,000 tons	35,540 tons	27.3 %
Steel hoop	60,000 "	27,644 "	46.1 %

Note: The actual maximum monthly productions of 4,631 and 4,302 tons for steel sheets and hoops were respectively attained in March, 1950.

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

From the very beginning of the operation of our company, the scope of our business was limited to operation of rolling mills and depended wholly upon other makers for replenishment of the essential sheet bars and billets.
Under such circumstances, much difficulties are being encountered in respect to our desired quality, quantity, and delivery date of our rolling materials, which in turn created a bottleneck in the execution of our planned production program to meet the potential demands. Basically speaking, the true rationalization of a rolling mill operation is dependent upon the ability to through-process such required materials.
Smooth functioning of manufacturing operation and efficiency in production rely upon the availability of right quality and size of material with speed and at will.

It is for the aforementioned reasons that we are desireous of obtaining an authority for efficacious diversion of the idle steel manufacturing equipments in the compound of the ex-Hikari Naval Arsenel; where by with the operation of open hearth furnaces, rehabilitation of steel forging plant, and with the transferring to the area of our three high sheet bar and billet will enable us to through-process the essential sheet bars and billets which then will enable us to solve the obstacles hindering our present production shedules in meeting the potential demands.

In summarizing, the followings satisfactorily meet our contemplated plan:

a. Geographically close to our present establishment, offering all conveniences of both the land and sea transportations and at low cost.

b. Availability in the installation of the most suitable idle equipments for steel production.

c. Comparatively slight bomb damages make rehabilitation possible with proportionately small amount of expenditures.

d. Harbor and loading and unloading facilities are complete.

e. Extensiveness of the area.

f. Installation of water lines are complete and supply of suitable water abundant.

g. Availability of main power lines.

h. Availability of required factory hands.

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An early permission for authorizing the rehabilitation and the usage of this idle installation will mean much to us in our further participation towards the promotion of overseas trade and at the same time will serve in alleviating the stringent local economic conditions. Viewing the situation from another angle, it will also be a definite booster in the development of our iron and steel industry as well as for our contribution towards the rebuilding of the post-war economy of Japan.

Shunjiro Kodama

SHUNJIRO KODAMA
President,
Tokuyama Steel Sheet Co., Ltd.

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

LIST OF THE DESIRED REPARATION

DESIGNATED MACHINERY AND EQUIPMENT

Applicant: Tokuyama Steel Sheet Co., Ltd.

Name of Item	Manufacturer	Type and Dimension	Inventory Number	Operation or Idle	Quantity	Remark
Winch, electric	Goto Kikai	Load, 1½T	2140		1	759/1234
Hoist, electric	Hitachi	Load, 3T	2141		1	757/1234
Crane, overhead	Ishikawajima	Load, 30T and 5T	2601		1	30/1234
do	Hitachi	Load, 10T and 3T	2636		1	do
do	do	Load, 20T and 6T	2651		1	16/1234
do	do	Load, 30T and 7½T	2652		1	do
do	do	Load, 20T and 6T	2653		1	17/1234
do	Ishikawajima	Scrap charging load, 5T and 10T	2654		1	16/1234
do	do	do	2655		1	do
do	do	Ladle load, 80T and 20T	2656		1	do
do	do	Ladle load, 150T and 40T	2657		1	do
do	do	Load, 60T and 15T	2658		1	do

Name of Item	Manufacturer	Type and Dimension	Inventory Number	Operation or Idle	Quantity	Remark
Crane, overhead	Sumitomo Kikai	Load, 30T	2659		1	22/1234
do	do	Load, 30T and 5T	2660		1	747/1234
do	do	do	2665		1	26/1234
do	Tanaka	Load, 20T	2680		1	30/1234
do	Ishikawajima	Load, 30T and 5T	2681		1	do
do	Sakurada	Load, 5T	2682		1	do
Crane, unloader	Ishikawajima	Capacity, 140T/Hr	2733		1	754/1234
Elevator	Toho	Load, 3T	3599		1	659/1234
Hoist electric	Hitachi	Load, 1T	3940		1	757/1234
do	do	Load, 2T	3943		1	do
do	do	do	3944		1	do
do	do	Load, 3T	3945		1	do
do	do	Load, 2T	4028		1	do
do	do	load, 1T	4029		1	do
Car, flat	Notknown	Capacity, 4T	4042		1	956/1234
Car, truck	Hitachi	Capacity, 2T	4043		1	668/1234
do	do	do	4044		1	do
do	do	do	4045		1	do
do	do	do	4046		1	do

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Name of Item	Manufacturer	Type and Dimension	Inventory Number	Operation or Idle	Quantity	Remark
Car, truck	Hitachi	Capacity, 2T	4047		1	668/1234
do	do	do	4048		1	669/1234
do	do	do	4049		1	do
do	do	do	4050		1	do
do	do	do	4051		1	do
do	do	do	4052		1	do
do	do	do	4053		1	do
do	do	do	4054		1	do
do	do	do	4055		1	do
do	do	do	4056		1	do
do	do	do	4057		1	do
do	do	do	4058		1	do
do	do	do	4059		1	31/1234
do	do	do	4060		1	669/1234
do	Teikoku Sharyo	do	4062		1	44/1234
do	do	do	4063		1	do
do	do	do	4064		1	do
do	Kisha Seizo	do	4065		1	969/1234
do	Teikoku sharyo	do	4070		1	44/1234
do	do	do	4078		1	do

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Name of Item	Manufacturer	Type and Dimension	Inventory Number	Operation or Idle	Quantity	Remark
Car, truck	Teikoku Sharyo	Capacity, 2T	4079		1	44/1234
do	do	do	4080		1	do
do	do	do	4081		1	do
do	Hitachi	do	4082		1	45/1234
do	do	do	4083		1	do
do	do	do	4084		1	do
do	do	do	4085		1	do
do	do	do	4086		1	do
do	do	do	4087		1	do
do	do	do	4088		1	do
do	do	do	4089		1	do
do	do	do	4090		1	do
do	do	do	4091		1	do
do	do	do	4092		1	do.
do	do	do	4093		1	do
do	do	do	4094		1	do
do	do	do	4095		1	do
do	do	do	4096		1	do
do	do	do	4097		1	do
do	do	do	4098		1	do

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Name of Item	Manufacturer	Type and Dimension	Inventory Number	Operation or Idle	Quantity	Remark
Car, truck	Hitachi	Capacity, 2T	4099		1	45/1234
do	do	do	4100		1	do
do	do	do	4101		1	do
do	do	do	4102		1	46/1234
do	do	do	4103		1	do
Car, flat	Not known	Capacity, 15T	4123		1	954/1234
do	do	do	4124		1	do
do	do	do	4125		1	do
do	do	do	4126		1	do
do	do	Capacity, 5T	4127		1	do
do	do	do	4128		1	do
do	do	do	4129		1	do
do	do	Capacity, 15T	4130		1	957/1234
do	do	do	4133		1	do
do	do	Capacity, 5T	4134		1	955/1234
do	do	do	4135		1	957/1234
do	do	do	4136		1	do
Car, truck	Hitachi	Capacity, 2T	4137		1	26/1234
do	do	do	4141		1	14/1234

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Name of Item	Manufacturer	Type and Dimension	Inventory Number	Operation or Idle	Quantity	Remark
Car, flat	Not known	Capacity, 10T	4143		1	955/1234
Winch, electric	Sakurada	Load, 10T	4252		1	650/1234
Hoist, electric	Hitachi	Load, 1T	4254		1	do
Magnet, lifting	do	Capacity, 1T	4377		1	13/1234
Buckets	Not known	For raw materials	5661		50	do
Car, truck	Hitachi	Capacity, 2T	5803		1	26/1234
do	do	do	5804		1	do
do	do	Capacity, 4T	5810		1	31/1234
Total					147	

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Name of Item	Manufacturer	Type and Dimension	Inventory Number	Operation or Idle	Quantity	Remark
Compressor, air	Fujimura	Capacity, 6m3/Min	380		1	727/1234
do	Kobe Seiko	Capacity, 75m3/Hr	2611		1	49/1234
Hammer, air	Osaka Kikai	Capacity, 1000kg	2748		1	698/1234
Gas producer, coal	Yamatojuki	Capacity, 30T/day	2754		1	43/1234
do	do	do	2755		1	do
do	do	do	2756		1	do
do	do	do	2757		1	do
do	do	do	2758		1	do
do	do	do	2759		1	44/1234
Crusher, roll	do	Capacity, 50T/Hr	2762		1	do
do	do	do	2792		1	49/1234
Gas producer, coal	do	Capacity, 30T/day	2793		1	48/1234
do	do	do	2794		1	do
do	do	do	2795		1	do
do	do	do	2796		1	do
Hammer, air	Nippon Kikai	Capacity, 250kg	2843		1	698/1234
do	do	Capacity, 100kg	2844		1	do
Boiler, Cornish type	Not known	Capacity, 9½T	2885		1	713/1234

