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OUTLINE OF NAVAL ARMAMENT AND PREPARATIONS FOR WAR

Part II

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FOREWORD

This is the second of a series of six monographs in regard to Japan's naval armament in preparation for and during the Pacific War.

Additional monographs covering Japan's naval armament plans

are:

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Preface

Through Instructions No. 126 to the Japanese Government, 12 October 1945, subject: Institution for War Records Investigation, steps were initiated to exploit military historical records and official reports of the Japanese War Ministry and Japanese General Staff. Upon dissolution of the War Ministry and the Japanese General Staff, and the transfer of their former functions to the Demobilization Bureau, research and compilation continued and developed into a series of historical monographs.

The paucity of original orders, plans and unit journals, which are normally essential in the preparations of this type of record, most of which were lost or destroyed during field operations or bombing raids rendered the task of compilation most difficult; particularly distressing has been the complete lack of official strength reports, normal in AG or G3 records. However, while many of the important orders, plans and estimates have been reconstructed from memory and therefore are not textually identical with the originals, they are believed to be generally accurate and reliable.

Under the supervision of the Demobilization Bureau, the basic material contained in this monograph was compiled and written in Japanese by former officers, on duty in command and staff units within major units during the period of operations. Translation was effected through the facilities of Allied Translators and Interpreters Service, G2, General Headquarters, Far East Command.

This Japanese Operational Monograph was rewritten in English by the Japanese Research Division, Military History Section, General Headquarters, Far East Command and is based on the translation of the Japanese original. Editorial corrections were limited to those necessary for coherence and accuracy.

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Chapter I

The Third Replenishment Plan

In December 1934, Japan submitted notification of the abrogation of the Washington Treaty. At the same time, after intensive research for the coming disarmament conference, it was found that Japan did not have the facilities, material or money to compete with the western powers in naval armament. It was planned, therefore, that in order to safeguard herself, Japan would stress the point of finding the common upper limit of naval strength and of reducing or entirely abolishing offensive vessels, such as battleships and aircraft carriers. It was felt that the naval ratio that had been adopted both in the Washington and London Treaties was unreasonable and would not guarantee the security of Japan.

The Naval Disarmament Conference of the five powers, Japan, Great Britain, United States, France and Italy was held in London in December 1935. Since Great Britain and the United States not only disagreed in principle with Japan's contention that the naval treaty was unreasonable, but ignored it, Japan withdrew from the conference in January 1936. Thus, with the expiration of both the Washington and First London Naval treaties, Japan was no longer committed to any treaty obligations with Britain and the United States.

These events combined to make Japan feel herself in an isolated position in regard to the Occidental powers. In addition, from the time of the establishment of Manchuko the Chinese people had openly

shown their resentment against Japan, and, especially in North China, armed clashes were frequent. With the marked increase of clashes in Asia between Japan and China and between Japan and the Soviet Union, Japan began to feel pressure from all sides, which she believed would have to be overcome at any cost.

In March 1936, Great Britain requested the Japanese Government to take part in the limitation of guns on capital ships provided in the Second London Naval Treaty (British-American-French Naval Qualitative Limitations Treaty) but Japan declined the invitation. Since the end of 1935, in view of the unexpected delay in carrying out the Second Naval Replenishment Plan, Japanese naval authorities had been preparing for the next armament replenishment plan. As a result, the Third Replenishment Plan, extending over five years (four years in the case of aircraft) beginning in the 1937 fiscal year, was formulated. This plan called for a total of 66 ships (including two battleships) amounting to approximately 270,000 tons; also included in the plan were 14 new air units, bringing Japan's total air strength to 53 units. (See Appendix I) The approved budget for shipbuilding was approximately 800,000,000 yen. (3 1/2 yen = \$1.00) (See Chart I) The progress of ship construction is shown in Chart 2.

The Plan and Subsidiary Means Used to Replenish Naval Surface Strength

This was the first plan made and put into effect by the Japanese Navy after it had been freed from obligations of international dis-

Chart -- 1 Approved Budget (Fiscal year 1937)

Type of Ship	Tonnage	Number of Ships	Cost (in 1,000 yen)	Total (in 1,000 yen)
Battleships	35,000	2	98,000	196,000
Aircraft Carriers	24,500	2	80,850	161,700
Minelayer (Class A)	11,600	1	24,940	24,940
Minelayer (Class B)	5,400	1	9,750	9,750
Emergency Net Layers	2,000	2	4,500	9,000
Escort Ships	1,200	4	3,060	12,240
Gunboats (Class A)	1,000	2	3,300	6,600
Gunboats (Class B)	270	2	1,174.5	2,349
Destroyers	2,000	18	9,000	162,000
Submarines (Class A)	2,600	2	14,560	29,120
Submarines (Class B)	2,100	12	12,180	146,160
Minesweepers	600	6	2,130	12,780
Naval Transport	10,000	1	4,400	4,400
Survey Ship	1,600	1	3,760	3,760
Light Minelayers	700	5	2,450	12,250
Subchasers	300	9	1,500	13,500
Total		70		806,549

Budget Appropriation for Each Fiscal Year (in 1,000 yen)

Total	1937	1938	1939	1940	1941
806,549	48,007	206,342	232,392	229,057	90,751

In addition, on account of a rise in prices, a 57,669,038 yen increase was authorized for the fiscal year 1941.

armament treaties. Every effort was to be made to compensate for lack of quantity in naval strength by the improvement of quality. To do this, it was necessary to re-equip vessels in order to make each ship as effective as possible.

Battleships

Due to lack of facilities, materials and the time necessary for construction, and from the viewpoint of expense, it was realized that it would be impossible to raise the ratio of battleships. Therefore, as the Japanese Navy could not compete with the United States Navy in regard to the number of battleships, it was decided to construct the two largest and most effective battleships in the world, the Yamato and Musashi.

Since 1931, with each armament plan, the moderanization of capital ships had been carried out. The conversion of the nominal training ship Hiei back to a battleship was begun in 1937, when the ship was freed from treaty limitations.

Aircraft Carriers

In view of the vulnerability of aircraft carriers, quantity rather than quality of carriers was given first consideration, and a policy was adopted whereby the ratio of Japanese aircraft carriers would be kept equal to, if not greater than, that of the United States.

It was considered that the two aircraft carriers of the Shokaku class, which had been included in the Third Replenishment Plan (See

Chart 2) would easily be able to balance the United States Navy in the number of carriers completed in accordance with the First Vinson Plan. However, since 1937 the United States had been planning an increase in aircraft carriers. It was also reported that the number of carriers to be constructed according to the Second and Third Vinson Plans would total between 8 and 10. It seemed therefore that, in spite of the Japanese plan to maintain parity with the United States, this would not be realized. Under the circumstances the Japanese Navy decided to conduct intensive research and investigation into the progress of the United States naval armament, and, if necessary, in order to obtain parity, to requisition and convert first-class merchant ships into aircraft carriers.

Cruisers

The Japanese Navy's most favorable ratio with the United States Navy, under treaty restrictions, was cruisers. Generally speaking, however, the number of Japanese cruisers could not exceed 70 percent of the United States cruisers. The Japanese Navy, therefore, adopted a policy of equipping each cruiser with as many guns and torpedoes as possible. Furthermore, with the removal of treaty restrictions, it was able by the end of the 1938 fiscal year to complete the conversion of the light cruisers Mogami and Mikuma into heavy cruisers, by replacing 155mm guns with 200mm guns.

The light cruisers Kumamo and Suzuya, which were of the same type as the Mogami, and the Tone and Chikuma, which were based on the

Chart-2 Ship Construction Progress of Third Naval Replenishment Plan

Type	Period of Construction	Ships
Battle ships	Nov 37 to Aug 42	<u>Yamato</u> <u>Musashi</u>
Carriers	Dec 37 to Sep 41	<u>Shokaku</u> <u>Zuikaku</u>
Seaplane tender	Nov 38 to Jan 42	<u>Nisshin</u>
Mineslayer	Jul 39 to Oct 41	<u>Tsugara</u>
Emergency Mineslayer	Apr 38 to Jun 40	<u>Hatsutake</u> <u>Aotaka</u>
Escort Ships	Nov 38 to Mar 40	4 - <u>Shamushu</u> Class
Gunboats (Class A)	Feb 39 to Apr 41	<u>Hashidate</u> <u>Uji</u>
Gunboats (Class B)	Aug 38 to May 40	<u>Fushimi</u> <u>Somida</u>
Destroyers	Sep 37 to Jun 41	15 - <u>Kagero</u> Class
Submarines (Class A)	Jan 38 to Oct 41	1 - 1-9 Class 1 - 1-10 Class
Submarines (Class B)	Jan 38 to Oct 41	6 - 1-15 Class
Submarines (Class C)	Aug 37 to Oct 41	5 - 1-16 Class
Subchasers	Oct 37 to Aug 39	6 - No. 7 Class
Naval transports	Jul 39 to Jul 40	<u>Kashino</u>
Survey ship	Jan 40 to Jan 42	<u>Tsukushi</u>
Light Mineslayer	Jun 37 to Oct 40	5 - <u>Sokuten</u> Class
Minesweepers	Oct 37 to Jun 39	9 - No. 4 Class

TOTAL: 66 ships, approximately 277,000 tons.

(Note) Construction of three destroyers and one submarine was cancelled in order to divert the funds to the construction of the two super-battleships, Musashi and Yamato.

Second Replenishment Plan, were in the process of construction, so that they could be completed as heavy cruisers, without going through the process of conversion.

Thus, when the Second Replenishment Plan was fully carried out, the number of heavy cruisers in the Japanese Navy totalled eighteen. In spite of the fact that the Third Replenishment Plan did not include the construction of cruisers, it appeared that, as far as cruisers were concerned, the Japanese Navy would be able to maintain an almost equal strength with the United States Navy.

Air Strength Plan

Although the budget appropriation approved for the preparation of air strength of approximately 140,000,000 yen, reaching a total of about 200,000,000 yen by the addition of various other subsidiary expenditures, may appear small when compared with the 800,000,000 yen for shipbuilding scheduled in the Third Replenishment Plan, this was actually not so. The expenditure for the maintenance and replacement of 53 land-based air units and about 600 shipboard aircraft, when this plan was carried into effect, totalled an extraordinarily large amount. Moreover, with the rapid increase in air strength, airfields had to be constructed and expanded. Factories also were established under the administration of the Naval Aeronautical Department for the manufacture, maintenance and repair of aircraft equipment.

With the commencement of the Third Replenishment Plan, not only did the Naval Aeronautical Department become more and more important as a training control unit, but its duties as a repair and construction control organ brought it more closely in line with the Naval Technical Department. This situation resulted in subsequent approved budgets being almost equal for both organs.