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Name of Item	Manufacturer	Type and Dimension	Inventory Number	Operation or Idle	Quantity	Remark
Boiler, Lancashire type	Not known	Capacity, 7½T	2886		1	713/1234
Sand mill	Kurimoto Koki	Capacity, 1000kg/charge	2944		1	706/1234
Stone crucher	Kanazawa Koki	Capacity, 6000kg/Hr	2946		1	709/1234
do	do	do	3347		1	do
Compressor, air	Kobe Seiko	Capacity, 75m3/Hr	3701/		1	28/1234
do	Hitachi	Capacity, 8.02m3/Min	4018		1	718/1234
Stack, steel		Top dia. 1.5m Height, 50m	5264		1	893/1234
Furnace, melting	Takao Tekko	Basic capacity, 50T	5296		1	15/1234
Stack, steel	do	Top dia. 1.5m Height, 50m	5297		1	do
Furnace, melting	do	Acid capacity, 30T	5298		1	do
Stack, steel	Ishii Tekko	Top dia. 1.5m Height, 50m	5299		1	do
Furnace, melting	do	Acid Capacity,	5300		1	do
Furnace, melting	do	do	5519		1	do

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

Name of Item	Manufacturer	Type and Dimensing	Inventory Number	Operation or Idle	Quantity	Remark
Hangér, ladle	Ishii Tekko	3.5x0.18x3.65m	5520		4	16/1234
Ladle	Hikari Arsenal	Capacity, 65T	5526		1	17/1234
do	do	do	5527		1	do
do	do	do	5528		1	do
do	do	do	5529		1	18/1234
do	do	do	5530		1	do
do	do	do	5531		1	do
do	do	do	5532		1	do
do	do	do	5543		1	do
do	do	do	5544		1	do
do	do	Capacity, 45T	5545		1	25/1234
do	do	do	5546		1	do
Stack, concrete	Not known	Top dia. 1.2m Height, 30 m	5696		1	29/1234
do	do	do	5700		1	do
Kiln, brick	Hikari Arsenal	Capacity, 5T/charge	5784		1	658/1234
Stack, concrete	Not knwon	Height, 18m	5785		1	do
Total					50	

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

Name of Item	Manufacturer	Type and Dimension	Inventory Number	Operation or Idle	Quantity	Remark
Dynamo	Hitachi	300KW 230V 1300A	592		1	833/1234
do	do	do	593		1	do
Motor, Induction	Mitsubishi Denki	5HP	633		1	816/1234
do	Hitachi	do	648		1	824/1234
do	Mitsubishi Denki	do	654		1	826/1234
do	do	10HP	922		1	774/1234
do	do	do	923		1	do
do	do	do	924		1	do
do	do	do	925		1	do
Transformer	Hitachi	50KVA	2568		1	843/1234
do	do	do	2569		1	844/1234
do	do	do	2570		1	do
do	do	do	2571		1	do
do	do	do	2572		1	do
do	do	do	2573		1	do
do	Mitsubishi Denki	10,000KVA	2623		1	51/1234
do	Hitachi	500KVA	2890		1	848/1234
Motor induction	do	25HP	2899		1	792/1234

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

Name of Item	Manufacturer	Type and Dimension	Inventory Number	Operation or Idle	Quantity	Remark
Motor, induction	Hitachi	25HP	2900		1	792/1234
do	Mitsubishi Denki	40HP	2905		1	786/1234
do	do	25HP	2929		1	804/1234
do	Yasukawa Denki	25KW	2930		1	787/1234
do	do	do	2931		1	do
Generator	Mitsubishi Denki	500KW 230V	3309		1	837/1234
do	do	do	3310		1	835/1234
Transformer	do	400KVA	3458		1	847/1234
do	do	do	3459		1	do
do	do	do	3460		1	do
Transformer	Osaka Henatsuki	100KVA	3490		1	841/1234
do	do	do	3491		1	do
do	do	do	3492		1	do
do	do	do	3493		1	do
do	do	do	3494		1	do
do	do	do	3495		1	do
do	do	50KVA	3510		1	do
do	do	do	3511		1	do

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

Name of Item	Manufacturer	Type and Dimension	Inventory Number	Operation or Idle	Quantity	Remark
Transformer	Osaka Hehatsuki	50KVA	3512		1	841/1234
do	do	150KVA	3516		1	663/1234
do	do	do	3517		1	do
do	do	do	3518		1	do
do	do	600KVA	3519		1	50/1234
do	do	do	3520		1	do
do	do	do	3521		1	do
Motor, induction	Yasukawa Denki	30KW	3650		1	787/1234
do	do	15KW	4709		1	800/1234
do	Siemen	1HP	4771		1	775/1234
do	do	do	4775		1	773/1234
do	do	do	4776		1	do
do	Hitachi	do	4780		1	830/1234
do	do	3HP	4783		1	do
do	do	do	4784		1	do
do	Yasukawa Denki	5HP	4790		1	811/1234
do	do	do	4791		1	do
do	Hitachi	do	4792		1	do
do	Shibaura Denki	3HP	4793		1	do

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

Name of Item	Manufacturer	Type and Dimension	Inventory Number	Operation or Idle	Quantity	Remark
Motor, induction	Yasukawa Denki	7.5HP	4795		1	811/1234
do	do	do	4796		1	do
do	do	do	4797		1	do
do	do	do	4798		1	do
do	do	2.2KW	4832		1	823/1234
do	do	do	4833		1	do
do	do	do	4834		1	do
do	do	do	4835		1	do
do	Mitsubishi Denki	15HP	4885		1	818/1234
do	do	do	4886		1	do
do	do	do	4887		1	do
do	do	do	4888		1	do
do	do	do	4889		1	do
Switch, board	Not known	250V 100A	5229		1	853/1234
do	Inoue	250V 800A	5230		1	do
do	Not known	Marble type	5231		1	do
do	Hitachi	220V 200A	5240		1	886/1234

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

Name of Item	Manufacuturer	Type and Dimension	Inventory Number	Operation or Idle	Quantity	Remark
Oil circuit breaker	Hitachi	6900V 1000A	5377		1	877/1234
do	do	do	5378		1	do
do	do	do	5379		1	877/1234
do	do	6900V 1500A	5465		1	878/1234
do	do	6900V 200A	5466		1	do
do	do	do	5467		1	do
Trahsformer	Not known	3300V/110V	5492		1	848/1234
Oil circuit brsaker	Hitachi	6900V/200A	5598		1	877/1234
Switch, board	Mitsubishi Denki		5649		1	14/1234
do	Hitachi	3300V	5849		1	890/1234
Total					82	

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

Name of Item	Manufacturer	Type and Dimension	Inventory Number	Operation or Idle	Quantity	Remark
Lathe, Gap heavy	Ikegai		259		1	172/1234
Lathe, engine	Takizawa		476		1	67/1234
do	Shinagawa Seiki		3354		1	566/1234
Total					3	

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

Name of Item	Manufacturer	Type and Dimension	Inventory Number	Operation or Idle	Quantity	Remark
Weight measuring machine	Not known	Hang type Capacity, 10,000kg	5009		1	652/1234
do	do	Hang type Capacity, 3000kg	5011		1	do
Weight, lever	Sato Seiko	Capacity, 20T	5777		1	21/1234
Total					3	

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

Name of Item	Manufacturer	Type and Dimension	Inventory Number	Operation or Idle	Quantity	Remark
Conveyor	Yamato juki	Capacity, 50T/Hr	2760		1	44/1234
Dryer nozzle, gas	Hikari Arsenal	Nozzle dia. 200m/m	2763		1	20/1234
do	do	do	2764		1	do
do	do	do	2765		1	do
do	do	do	2766		1	do
Pump, water	Komatsu	Capacity, 1KL/Hr	2777		1	24/1234
Conveyor	Yamato juki	Capacity, 50T/Hr	2791		1	49/1234
Pump, water	Komatsu	Capacity, 1KL/Hr	2805		1	28/1234
Pump, turbin water	Torishima Seisaku	Capacity, 543/Min L	2959		1	731/1234
do	do	Capacity, 1050L/Min	3389		1	730/1234
do	do	Capacity, 2550L/Min	4017		1	729/1234
Rail road	Not known	37kg/m	4308		2,859m	981/1234
do	do	30kg/m	4309		11,390m	do
do	do	22kg/m	4310		2,000m	do
do	do	12kg/m	4311		875m	do
Pit, concrete	Not known	5x7x2m	5521		1	17/1234
do	do	15x4x5m	5522		1	do
do	do	14x4x6m	5523		1	do
do	do	12x7x5m	5524		1	do

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

Name of Item	Manufacturer	Type and Dimension	Inventory Number	Operation or Idle	Quantity	Remark
Platform, steel plate	Hikari Arsenal	8-3x2.8-1x0.02-0.08m	5525		42	17/1234
Water pond, concrete	Not known	11x8.5x4m	5778		1	21/1234
Bag	Hikari Arsenal	1.8x0.69x0.49m	5780		83	22/1234
Pit	Not known	Scrap pit 5x5x5m	5783		1	do
Plate, steel bed	Hikari Arseanl	15x15x0.5m	5786		1	659/1234
do	do	do	5787		1	do
Total					144 17,124m	
Grand Total					429 17,124m	