Soon after the commencement of the Third Replenishment Plan, the China Incident broke out, so that the operational loss of naval aircraft showed a rapid increase, with the resultant difficulties in executing armament plans and activating forces. Measures were taken at this time to obtain unanimous approval of the Extraordinary Military Expenditure (See p. 16). Increase of industrial production was intensified with the expansion of the war front, and, in spite of the fact that it became necessary to increase various emergency armament and war preparations for the China Incident, their completion was successfully expedited. The bulk of the land-based air force (totalling 12 units excluding one unit of medium attack planes and one unit of medium flying boats) was completed by the end of the fiscal year 1938; the uncompleted unit of medium attack planes was completed within the fiscal year 1939 and the medium flying boats within the fiscal year 1940. The completion of shipboard strength was realized between 1938 and 1941 (except for aircraft for the Musashi which was completed in 1942) according to the time of completion of shipbuilding.

The grand total of air strength at the time of the completion of this plan was roughly estimated as shown in "Expected Air Strength at the Time of Completion of the Third Replenishment Plan" (See Appendix II) though it was subject to many additions and changes with the development of the China Incident.

The preparation of land air bases steadily progressed with the preparation of aircraft. Land-based air groups which were activated by the end of 1940 were as follows:

	Name of Air Group	Date of Activation	Note
1	YOKOSUKA	1 Apr 1916	
2	SASEBO	1 Apr 1918	
3	KASUMIGAURA	1 Nov 1922	
4	OMURA	1 Nov 1922	
5	TATEYAMA	1 Jun 1930	
6	KURE	1 Jun 1931	According to the Second Replenish- ment Plan
7	OMINATO	1 Nov 1933	
8	SAEKI	5 Feb 1934	
9	MAIZURU	1 Oct 1935	According to the Second Replenish- ment Plan
10	KISARAZU	1 Apr 1936	
11	KANOYA	1 Apr 1936	
12	CHINKAI	1 Oct 1936	
13	YOKOHAMA	1 Oct 1936	

14	TAKAO	1 Apr 1938	According to the Third Replenish- ment Plan
15	SUZUKA	1 Apr 1938	
16	OITA	5 Dec 1938	
17	TSUKUBA	5 Dec 1938	
18	KASHIMA	5 Dec 1938	
19	CHICHI JIMA	1 Apr 1939	
20	USA	1 Oct 1939	
21	CHITOSE	1 Oct 1939	
22	YATABE	1 Dec 1939	
23	HYAKURIHARA	1 Dec 1939	
24	IWAKUNI	1 Dec 1939	
25	TSUCHIURA	5 Nov 1940	According to the Fourth Replenish- ment Plan
26	MIHORO	1 Oct 1940	
27	GENZAN	1 Oct 1940	
28	TOKO	1 Oct 1940	
29	HAKATA	5 Nov 1940	

CHAPTER II

Acceleration of War Preparations and Supplementary Armament Plans Caused by Outbreak of China Incident

Acceleration of War Preparations

At the time of the outbreak of the China Incident in July 1937, the Third Replenishment Plan was already under way, and the subsidiary preparations to modernize existing ships and reorganize air groups were making steady progress. In order to prevent obstructing the execution of the armament program, the Japanese Government and the Navy desired to localize the Incident. However, the Incident spread to Central and South China, causing a general clash between Japan and China.

In early and middle July the Navy made preparations to cope with the situation (See Monograph No. 144; "Political Strategy prior to Outbreak of War," Part I, 1931-1939, Chapter II.) These preparations included:

- a. Reorganization of units and deployment of necessary strength for emergency to include the activation, preparations for deployment and alerting of two Special Combined Air Groups and a Special Naval Landing Force.
- b. Drafting of necessary personnel.
- c. Acceleration of manufacturing and stockpiling of equipment, war materials (especially materials impossible to import in wartime), bombs and machine gun ammunition.

d. Preparation for requisitioning necessary ships and complete equipment of navy vessels.

e. Establishment of necessary facilities for defense of key positions.

By the middle of August, the main results obtained from the above preparations were:

a. The Aoba and Kimigasa, having been repaired, were engaged in army transportation as guard ships.

b. The Belfast Maru, Kimigasa Maru and Choko Maru had been requisitioned.

c. The Asahi Maru had been requisitioned and converted into a hospital ship, while a special sick bay had been organized aboard the hospital ship Muroto.

d. The First Naval Harbor Master's Department had been established aboard the naval auxiliary ship Asahi, and this ship attached to the Third Fleet and used for salvage and repair.

e. The necessary facilities for the transportation of a Special Naval Landing Force to the Tsingtao area had been installed on the Settsu and Yakaze.

On 13 August 1937, the Chinese Army made an attack on a Japanese naval land combat unit at Shanghai, which precipitated the two armies into a full-scale war.

Believing that the Incident would continue to expand for a considerable time, and that friction with the Three Powers would necessarily increase during that period, the Navy determined to

accelerate war preparations immediately to cope with the situation. On 23 August, in order that the Chief of Navy General Staff might present his views to the Navy Minister, the First War Preparations Analysis Conference was held. (See Appendix III)

In spite of the capture of Nanking in November 1937, the China Incident dragged on, and cases of protest and interference by the Three Powers occurred so frequently that the execution of war preparations based on the conferences held on all such occasions between the Navy Ministry and the Navy General Staff became standard procedure. Moreover, preparations covering a long period were to be given priorities by weighing their importance with the existing and next armament plans, and by advancing their completion dates in the form of additional armament. Special emphasis was placed on:

Replenishment of aircraft lost in operations

Obtaining and training aircraft personnel

Completion of operational air bases and strengthening of their defenses

Gradual overhaul or modernization of all existing navy vessels

Gradual requisitioning and conversion of ships and construction of miscellaneous small ships

Procurement, increased production, storage and supply of required war materials

Strengthening of various land and sea facilities along with the completion of the above strength and equipment.

Supplementary Armament Plan

In order to achieve the objectives agreed upon by the Navy Ministry and the Navy General Staff, it became obvious that it would be necessary to execute an additional armament plan for the period between the Third and Fourth Replenishment Plans.

Ship Strength

In the fiscal year 1938, a budget appropriation of 17,200,000 yen for the construction of three ships -- two training ships (three requested) and one storeship (two requested) -- was approved as an expenditure extending to 1941. The construction of these ships was to be carried out together with the Third Replenishment Plan.

The obsolete ships used for training had always been regarded as a disgrace and, with the sharp increase in the number of cadets, and the tremendous development in ships' equipment and tactics, it became absolutely necessary to replace them. The Katori and Kashima (displacement tonnage per ship 5,800 tons) were completed and commissioned as training ships in April and May 1940 respectively.

One storeship, the Irako (displacement tonnage, 9,570 tons) was completed and commissioned in December 1941. However, with the expansion of the area of fleet training and the extension of the training period, this one storeship was considered completely inadequate to cope with the situation.

Air Strength

The Navy General Staff requested 75 additional medium attack planes for the war with China within the fiscal year 1937. This meant almost doubling the existing strength of medium attack planes within half a year. Every effort was made to accelerate production by advancing to the utmost the date of completion of two and a half units of medium attack planes in accordance with the Third Replenishment Plan, completing three units of medium attack planes as an additional armament plan in 1938, and reinforcing the Kanoya and Takao Air Groups with the above units, thus expediting the replenishment of loss by the operational forces.

It required great effort to replenish and maintain air strength even in peacetime. It was, therefore, found extremely difficult to maintain combat strength by the prompt replenishment of losses in the China operations, and, at the same time, to plan the increase in strength demanded by the armament plan. For instance, the number of aircraft which was scheduled to be completed by the third year of the China Incident as a replenishment, or strengthening, of war preparations for the Incident, in addition to aircraft scheduled in the existing armament plan (excluding the above mentioned additional armament of three units of medium attack planes) was estimated as shown below:

Carrier Fighters	131
Carrier Bombers	57
Carrier Attack Planes	71
Reconnaissance Seaplanes	59
Medium Attack Planes	72
Heavy Attack Planes	0
Transports	0
Total	<u>390</u>

Needless to say, these figures indicated the budgetary strength which was estimated after considering the Extraordinary Military Expenditure appropriation, not the actual strength which was assigned and committed to the China operations. It is interesting to note that the actual number of aircraft completed in a year was much the same as the total number of aircraft scheduled in past armament plans covering several years.

Extraordinary Military Expenditure

With the outbreak of the China Incident, measures were taken to obtain unanimous approval of the Extraordinary Military Expenditure. This was done not only from the standpoint of urgency of operations and preservation of secrets, but it was also a very effective means of accelerating armament and war preparations.

In the past the expenditure of the budget had been restricted within narrow limits. The Extraordinary Military Expenditure made it possible to divert money from one item or expenditure to

another or to expend it for a new item in accordance with changes in plans.

The Fourth Replenishment Plan

Soon after the outbreak of the China Incident, the Chinese Government submitted a protest to the League of Nations. The United States Government in October 1937, as though in concert with this action accused Japan of violating the Kellogg Pact. Anti-Japanese feeling in both Great Britain and the United States was aggravated at this time by the Panay and Lady Bird Incidents, caused in connection with the capture of Nanking. Although these incidents, themselves, were settled by diplomatic measures, with the expansion of operations in Central and South China, cases of violations of rights and interests, particularly of Great Britain and the United States, occurred so frequently that anti-Japanese feeling became increasingly evident. This, together with the acute situation in Europe, caused both Great Britain and the United States to greatly accelerate the strengthening of armament and war preparations.

The German-Austrian Anschluss and the German invasion and annexation of the Sudeten area, which were carried out in the spring and fall of 1938, seemed to be drawing Europe closer to a great cataclysm. World conditions caused Great Britain and France to place themselves on a quasi-wartime footing, and the United States to further step up armament and war preparations against the Axis Powers.

The armament of the United States Navy, according to the First Vinson Plan for the fiscal year 1934, was to be expanded to the limit permitted by the treaty. Moreover, a budget for an increase of 2 battleships, 20 destroyers, 6 submarines and 333 aircraft was approved in 1936. In addition, a plan for a huge amount of armament, totalling 81 vessels, was announced for the fiscal year 1937: 2 battleships, 3 aircraft carriers, 11 cruisers, 16 submarines, 48 destroyers and 1 gunboat. Besides this, a budget for the construction of two replacement battleships from the fiscal year 1939 onward was requested. Furthermore, in May 1938, the Second Vinson Plan, requiring 46 combat ships (including three battleships and two aircraft carriers), 26 auxiliary ships, 950 aircraft and one airship was signed by the President. The Second Vinson Plan was a ten-year plan. At the same time, a budget for about 1,100,000,000 dollars was passed for land and sea facilities.