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

Building

Area No.	Building No.	Name of Building	Total Area (tsubo)	Construction	Remark
A	15	Substation	8.75	Brick	
A	16	Unloading house	324.00	Steel	
A	19	W. C.	13.20	Wooden	
A	21	Substation	15.00	Brick	
A	24	Substation	23.70	Brick	
A	34	Gas generating plant	354.00	2 storeyed Steel	
A	35	W. C.	6.00	Wooden	
A	37	Stock yard Shop	672.30	Steel	
A	38	Open hearth Shop	3047.50	Partly 2 storeyed Steel	
A	40	W. C.	5.60	Wooden	
A	41	Lime roasting kilm	174.50	Partly 2 storeyed Steel	
A	42	Drying furnace Shop	9.00	Steel	
A	44	No. 1 Forging Shop	1082.60	Steel	
A	45	Boiler room	782.80	R.F.Concrete 2 storeyed	
A	46	W. C.	14.00	Wooden	
A	47	Gas generating Plant	212.30	2 storeyed Steel	

DECLASSIFIED E.O. 12065 SECTION 3-402/NNDC NO. 77 50 13

Building

Area No.	Building No.	Name of Building	Total Area (tsubo)	Construction	Remark
A	67	Substation	15.75	Wooden	
A	72	Substation	14.00	Brick	
A	73	W. C.	5.60	Wooden	
A	74	Substation	21.00	Brick	
A	90	Machine Shop	1250.00	Steel	
A	227	No. 1 Forging Shop yard	722.80	Steel	
Total			8558.90		

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Land

Area No.	Area (tsubo)	remark
A	110,346	
Total	110,346	

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

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

LETTER OF ASSENT

31 August 1950

To: The Ministry of Finance

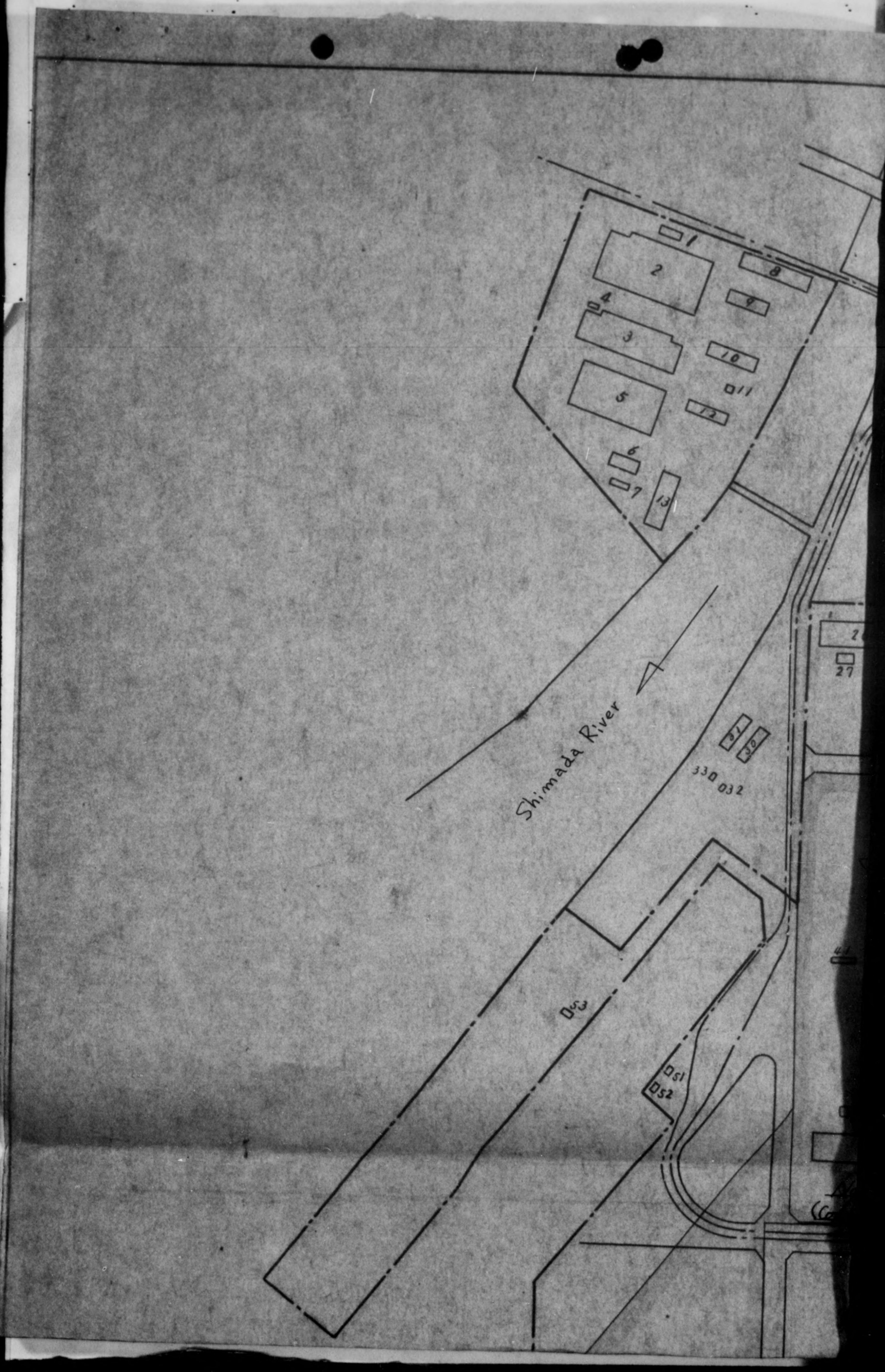
From: Tokuyama Steel Sheet Co., Ltd.

Sirs: 1, The undersigned, hereby assent for the Custodian of Ex Hikari Naval Arsenal to take burden of the responsibility pertaining to maintenance of the reparation designated machinery and equipment, list of which is attached to the application here in, belong to the above Arsenal, after authorized useof same was permitted to Tokuyama Steel Sheet Co., Ltd.

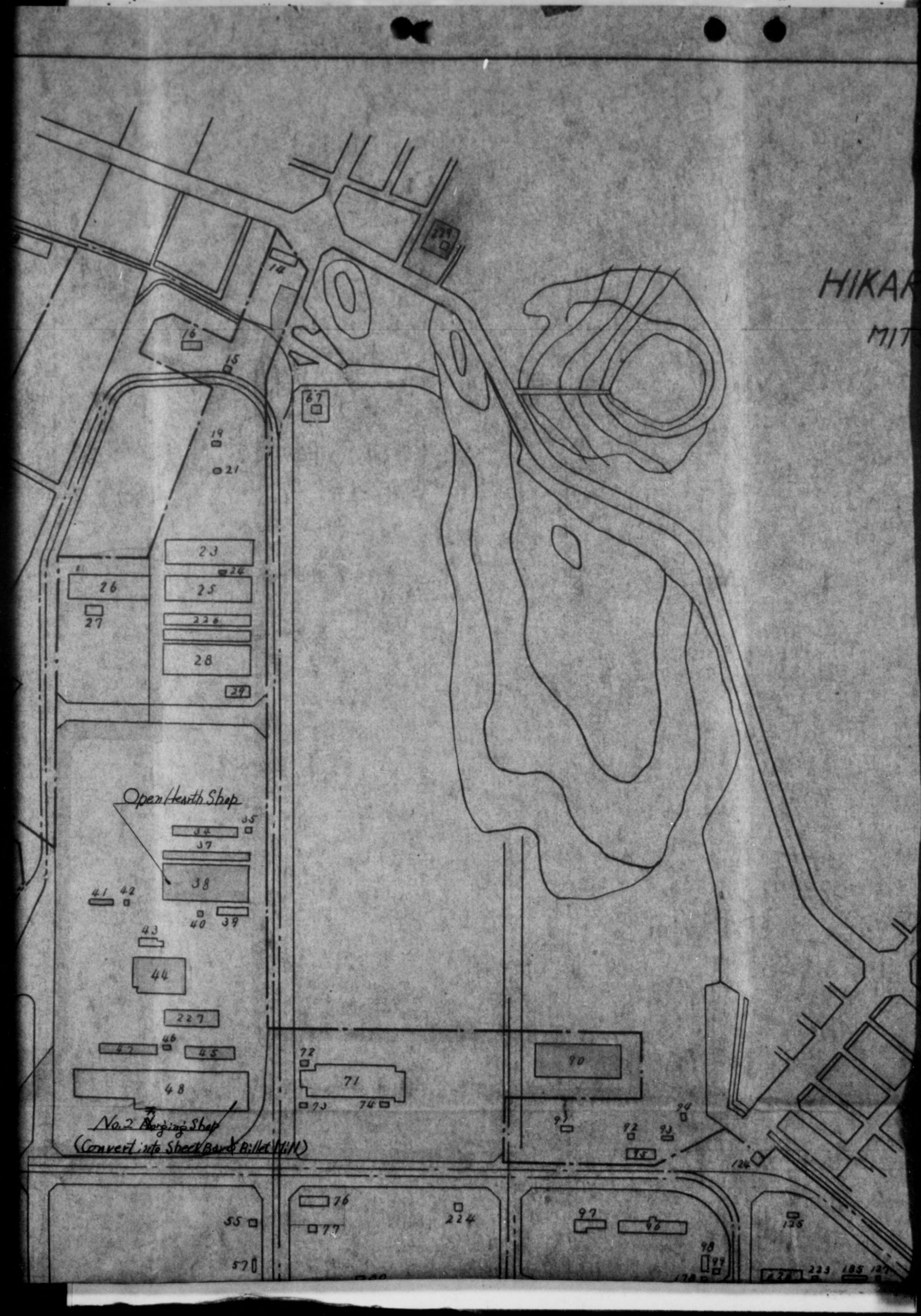
Shunjiro Kodama

SHUNJIRO KODAMA
President
Tokuyama Steel Sheet Co., Ltd.

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



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



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

PLANT LAYOUT

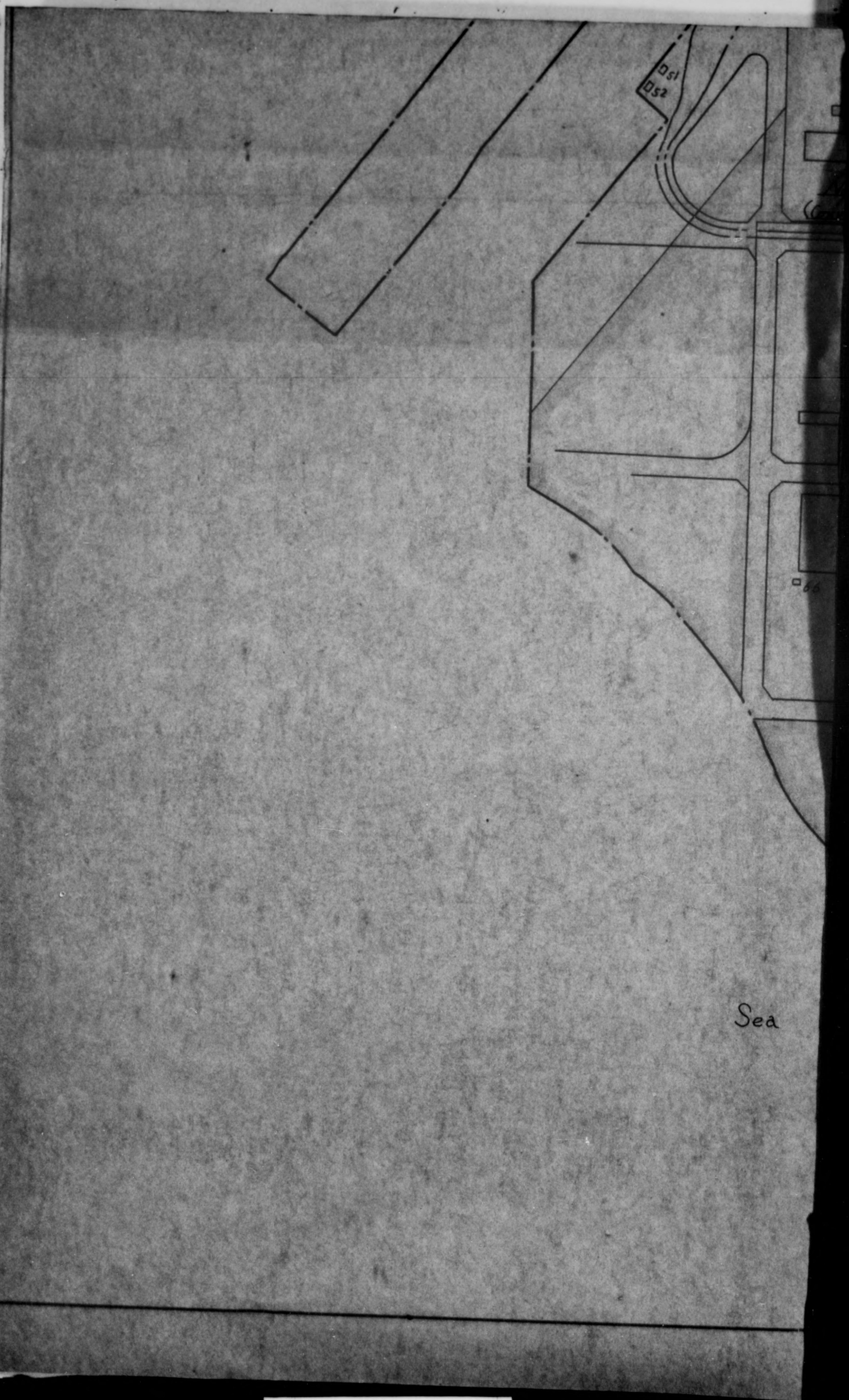
HIKARI NAVAL ARSENAL (CODE No. 45-4)

MITSUI, HIKARI, CITY. YAMAGUCHI PREFECTURE

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

(4)

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



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

No.2 Forging Shop
(Convert into Sheet Bar & Billet Mill)

Sea

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

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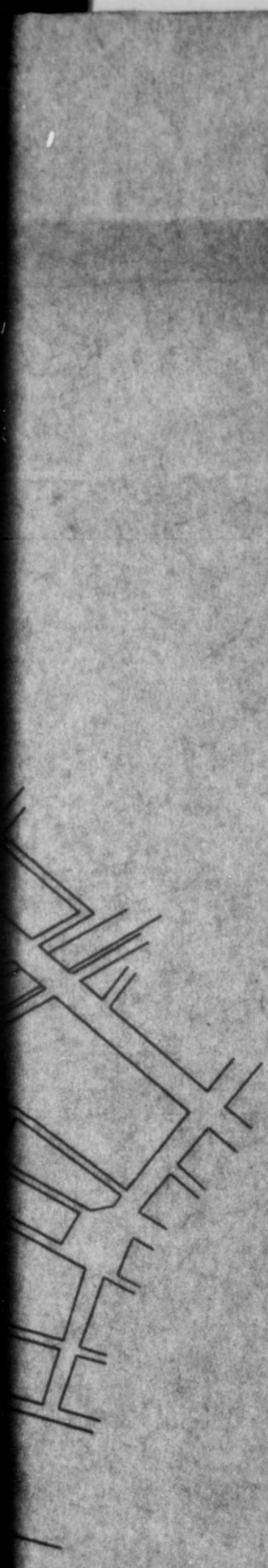


○A

德山鐵板株式會社
25.8.31
平面係

	○		5					
			4					
			3					
			2					
			1					
ハ	ロ	イ	部番	品号	名稱及摘要	基本數量	材質	圖面番号	單位
製作數量									

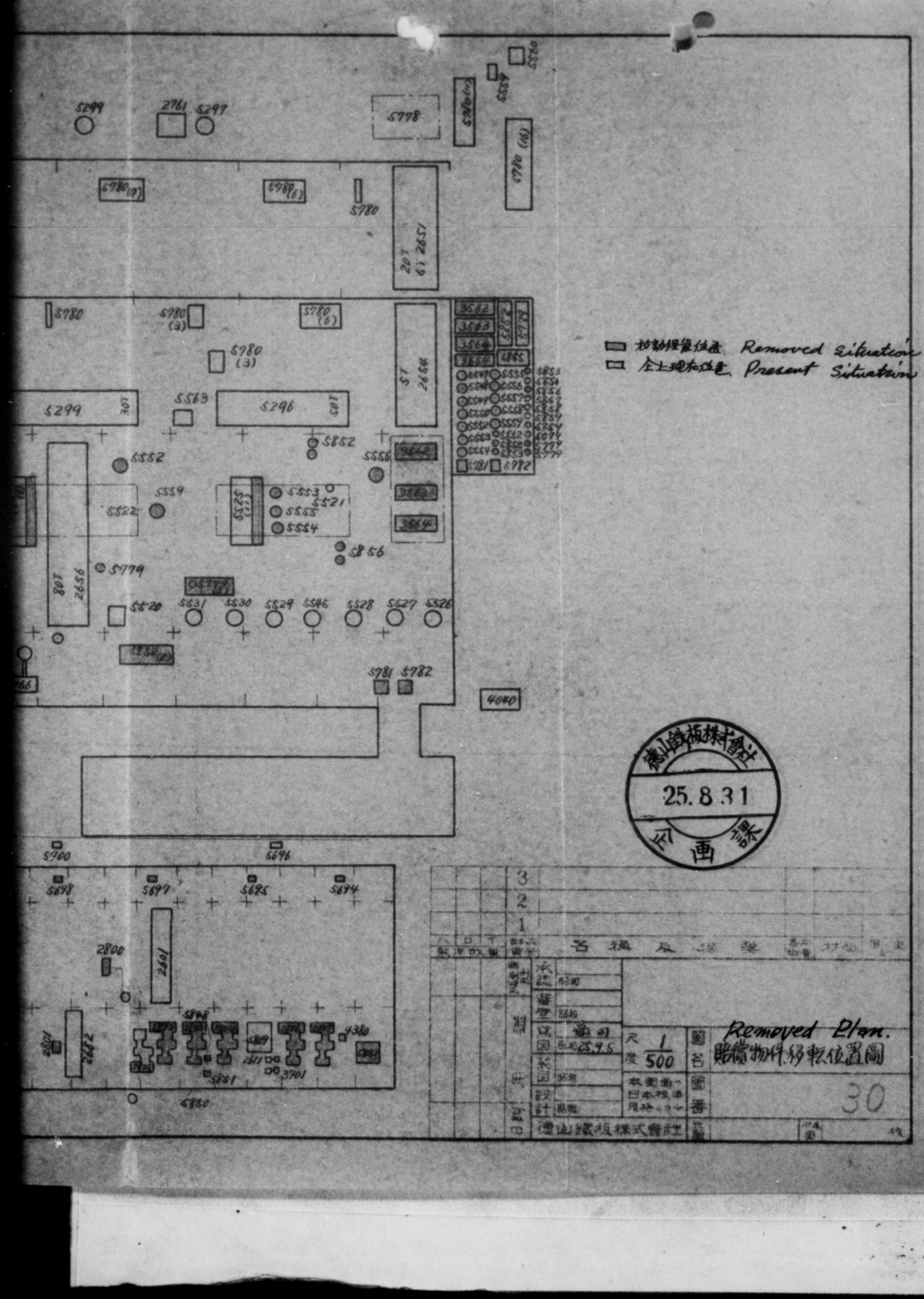
承認	昭和				
審査	昭和				
寫圖	昭和 25.7.25	尺度 1/5000	圖面名稱		
製圖	昭和	本圖面ハ日本橋準規格ニ基ク	圖面番号	20	
設計	昭和				
日期	德山鐵板株式會社		外圖		附圖 枚