In view of the United States increase in strength according to the plan for the fiscal year 1937, and the Second Vinson Plan, which was approximately four times that of the Third Replenishment Plan for the Japanese Navy, Japan, in spite of her difficulties in China, felt forced to cope with the situation at any cost by means of another armament plan.

The Japanese Navy was confronted with the absolute necessity of completing its armament, while on the other hand, operations on

the China mainland necessarily required priority of Army armament. This gave rise to a number of problems in regard to the financial and material limits of the country. In the meantime, the Navy Ministry and the Navy General Staff, upon investigating the contents of the two huge armament plans of the United States Navy, advanced the next armament plan, aiming at Japan's ship strength to at least equal one of the American plans, and her air strength to be on parity. They continued negotiations with the ministries concerned until at last in 1939 the budget passed the Diet. This was known as the Fourth Replenishment Plan of the Naval Armament Completion Plan for the fiscal year 1939. (See Appendix IV) An approved budget of approximately 1,200,000,000 yen was appropriated for the construction of 83 vessels (including two battleships). (See Chart 3) The progress of construction of these vessels is shown in Chart 4. In air strength, this plan called for 75 units as a nucleus comprising 34 1/2 operational units and 40 1/2 training units, both of which belonged to land-based air forces. About 300,000,000 yen was appropriated solely for the construction of aircraft. This plan was intended to cover six years (five years in the case of air strength) from the fiscal year 1939 to 1944.

The Third Naval Replenishment Plan aimed to double the naval air strength in five years, in spite of the fact that it had taken over 20 years to build it to its present strength. The Navy did

Chart -- 3 Budget (Fiscal year 1939)

Type	Tonnage	Number	Cost (in 1,000 yen)	Total Cost (in 1,000 yen)
Battleships	40,000	2	130,000	260,000
Carrier	28,500	1	101,175	101,175
Cruisers (Class B)	6,600	4	26,400	105,600
Cruisers (Class C)	8,200	2	31,160	62,320
Destroyers (Class A)	2,100	18	10,605	190,890
Destroyers (Class B)	2,600	6	12,090	72,540
Cruising Submarines (Class A)	2,600	1	16,640	16,640
Cruising Submarines (Class B)	2,200	15	14,190	212,850
Submarines (Navy Large Type)	1,600	10	10,480	104,800
Training Ship	6,000	1	7,200	7,200
Seaplane tender	5,500	1	11,825	11,825
Light Minelayers	700	10	2,660	26,600
Minesweepers	700	6	2,660	15,960
Subchasers	300	4	1,620	6,480
Emergency net layer	2,000	1	4,900	4,900
Oil tanker	5,000	1	6,000	6,000
Total		89		1,205,780

Annual Budgets (in 1,000 yen)

1939	1940	1941	1942	1943	1944	Total
60,150	119,250	289,785	384,184	290,080	62,330	1,205,780

These budgets were approved as general accounts. However, they were included in the extraordinary military expenditure after the fiscal year 1942.

Chart -4 Ship Construction Progress of the Fourth Naval Replenishment Plan

Battleship 110	Apr 40 to Dec 40 Dec 40 to Jun 42 Jun 42 to Nov 44	Construction in progress Construction suspended Converted to carrier <u>Shinano</u>
Battleship 111	Nov 40 to Dec 40 Dec 40 to Mar 43 Mar 43	Construction in progress Construction suspended Dismantled
Carrier	Jul 41 to Mar 44	<u>Taiho</u>
Cruiser (Class B)	Jun 40 to Nov 44	4 <u>Agano</u> Class cruisers
Cruisers (Class C)	1939 Feb 41 to Feb 43	1 ship - construction suspended. <u>Oyodo</u>
Destroyers (Class A)	May 39 to Jul 43	3 <u>Kagero</u> Class 12 <u>Yugumo</u> Class 1 <u>Shimakaze</u>
Destroyers (Class B)	Jul 40 to May 43	6 <u>Akitsuki</u> Class
Submarine (Class A)	Apr 40 to May 42	1-11 Class Submarine
Submarine (Class B)	Jun 39 to Apr 43	I-14 I-15 Class Submarines
Submarine (Navy Large Type)	Jun 40 to Aug 43	10 I-176 Class Submarines
Training ship	Oct 39 to Jul 41	<u>Kashii</u>
Seaplane tender	Nov 40 to Apr 42	<u>Akitsuishima</u>
Light Minelayer	Sep 39 to Jul 43	1 ship - construction suspended 9 Improved <u>Sokuten</u> Class
Subchaser	Jul 39 to Mar 41	4 No. 13 Class Subchasers
Minesweeper	Sep 40 to Mar 43	6 No. 19 Class Minesweepers
Emergency Netlayer	Dec 40 to Nov 41	<u>Wakataka</u>
Tanker	Mar 42 to May 43	<u>Sunosaki</u>

Note: Although the budget approved by Diet showed a total of 83 ships to be constructed, the Navy decided to build only 80 ships and to use the extra appropriations to construct two super battleships. Later, it was found that this plan was not practical and Battleship 110 was converted into the Carrier Shinano, while, after suspending construction on Battleship 111 in December 1940, it was finally dismantled in March 1943.

not have complete faith in this ambitious program, however, it was felt necessary to attempt this goal in order to instill the "air strength first" idea into the naval armament plan. About this time aircraft production had made unexpected progress as a result of the China Incident. Taking advantage of this momentum, this plan aimed at developing the low aircraft production capacity of Japan at any cost to carry out the Fourth Replenishment Plan.

Therefore, subsequent to the commencement of this plan, it was made a rule to give priority to the naval air armament plan within the limits of scheduled manpower, materials and facilities. Accordingly, from that time forward, naval air armament was not restricted for financial reasons. The building up of air power, however, was retarded by the fact that, in spite of the vision of the few who could see the tremendous importance of air power, with many the basic idea of huge warships and big guns as a nucleus of sea power, with air power as auxiliary strength, still predominated.

With the Third Replenishment Plan almost completed, but before the Fourth Replenishment Plan was completely drafted, in October 1938, naval air armament under the Fourth Replenishment Plan was begun. The plan made unexpectedly good progress due to strong advocacy of "air strength first" in naval armament. Production facilities were expanded and aircraft production techniques were much improved.

When the situation became critical in August 1941, the order was given to advance the plan by one year, changing it to a four-year plan to be completed in the fiscal year 1942. Not only was this plan completed as revised, but, during this time, a large amount of the strength lost due to the China Incident was replaced. From 1941 onward, although each supplementary armament plan and each new armament plan was put into effect in advance, they were rarely completed in the specified time.

The number of aircraft completed in the fiscal years 1940 and 1941 to replace the expended aircraft was estimated to be:

Carrier fighters	75
Carrier bombers	37
Carrier attack planes	36
Reconnaissance seaplanes	43
Medium attack planes	102

Total	293
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Thus, from a practical angle, the air strength of the Japanese Navy at the time of the outbreak of the Pacific War was almost equal to the expected strength at the time of the completion of the Fourth Replenishment Plan. Details of the plan in connection with other war preparations and armament plans will be mentioned in monograph No 160.

Compared with the preparation and replenishment of the above air groups, the expansion of aircraft production and the training of air personnel lagged far behind. The greatest difficulties encountered in air preparation and armament throughout the Pacific war, and even in pre-war days, were the poor aircraft equipment and the shortage of well-trained air personnel.

Third Replenishment Plan

Ship Construction

	Tonnage per ship (Standard Displacement)	Number of ships	Total Tonnage	Speed (knots)	Cruising Range	Principal Armament	Remarks
Battleships	64,000	2	128,000	27	16 knots 7,200 nautical miles	460mm guns 9 155mm guns 12 127mm Dual Purpose guns 12 Aircraft 6	
Aircraft Carriers	20,000	2	40,000	34	18 knots 9,700 nautical miles	12.7mm Dual Purpose guns 16 Aircraft-96 (Fighter Primary 18 Secondary .. 8 Bomber Primary 54 Secondary... 18)	
Seaplane Tender	9,500	1	9,500	22	16 knots 8,000 nautical miles	140mm guns 6 Reconnaissance Seaplane Primary .. 20 " Secondary .. 5 Facilities for boarding Type A Midget Submarines	Originally planned for minelayers
Minelayer	4,000	1	4,000	21	14 knots 6,400 nautical miles	127mm guns 4 Depth Charge Thrower 1 Mines 600	
Minelayer (Emergency Net Layers)	1,600	2	3,200	20	14 knots 4,100 nautical miles	40mm Machine guns 2 Depth Charge Thrower 1 Antisubmarine Nets 24	
Escort ships	860	4	3,440	20	18 knots 8,000 nautical miles	120mm guns 3 Depth Charge Thrower 1	
Gunboats (Class-A)	990	2	1,980	19.5	14 knots 2,500 nautical miles	120mm Dual Purpose guns 3	
Gunboats (Class-B)	320	2	640	17	14 knots 1,400 nautical miles	Short 80mm Dual Purpose gun 1	
Destroyers	2,000	15	30,000	35	18 knots 5,000 nautical miles	120mm guns 6 Torpedo Tubes 8	The approved budget was for 18 vessels. The budget for three of them was diverted to battleship construction.
Submarines (Class-A)	2,200	2	4,400	Surface 23.5	16 knots 16,000 nautical miles	140mm gun 1 Torpedo Tubes 6 Aircraft 1	
Submarines (Class-B)	1,950	6	11,700	Surface 23.6	16 knots 14,000 nautical miles	140mm gun 1 Torpedo Tubes 6 Aircraft 1	The approved budget was for 12 vessels. The budget for one of them was diverted to battleship construction.
Submarines (Class-C)	2,180	5	10,900	Surface 23.6	16 knots 14,000 nautical miles	140mm gun 1 Torpedo Tubes 8	
Minesweepers	630	6	3,780	20	14 knots 2,000 nautical miles	120mm guns 2 Depth Charge Throwers 2	
Naval Transport	10,360	1	10,360	14	14 knots 8,000 nautical miles	120mm Dual Purpose guns 2 (Equipped with facilities for the transportation of 460mm gun)	
Survey ship	1,400	1	1,400	20	16 knots 8,000 nautical miles	120mm guns 4	
Light Minelayers	720	5	3,600	20	14 knots 2,000 nautical miles	80mm Dual Purpose gun 1 Depth Charge Throwers 2	
Subchasers	290	9	2,610	20	14 knots 2,000 nautical miles	40mm Machine guns 2	
TOTAL		66	269,510				

Aircraft Preparation - Land-based Air Group

Classification	Number of Units	Number of Aircraft				Total Number of Aircraft	
		Per Unit		Scheduled			
		Primary	Secondary	Primary	Secondary		
Operational Air Group	Carrier Bombers	1	12	4	12	4	16
	Land Attack Planes	2.5	12	4	30	10	40
	Reconnaissance Seaplanes	1.5	8	4	12	6	18
	Medium Flying Boats	1	4	2	4	2	6
	Total	6			58	22	80
Training Air Group	Primary Trainers	1	12	18	12	18	30
	Intermediate Trainers	5	12	12	60	60	120
	Combat Trainers	2	12	4	24	8	32
	Total	8			96	86	182
GRAND TOTAL		14			154	108	262

NOTE: The total of 14 units in the above chart is sometimes regarded as included in the Third Replenishment Plan, because the completion of shipboard air groups was delayed along with the progress of ship construction.