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

(38) 第一製鋼工場（鋼）
Open Hearth Shop

(48) 第二鍛錬工場（鋼）
No.2 Forging Shop

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



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

Application for movement and authorized
use of designated reparation
machinery and equipment

29th , June , 1950.

TO : Mr. Hayato Ikeda, Minister of Finace.

FROM : The Hitachi, Ltd.
12, 2-chome, Marunouchi, Chiyoda-ku, Tokyo.

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

Name : The Kasado Works, Hitachi, Ltd.

Code No. : Nil, for the plant is not under the custody for reparation.

Location : 794, Aza-Miyanosuhama, Oaza-Higashitoyoi, Kudamatsu City, Yamaguchi Prefecture.

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

Name : The former Hikari Navy Arsenal.

Code No.: 45-4

Location: Oaza-Mitsui, Hikari City, Yamaguchi Prefecture.

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

As attached sheet.

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

SCAP (ECONOMIC AND INDUSTRIAL) FILE 45-4 See II

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

The machines which are now hold and used in the Kasado Works were bought many years ago, and have not been able to be maintained for the long time, as they would be. Besides in the War time, the continuous use of them day and night and the operation by the unskilled workers put the machines to the condition of utterly overdriven.

After the end of the War, our works asked the rapid increase of manufacturing of rolling stocks and boilers which were demanded for the reconstruction of Japanese industry. These status put the machines to the condition of overdriven more and more.

Under these condition, the decrease of efficiency, the suspension of work, and the increase of repairing cost due to the trouble of machine, these are giving a great influence to the reconstruction of the industry.

Now we are making 17 Kewanee boilers ordered from the 8theArmy, and 10 steam locomotives, 10 Passenger coaches, and 5 freight cars for Siam; and they are demanded to be delivered in a short time. In compliance with the demand, the satisfactory deliver is owe to the efficiency of machinery.

The rationalization of work and the increase of efficiency are only expected by means of high speed machine. Lathe, slotting machine, and radial drilling machine on this application are high speed and special device unlike the ordinary machine tools.

The modern machine tool is operated with the bite of carbonized tungsten, and plane with high speed revolution; therefore the preciseness and the strength on every part, and the shock and vibration proof construction are needed. The machine of these device can not be available now from the civil source. (The machine tools of high speed device had been manufactured in the War time, but they were delivered only to Army, not to civil plant.)

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

Lathe turret and every type of grinder are special type of machine tools, and it is not only difficult to get in a short time, but Japanese maker of them is unknown. The inquiry of presence about the machine on this application has been made in vain at the civil plant under the custody for reparation in Yamaguchi Prefecture. A few of reparation civil plant which had made machine tools in the Chugoku Destrict have some of machines on this application, but they do not comply to our entreaty. Therefore it can not be helped to made an application for authority to move and use temporarily the machine existing in the former Hikari Navy Arsenal. The said Arsenal is near by our factory connected by the paved high way of 10-meter wide, and it is very convenient to transport the machine in only 20 minutes by motor car, and transportation expense is trifling.

The long term loan which is necessary means for purchasing of the mahhine is closed in the present stage.

Having the authority of temporary use of the machine, we have an intention to deliver satisfactory the before said rolling stocks and boilers, and we would like to contribute to the reconstruction of Japanese industry.

The attached certificate of the Hiroshima Bureau of International Trade and Industry will help you to understand that the machine of before said device can not be available now from the civil sources.

The difference between machine tools of high speed device and ordinary are shown as follows:

a) Larger number of maximum revolution shows the possibility of high speed planing.

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b) Larger of maximum revolution and smaller of minimum show the wider woeking space.

c) Greater horse power shows the higher planing efficiency.

d) Larger of gross weight is strong and anti-viblation and anti-shock.

Lathe: Swing 400 m/m; bed long 1,800 m/m.

	High speed device	Ordinery
Maximum revolution	960 r/m	400 r/m
Ratio of max. & Min. revolution	1/48	1/30
Horse power	7.5 HP, 10 HP	3 - 5 HP
Gross weight	3,500 kg	2,300 kg
Screw Cutting Machine No. 3		
Maximum revolution	1,200 r/m	420 r/m
Ratio of max. & min. revolution	1/50	1/30
Horse power	10 HP	5 HP
Gross weight	4,200 kg	3,000 kg
Slotting Machine: stroke 600 m/m		
Maximum revolution	300 r/m	200 r/m
Ratio of max. & min. revolution	countless	countless
Horse power	5 HP	3 HP
Gross weight	4,800 kg	3,500 kg
Radial drilling machine: arm length 1,800 2/m		
Maximum revolution	1,500 r/m	600 r/m
Ratio of max. & min. revolution	1/50	1/30
Horse power	7½ HP	5 HP
Gross weight	7,000 kg	4,500 kg

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Lathe Turret No. 3

Maximum revolution	1,200 r/m	600 r/m
Ratio of max. & min. revolution	1/40	1/20
Horse power	7½ HP	5 HP
Gross weight	3,000 kg	2,200 kg

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

Item	No.	Work
High speed Lathe	1-25	For machining of wheels axles spindle and pin.
High speed Lathe Turret	26-30	For cutting of stay-bolt, boiler-wheel. Furnace and wheel center and truck center bearing
Special Milling machine	31-34	For cutting-horn block guide plate and plug screw of Boiler.
Slotting machine	35-37	For cutting of bearing box and end face of bearing.
Boring machine	38	For boring of various links.
Gear shaper	39-40	For cutting of driving gear.
Universal Tool grinder	41	For grinding of cutting tools.
Universal Grinder	42-45	For grinding of cutting tools and internal face of link bushes
High Speed Radial drilling machine	46-47	For drilling of boiler plate
High speed Drilling machine	48-49	For drilling of various slide plate

For president

(Signed) T. Matsuno.

Manager of Kasado Works,
Hitachi Ltd.

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

Attached documents

Approval of the applicant, concerning responsibility of custody for designated reparation machinery and equipment.

I hereby, certify that I will do my best efforts with responsibility in keeping all machinery received in good custody after approval by S. C. A. P.

Signed T. Matsuno

Manager of Kasado Works,
Hitachi, Ltd.

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

Reparation Machinery List

(applied for suthorized utilization)

Name of Plant : The Former Hikari Navy arsenal.
Location of Plant : Oaza-mitsui, Hikari City, Yamaguchi Prefedture
Code No. : 45-4

Inventory No.	Name of machine	Type Form	Quantity	Remarks
427	High Speed Lathe	Swing over bed. 520 mm Swing over cariage 340mm	1	1
1605	"	" " 440 mm 330 mm	1	2
2058	"	" " 440 mm 330 mm	1	3
1954	"	" " 820 mm 430 mm	1	4
2106	"	" " 440 mm 300 mm	1	5
1399	"	" " 440 mm 300 mm	1	6
1603	"	" " 440 mm 300 mm	1	7
1697	"	" " 440 mm 300 mm	1	8
428	"	" " 520 mm 340 mm	1	9
1017	"	" " 440 mm 300 mm	1	10
425	"	" " 520 mm 340 mm	1	11

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1972	Lathe	Swing over bed. 440 mm Swing over cariage 300mmmm		1	12
1018	"	" "	440 mm 300 mm	1	13
1824	"	" "	440 mm 300 mm	1	14
3122	"	" "	2000 mm 470 mm	1	15
1278	"	" "	440 mm 300 mm	1	16
4	"	" "	480 mm 230 mm	1	17
3374	"	" "	2500 mm 520 mm	1	18
3118	"	" "	2500 mm 520 mm	1	19
1013	"	" "	440 mm 300 mm	1	20
1268	"	" "	460 mm 220 mm	1	21
810	"	" "	460 mm 280 mm	1	22
2533	"	" "	2500 mm 520 mm	1	23
1856	"	" "	440 mm 300 mm	1	24
2982	"	" "	2500 mm 460 mm	1	25

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

20	High Speed Lathe Turret	" "	460 mm 260 mm	1	26
38	"	" "	400 mm 180 mm	1	27
2107	"	" "	460 mm 250 mm	1	28
2217	"	" "	855 mm 510 mm	1	29
2219	"	" "	855 mm 510 mm	1	30
2042	Special Milling machine	Size of working surface table	340x350 mm	1	31
452	"	"	1750x450 mm	1	32
342	"	"	1340x300 mm	1	33
162	"	"	1500x350 mm	1	34
348	Slotting machine	Length of Stroke Max. Swing	215 mm 950 mm	1	35
783	Shaper (Horizontal)	Length of Stroke 600mm Size of surface of table	600x400 mm	1	36
1143	"	" "	600 mm 600x400 mm	1	37
1763	Boring machine	Capacity dia of Bore	150 mm	1	38
1796	Gear Shaper	Max. External dia of gear Max. internal dia of gear	213 mm 100 mm	1	39
1491	Gear Shaper (Vertical)	Max. dia of gear Max. width of fall	1200 mm 500 mm	1	40

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

468	Universal Tool grinder	Distance between stones 400 mm Table feed 500x250 mm	1	41
1400	Universal Grinder	Center height 104 mm Center dist. 600 mm	1	42
1232	"	Swing over bed 440 mm Dia of grinding feed 300 mm	1	43
463	"	Swing over bed 440 mm Dia of grinding feed 300 mm	1	44
2009	Centerless grinder	Feed table 150 mm Dia 400 mm 230 mm Width 150 mm 150 mm	1	45
2078	High speed Radial drilling machine	Drilling capacity 45x330 mm Spindle hole taper MT No. 4	1	46
3131	"	Size of base table 2200x1200 mm	1	47
1326	High speed Drilling machine	Spindle speed Range 225-1800R.P.M No. of step 9	1	48
1327	"	Spindle speed 130-1770 R.P.M No. of step 8	1	49

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

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

Date: 30 Apr. 1950

To: Minister of finance
From: President of Yamaguchi University
Address: Yamaguchi-shi, Yamaguchi-ken

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

Engineering Faculty of Yamaguchi University, Ube-shi, Yamaguchi-ken.

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

Hikari Naval Arsenal (45-4)
Mitsui, Hikari-shi, Yamaguchi-ken.

3) List designated repatation machinery and equipment to be moved and used.

See the appended list.

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

Our faculty was established as that of Engineering Department of Yamaguchi University recently and the former Ube Technical College was the predecessor of our faculty. Soon after the establishment of ourfaculty in 1939, World War 11 grew worse, and the completionof education and research installations became exceedingly difficult.

But with our steady application to it we have prepared installations scarcely enough to continue education. But our research installations are very meagre and in addition to it many of the apparatuses which we had prepared at the time of establishment of our College and also during the war are inferior in quality and are mostly either damaged or worn out at present to the extent just few can stand for our use. On the other hand, the budget allocated by the Department of Education being very slender, we are hardly able to prepare research installations and experimental machinery and apparatuses at present.

Under such a condition, our college has beenraised to the Faculty of Engineering of Yamaguchi University and all instructors are forced to research their projects in trouble because of the lack of their research installations.

All instructors are wasting their energy under such a condition and great difficulties being caused in polytechnical education.

Being such a condition, if we allowed to use the machines and instruments on this application, we shall be able to expect progress in the experimental processes and the better measuring accuracy in our researches. And besides we believe that it will contribute greatly to the improvement of various industries and the rationalization of enterprise in this prefecture, indirectly.

Motonori Matsuyama
President

MANUFACTURING AND INDUSTRY FILE 45-4 Sec

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

LIST OF FACILITIES FOR APPLICATION

Code No. : 45-4

Name of Plant : Hikari Naval Arsenal

Address of Plant: Mitsi, Hikari-shi, Yamaguchi-ken

Applicant: President of Yamaguchi University

Address : Yamaguchi-shi, Yamaguchi-ken

1. Machinery

Inv.No.	Name of Machine	Brief Specification	Qt.	Remarks
78	Drilling Machine	Drilling Capacity 9 - 70 m/m	1	
203	Gear Hobber	Micron Max.dia of gear 130m/m	1	
388	Universal Material Testing Machine	20,000Kg	1	Parts missing
238	Lathe Engine	Bed Length 5,420m/m	1	
1115	Welding Machine	A.C. Arc type 30K.V.A.	1	
1116	do.	do.	1	
1150	Shaper Horizontal	Length of Stroke 630m/m	1	
1286	Milling Machine (horiz. bench type)	Working Surface size 1130X270 m/m	1	
1467	Hydraulic Dynamometer	Max.measure cap. 500BHP	1	
1503	Gear shaper External Gleason type	Max. dia. of gear 80m/m	1	
1588	Lathe Engine	Bed Length 2500m/m	1	
1627	Lathe Bench	Bed Length 1070mm	1	
1687	Drilling Machine (Vertical Manual Feed)	Cap. 10 - 60mm	1	
1699	Lathe Turret (Ram type)	Bed Length ~~2500~~ 1660 mm	1	
1820	Impact Tester (Chanpy type)	Cap. 17 - 30 Kg/m	1	
2015	Grinder Surface	Table size 800X200mm	1	Parts missing

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

POSTSCRIPT FOR THE APPLICATION

To: Director of Hiroshima Financial Department

From: Chief of Hiroshima branch office of educational facilities of ministry of education

date: 30 Apr. 1950

The President of Yamaguti University have submitted the above application as indicated on the subjoined paper.

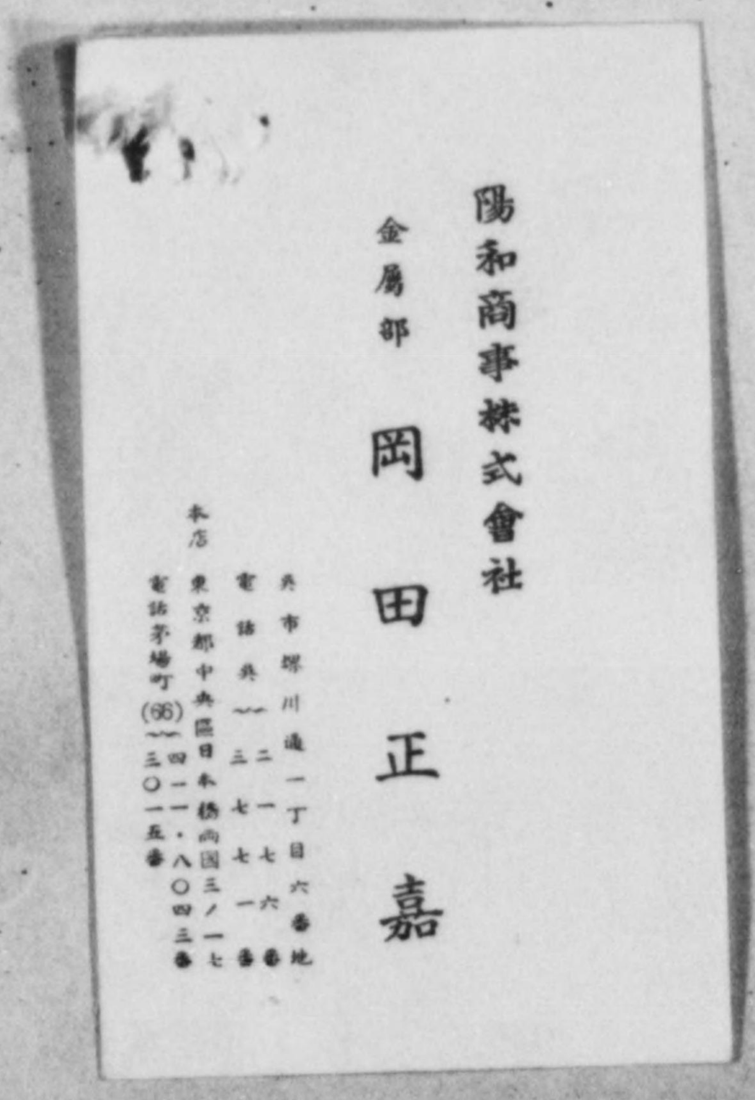
These equipment are to be used for the purpose of students practice and instructors' experiment and research in the Faculty of Engineering of Yamaguchi University. This Faculty of Engineering was newly-established and have became to accomplish experiments and researches, and also to practice students in the field of engineering.

But machineries and equipments in the faculty are not yet sufficient and it caused serious inconvenience and difficulty in the study.

Under this reason I have a favour to request of you in connection with the permission of authorized use and removal of the reparation equipments listed on the subjoined paper.

Yashiichi Kubota

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


陽和商事株式會社
金屬部
岡田正嘉
本店 東京都中央區日本橋兩國三ノ一七
電話茅場町(66)〜四一一・八〇四三番
兵市塚川通一丁目六番地
電話兵〜二一七六番
〜三七七一番

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

HIROSHIMA FINANCE BUREAU

1150 hrs.
8 Aug. 50

Mr. Stradley
Mr. Lord

Appreciate very much if the attached application be taken care of. The Yowa Shoji is anxious to have the operation permit of a travelling crane 45-4-2665 for removing ingots belonging to the Committee of Liquidating Companies. (Kawasaki Seitetsu, Kobe)

45-4 Misc.