Shipboard Air Strength

Classification	Number of Aircraft		Total Number of Aircraft
	Primary	Secondary	
Carrier Fighters	48	12	60
Carrier Bombers	144	48	190
Reconnaissance Seaplanes (Ship board)	38	4	42
Total	230	64	294

NOTE: There was a budget appropriation for carrier bombers but none for attack planes. This was a budget problem with the appearance of new carrier bombers.

Plan of the Third Replenishment Plan

		Land-based air group											Shipboard air strength											Grand Total													
		Training air group						Total					Shipboard air strength											Grand Total													
		First Plan			Second Plan			Third Plan			Total			Ships up to and in First Plan			Second Plan			Third Plan			Total			Grand Total											
Aircraft	Number of Units	Number of aircraft		Number of Units	Number of aircraft		Number of Units	Number of aircraft		Number of Units	Number of aircraft		Number of Units	Number of aircraft		Number of Units	Number of aircraft		Number of Units	Number of aircraft		Number of Units	Number of aircraft		Number of Units	Number of aircraft		Number of Units	Number of aircraft		Number of Units	Number of aircraft		Number of Units	Number of aircraft		Number of Units
		Primary	Auxiliary		Total	Primary		Auxiliary	Total		Primary	Auxiliary		Total	Primary		Auxiliary	Total		Primary	Auxiliary		Total	Primary		Auxiliary	Total		Primary	Auxiliary		Total	Primary		Auxiliary	Total	
8	1.0	12	4	16	0.5	6	2	8	2.0	24	8	32	7.0	84	28	112	81	30	111	36	18	54	48	12	60	165	60	225	249	88	337						
8	3.0	36	12	48				3.5	42	14	56	8.0	96	32	128	156	60	216	84	42	126		48	192	144	48	192	156	52	208							
32								2.0	24	8	32	2.0	24	8	32	6.0	72	24	96						240	102	342	336	134	470							
													2.0	24	8	32	1.5	18	6	24									69	23	92						
24								2.0	24	8	32	7.0	84	28	112	20	0	20	72	18	90				92	36	128	12	3	15							
6								0.5	6	2	8	2.0	24	8	32	122	41	163	14	0	14	36	4	42	174	54	228	110	148	46	194						
													4.0	48	16	64												16	8	24							
													2.0	24	8	32	4	0	4									16	8	24							
90							1.0	12	18	30	4.0	48	72	120	4.0	48	72	120										4	0	4							
							5.0	60	60	120	5.0	60	60	120	5.0	60	60	120										48	72	120							
							2.0	24	8	32	2.0	24	8	32	2.0	24	8	32										60	60	120							
16	0.5	8	2	10				1.5	18	6	24	1.5	18	6	24													24	8	32							
184	4.5	72	24	96	0.5	6	2	8	8.0	96	32	128	22.5	270	90	360	126	504	216	84	284	48	192	296	815	273	1,088	1,354	561	1,915							

Appendix III

Outline of the First War Preparations Analysis Conference

23 August 1937

Matters for Consultation Concerning War Preparations	Arrangements and Explanations
<p><u>Policy</u></p> <p>In anticipation of the China operations being protracted, war preparations which are of direct necessity will be completed. In addition, part of the war preparations required for sea operations will be accelerated in order to brush off interference, if any, of the Three Powers.</p>	
<p><u>Outline</u></p> <p>Surface Units</p> <p>The completion of the following ships being reequipped or reinforced will be accelerated. <u>Akagi</u>, <u>Yamashiro</u>, <u>Mogami</u>, <u>Submarine I-71</u></p> <p>The construction of the following ships will be accelerated: <u>Soryu</u>, <u>Tsurugizaki</u>, <u>Takasaki</u>, <u>Chitose</u>. Subchasers and other ships nearing their completion in accordance with the Naval Replenishment Plan for the fiscal year 1937.</p> <p>Besides the above, the existing surface units of the strength included in the war organization plan for the fiscal year 1937 will be equipped so as to execute operations effectively.</p> <p>Necessary ships will be requisitioned.</p>	<p>The reequipment of ships which are slated to be completed by the end of 1937 will be continued as scheduled. The reequipment of four ships mentioned in the left column is slated to be completed in the first half of 1938 and the date of completion is set as the end of January 1938 with the exception of the <u>Akagi</u>, which requires special preparation in order to strengthen sea-air strength.</p> <p>Emphasis will be laid on the acceleration of preparation of ships under repair or under overhaul. However, obsolescent ships such as the <u>Hirato</u>, <u>Yahagi</u>, and <u>Harazaki</u> are excluded from such preparation.</p> <p>Converted seaplane tenders 4; converted combined collier and oil tanker 1; converted</p>

Converted aircraft carriers equipment and materials required for conversion work will be prepared for three ships of Asama Maru class.

gunboats 4; converted ships
Ko 12; converted subchasers 4.