S Yamanaka

Sorry I could not come personally as I am leaving for Tokyo by 13.18 train.

~~Formal application necessary~~ RKL

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

CHUGOKU
~~HIROSHIMA~~ FINANCE BUREAU

SYM/th

KFL No. O-121 8 August 1950

To : Chugoku Civil Affairs Region
Attn. Economic Section

Subject: Temporary Loan of Reparations Crane - Hikara Naval Arsenal, Yamaguchi Prefecture

1. The Yowa Shoji K.K., Hikari Branch was entrusted to remove the ingots belonging to the Committee of Liquidating Companies (CILC) from the Hikari Naval Arsenal. However the entrustee has difficulty to handle biggest ingot pieces weighing about 20 tons.

2. It is therefore requested that the operation of a overhead crane, reparations code No. 45-4-2665 be approved as emergency action without applying formally through the Japanese Government channel.

3. The term of the operation will be from 8 August to 15 September 1950 and the Chief of the Hikari Branch of the Finance Bureau recommends the operation.

Yamanaka

SHIZUSO YAMANAKA
Chief of Liaison Section,
Chugoku Finance Bureau

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

CHUGOKU
HIROSHIMA FINANCE BUREAU

SYM/th

KFL No. O-121

8 August 1950

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Attn. Economic Section

Subject: Temporary Loan of Reparations Crane - Hikara Naval Arsenal, Yamaguchi Prefecture

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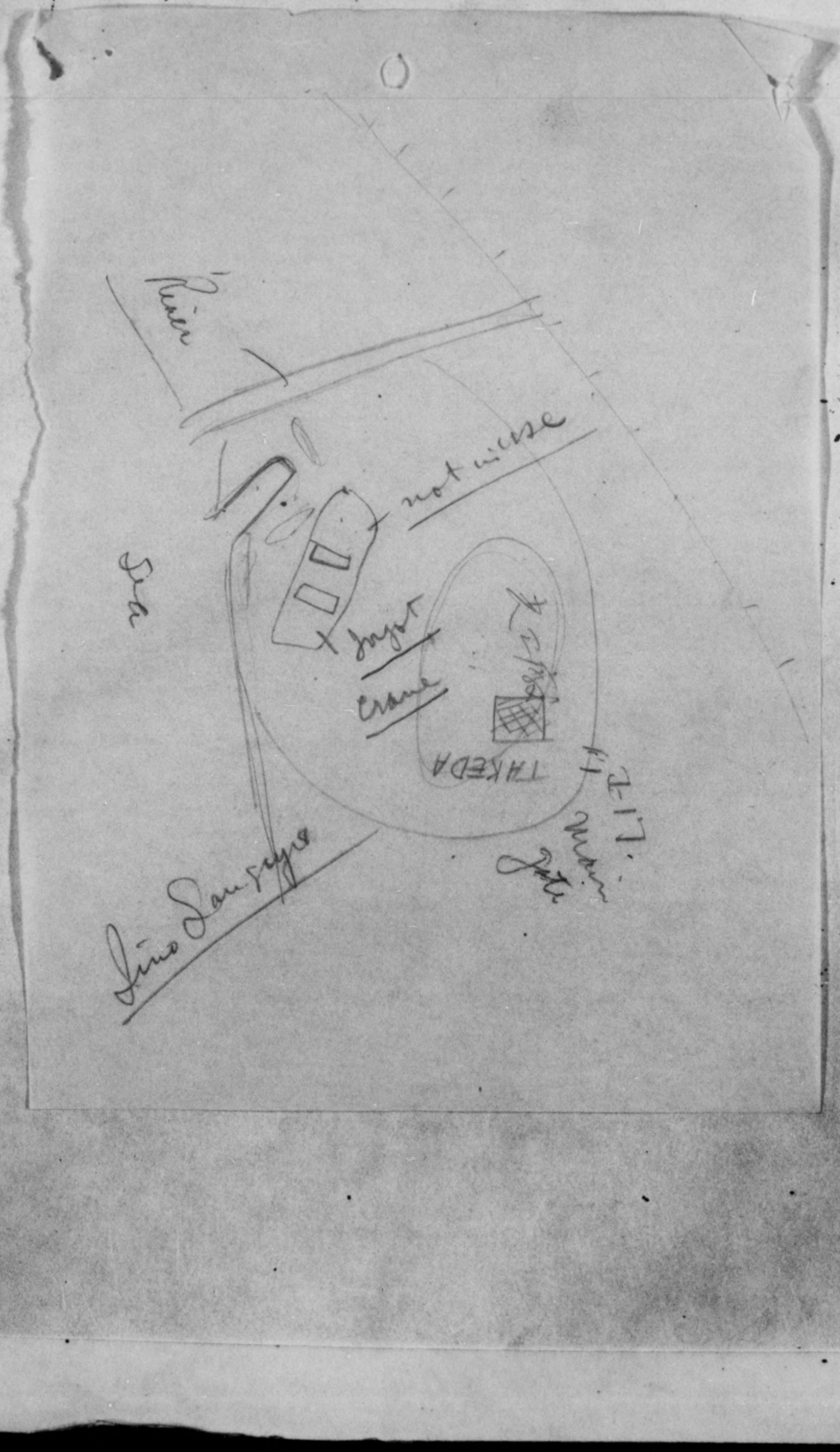
Yamanaka

SHIZUSO YAMANAKA
Chief of Liaison Section,
Chugoku Finance Bureau

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



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

Copy

To CCAR

Application for movement and Authorized use of designated reparation machinery and equipment

Date : 24th, July, 1950.

TO : Ministry of International Trade and Industry.

FROM : Kasado Works, Hitachi Ltd.

ADRESS : 794, Aza-Miyanosuhama, Oaza-Higashitoyoi, Kudamatsu City, Yamaguchi Prefecture.

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

Name : The Kasado Works, Hitachi Ltd.

Code No: Nil. for the plant is not under the custody for reparation.

Location: 794, Aza-Miyanosuhama, Oaza-Higashitoyoi, Kudamatsu City, Yamaguchi Prefecture.

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

Name : The former Hikari Navy Arsenal.

Code No: 45 - 4

Location: Oaza-Mitsui, Hikari City, Yamaguchi Prefecture.

MANUFACTURING AND INDUSTRY
F.I.E. 45-4 Dec. II

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

Machine Tools 49

As attached documents.

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

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

The machines which are now hold and used in the Kasado Works were bought many years ago, and have not been able to be maintained for the long time, as they would be. Besides in the War time, the continuous use of them day and night and the operation by the unskilled workers put the machines to the condition of utterly overdriven.

After the end of the War, our works asked the rapid increase of manufacturing of rolling stocks and boilers which were demanded for the reconstruction of Japanese industry. These status put the machines to the condition of overdriven more and more.

Under these condition, the decrease of afficiency, the suspension of work, and the increase of repairing cost due to the trouble of machine, these are giving a great influence to the reconstruction of the industry.

Now we are making 17 Kewanee boilers ordered from the 8theArmy, and 10 steam locomotives, 10 Passenger coaches, and 5 freight cars for Siam; and they are demanded to be delivered in a short time. In compliance with the demand, the satisfactory deliver is owe to the afficiency of machinery.

The rationalization of work and the increase of efficiency are only expected by means of high speed machine. Lathe, slotting machine, and radial drilling machine on this application are high speed and special device unlike the ordinary machine tools.

The modern machine tool is operated with the bite of carbonized tungsten, and plane with high speed revolution; therefore the preciseness and the strength on every part, and the shock and vibration proof construction are needed. The machine of these device can not be available now from the civil source. (The machine tools of high speed device had been manufactured in the War time, but they were delivered only to Army, not to civil plant.)

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

Lathe turret and every type of grinder are special type of machine tools, and it is not only difficult to get in a short time, but Japanese maker of them is unknown. The inquiry of prosence about the machine on this application has been made in vain at the civil plant under the custody for reparation in Yamaguchi Prefecture. A few of roparation civil plant which had made machine tools in the Chugoku District have some of machines on this application, but they do not comply to our entreaty. Therefore it can not be helped to made an application for authority to move and use temporarily the machine existing in the formar Hikari Navy Arsehal. The said Arsenal is near by our factory connected by the paved high way of 10-meter wide, and it is very convenient to transport the machine in only 20 minutes by motor car, and transportation expense is trifling.

The long term loan which is necessary means for purchasing of the mahhine is closed in the present stage.

Having the authority ~~of temporary~~ use of the machine, we have an intention to deliver satisfactory the before said rolling stocks and boilers, and we would like to contribute to the reconstruction of Japanese industry.

The difference between machine tools of high speed device and ordinary are shown as follows:

a) Larger number of maximum revolution shows the possibility of high speed planing.

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

b) Larger of maximum revolution and smaller of minimum show the wider wooking space.

c) Greater horse power shows the higher planing efficiency.

d) Larger of gross weight is strong and anti-viblation and anti-shock.

Lathe: Swing 400 m/m; bed long 1,800 m/m.

	High spoed device	Ordinery
Maximum revolution	960 r/m	400 r/m
Ratio of max. & Min. revolution	1/48	1/30
Horse power	7.5 HP, 10 HP	3 - 5 HP
Gross weight	3,500 kg	2,300 kg
Screw Cutting Machine No. 3		
Maximum revolution	1,200 r/m	420 r/m
Ratio of max. & min. revolution	1/50	1/30
Horse power	10 HP	5 HP
Gross weight	4,200 kg	3,000 kg
Slotting Machine: stroke 600 m/m		
Maximum revolution	300 r/m	200 r/m
Ratio of max. & min. revolution	countless	countless
Horse power	5 HP	3 HP
Gross weight	4,800 kg	3,500 kg
Radial drilling machine: arm length 1,800 2/m		
Maximum revolution	1,500 r/m	600 r/m
Ratio of max. & min. revolution	1/50	1/30
Horse power	7½ HP	5 HP
Gross weight	7,000 kg	4,500 kg

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Lathe Turret No. 3		
Maximum revolution	1,200 r/m	600 r/m
Ratio of max. & min. revolution	1/40	1/20
Horse power	7½ HP	5 HP
Gross weight	3,000 kg	2,200 kg

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

Item	No.	Work
High speed Lathe	1-25	For machining of wheels axles spindle and pin.
High speed Lathe Turret	26-30	For cutting of stay-bolt, boiler-wheel. Furnace and wheel center and truck center bearing
Special Milling machine	31-34	For cutting-horn block guide plate and plug screw of Boiler.
Slotting machine	35-37	For cutting of bearing box and and face of bearing.
Boring machine	38	For boring of various links.
Gear shaper	39-40	For cutting of driving gear.
Universal Tool grinder	41	For grinding of cutting tools.
Universal Grinder	42-45	For grinding of cutting tools and internal face of link bushes
High Speed Radial drilling machine	46-47	For drilling of boiler plate
High speed Drilling machine	48-49	For drilling of various slide plate

For president

(Signed) T. Matsuno.

Manager of Kasado Works,
Hitachi Ltd.

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

List of the desired separation designated
Machinary and equipment

Applicant: Kasado Plant, Hitachi Ltd.

Name of Items	Name of mfg. Co.	Type and Dimension	In.V No	Operation or Idle	No of Items	Machine No.	Work Sheet NO. (Page)
1) Machine Tools							
High Speed Lathe	Kohan	Swing over bed 520 mm Swing over carriage 340 mm	45-4 427	Idle	1	1	78
"	"	" 440 mm " 330 mm	" 1605	"	1	2	343
"	"	" 440 mm " 330 mm	" 2058	"	1	3	385
"	Elicon	" 820 mm " 430 mm	" 1954	"	1	4	60
"	Kohan	" 440 mm " 300 mm	" 2106	"	1	5	385
"	"	" 440 mm " 300 mm	" 1399	"	1	6	343
"	"	" 440 mm " 300 mm	" 1603	"	1	7	385
"	"	" 440 mm " 300 mm	" 1697	"	1	8	392
"	"	" 520 mm " 340 mm	" 428	"	1	9	75
"	"	" 440 mm " 300 mm	" 1017	"	1	10	327
"	"	" 520 mm " 340 mm	" 425	"	1	11	78
"	"	" 440 mm " 300 mm	" 1972	"	1	12	392

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High Speed Lathe	Kohan	Swing over bed 340 mm Swing over carriage 300 mm	454 1018	Idle	1	13	268
"	"	" 440 mm " 300 mm	" 1824	"	1	14	389
"	"	" 2000 mm " 470 mm	" 3122	"	1	15	549
"	"	" 440 mm " 300 mm	" 1278	"	1	16	268
"	"	" 480 mm " 230 mm	" 4	"	1	17	182
"	"	" 2500 mm " 520 mm	" 3374	"	1	18	548
"	"	" 2500 mm " 520 mm	" 3118	"	1	19	547
"	"	" 440 mm " 300 mm	" 1013	"	1	20	343
"	Ikegai	" 460 mm " 220 mm	" 1268	"	1	21	273
"	"	" 460 mm " 280 mm	" 810	"	1	22	69
"	Kohan	" 2500 mm " 520 mm	" 2533	"	1	23	547
"	Ikegai	" 440 mm " 300 mm	" 1856	"	1	24	385
"	"	" 2500 mm " 460 mm	" 2982	"	1	25	665
High Speed Lathe Turret	Hitachi	2 460 mm " 260 mm	" 20	"	1	26	123
"	Warner	" 400 mm " 180 mm	" 38	"	1	27	125
"	Hitachi	" 460 mm " 250 mm	" 2107	"	1	28	419
"	Karatsu	" 855 mm " 510 mm	" 2217	"	1	29	417
"	"	" 855 mm " 510 mm	" 2219	"	1	30	417

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

Special Milling Machine	Platt	Size of working surface table 540x350 mm	4544 2042	Idle	1	31	483
"	Wandler	" 1750x450 mm	" 452	"	1	32	87
"	Hitachi	" 1340x300 mm	" 342	"	1	33	84
"	Bimazuki	" 1500x350 mm	" 162	"	1	34	194
Slotting Machine	Hirao	Length of Stroke 215 mm	"				
"		Max.Swing 950 mm	348	"	1	35	92
Shaper (Horizontal)	Nakagawa	Length of Stroke 600 mm	"				
		Size of surface of table 600x400 mm	783	"	1	36	91
"	"	" 600 mm	"				
		" 600x400 mm	1143	"	1	37	489
Boring Machine	Ikegai	Capacity dia of Bore 150 mm	" 1673	"	1	38	225
Gear Shaper	Fellow	Max.External dia of gear 213 mm	"				
		Max.internal dia of gear 100 mm	1796	"	1	39	244
" (Vertical)	Karatsu	Max. dia of gear 1200 mm	"				
		Max.width of fall 500 mm	1491	"	1	40	241
Universal Tool Grinder	Larver	Distance between stones 400 mm	"				
		Table feed 500x250mm	468	"	1	41	65
Universal Grinder	Okwma	Center height 104 mm	"				
		Center dist 600 mm	1400	"	1	42	252
"	Liken	Swing over bed 440 mm	"				
		Dia of grinding feed 300 mm	1232	"	1	43	250
"	Heald	" 440 mm	"				
		" 300 mm	463	"	1	44	62
Centerless grinder	Nihon kenma	Feed table 150 mm Dia 400 mm 230 mm Width 150 mm 150 mm	" 2009	"	1	45	254

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

High Speed Radial drilling machine	Dainipon Koki	Drilling capacity 45x330 mm Spindle hole taper MT No. 4	45-4 2078	Idle	1	46	231
"	Heler	Size of base table 2200x1200 mm	" 3131	"	1	47	527
High Speed Drilling machine	Hosdex	Spindle speed Range 225-1800 R.P.M. No. of step 9	" 1326	"	1	48	235
"		Spindle speed 130-1770 R.P.M. No. of step 8	" 1327	"	1	49	234

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

Lotter of assent (Form II)

Date July, 1950.

TO: Minister of International Trade and Industry

FROM: Hitachi, Ltd.

SIRS: I, the undersigned, hereby assent for the custodian of Former Hikari Navy Arsenal (Code No. 45-4) to take the fixed responsibility for maintenance of the reparation designated machinery and equipment, List of which is attached to the application herein, belong to the above plant, after the same were moved into Kasado Plant, Hitachi, Ltd.

(Signed) T. Matsuno.

President, Hitachi Ltd.
(person who desires to use the reparation designated machinery and equipment)

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

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

To : Mr. Hayato Ikeda, Minister of Finance

From: President of Fuji Seitetsu K.K.

Address: 12, 2-chome, Edobashi, Nihonbashi, Chuo-ku, Tokyo-to.

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

Wanishi Works of Fuji Seitetsu K.K.
12, Wanishi-machi, Muroran City, Hokkaido.

2) Name (Code No.45-4) and Location of the plant where designated reparation machinery and equipment to be used actually exist.

Hikari Naval Arsenal (45-4)
Mitsui, Hikari City, Yamaguchi Prefecture.

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

45 - 4 - 309 8 Lathe
~~45 - 4 - 3099 "~~
~~45 - 4 - 417 "~~

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

With the production increase at Rolling Mills (Blooming, Wire Drawing, Small Section, Medium Section and Sheet Mills), the works' cutting capacity of rolls in short. But since it takes long time (about 12 months) and a huge amount of money (¥15,000,000 for 3 units) is required to install new lathes, it is earnestly desired to use the aboveмentioned machine tools after remodelling them properly.

Signed by the President.
Sijeo Nagano

Attached documents:

Approval of the applicant, concerning responsibility of custody for designated reparation machinery and equipment.

Submitted to this headquarters on 1 July 50

MANUFACTURING AND INDUSTRY FILE 45-4 Sec. II

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

APPROVAL OF APPLICANT

To : Mr. Hayato Ikeda,
Minister of Finance.

From: Shigeo Nagano,
President of Fuji Seitetsu K.K.

We assume the responsibility for the maintenance and repair of the designated reparation machinery mentioned in the application.

Sigeo Nagano

S. Nagano, President