Motors to be used for operating lifts, the lifts themselves, other materials and blueprints for conversion plans.

Air Strength

Medium attack planes and their equipment. Manufacturing and completion of the above according to Navy Secretariat Secret Document No 2893, will be accelerated to the utmost.

Besides those now being assembled, 75 aircraft will be completed in 1937.

Other aircraft and their equipment. The losses of the existing strength will be replenished. Aircraft and its equipment will be completed to achieve strength on wartime footing for the fiscal year 1937.

A monthly output of 120 aircraft is scheduled. It will be increased to 350 by the end of the fiscal year 1937.

Defense

It will be completed in accordance with the Secondary and the Tertiary Defense in the Essentials of Naval Defense Program for the fiscal year 1937.

Facilities

Air bases

Effort will be made to complete immediately air bases under construction and other necessary facilities.

The air bases mentioned on the left will be established chiefly on South Sea Islands and the Kuriles. Places necessary to establish new air bases are Genzan and Chitose (in Hokkaido).

Communications facilities

Communications facilities necessary for the above-mentioned defense will be completed.

To be established; Second Transmitting Station of Shanghai Land Combat Unit; Harbin Radio Receiving Substation; Rashin Communications Unit; Niigata Radio Finder Station; Mikuriya Radio Direction Finder Station. Completion of Equipment for Communications Units.

Construction and repair facilities

Efforts will be made to complete facilities required for the prepara-

tion of above strength and of the
Sixth Expeditionary Preparation
Materiel.

Personnel

Efforts will be made to
train the personnel required for
the operation and maintenance of
the above strength and facili-
ties.

Personnel on First and
Second Reserve Lists to be
called to active service.
Aircraft personnel to be
trained.

Preparation of Expeditionary
Materiel

Based on the above strength,
preparations will be made for the
completion of materiel for the
opening of hostilities in accord-
ance with the Expeditionary Pre-
parations Regulations for the
fiscal year 1937. Every effort
will be made for the procurement
and preparation of fuel, raw
materials, bombs and other neces-
sary arms.

Air defense equipment:
Dual purpose guns; machine
guns; range finders; sound
locators.

Anti-submarine equipment:
Mines; antisubmarine nets with
mines; hydrophones.

Shells, powder and other
equipment.

Appendix IV

Fourth Replenishment Plan of the Naval Armament Completion Plan

Aircraft Preparation - Land-based Air Group

Classification	Operational air groups	Training air groups	Transport planes	Total
Number of Units	34.5	40.5		75
Number of aircraft	566	877	35	1,443 Plus 35

NOTE: If the strength of former plans is included, the total strength will amount to 128 units (2270 aircraft) 65 operations units (947 aircraft) and 63 training units (1323 aircraft) and 35 transports.

Details of this air strength are:

Classification	Number of Units	Number of aircraft						
		Per Unit			Total			
		Primary	Secondary	Total	Primary	Secondary	Total	
Operation air group	Carrier fighters	6.5	12	4	16	78	26	104
	Carrier attack planes	2.0	12	4	16	24	8	32
	Medium attack planes	18.5	12	4	16	222	74	296
	Reconnaissance seaplanes	7.5	8	4	12	60	30	90
	Medium flying boats	Reorganized Two groups 8 reduced		4	12	No increase or decrease in number		
	Large flying boats	Reorganized Two groups 8 increased		4	12	28	16	44
	Total	34.5				412	154	566
Training air group	Primary trainers	7.5	12	18	30	90	135	225
	Intermediate trainers	15.5	12	12	24	186	186	372
	Combat trainers	17.5	12	4	16	210	70	280
	Total	40.5				486	391	877
Transport planes	Large transport planes						24	
	Medium transport planes						11	
	Total						35	
GRAND TOTAL	75.0				898	545	1,443 Plus 35	

NOTE: Approval was obtained to include the 3.0 medium attack plane units planned in the 1938 Extraordinary Military Expenditure in the 18.5 medium attack plane units in this plan.

Subtracting 597 trainers from 1443 aircraft, there were 846 operational aircraft in all. This number corresponded to the number of navy aircraft in the Second Vinson Plan.

Shipboard Air Strength

Classification	Number of aircraft			Remarks
	Primary	Secondary	Total	
Carrier fighters	24	12	36	Carrier aircraft
Carrier bombers	24	12	36	"
Carrier attack planes	36	18	54	"
Reconnaissance seaplanes	48	0	48	Shipboard aircraft
Total	132	42	174	

NOTE: The first completion expenditure for shipboard air strength is included in the ship budget in each armament plan.

It was planned to organize air groups at Komatsushima, Tainan, Misawa, Katori, Tokushima, Matsushima, Shinchiku, Mikawa Bay, Chitose and Genzan (as well as eight training air groups). However, the plan was to be changed as occasion demanded in accordance with the establishment of airfields, training programs or other situations that might arise.

Fourth Replenishment Plan of the
Naval Armament Completion Plan - 1939

Ship Construction

Type	Tonnage (Displacement tonnage)	Number	Total Tonnage	Speed (knots)	Cruising Range (knots-nautical miles)	Principal Armament	Note
Battleships	64,000	2	128,000	27.0	16-7,200	460mm guns 9 155mm guns 12 100mm dual purpose guns ... 12 Aircraft 6	One ship's construction suspended and ship dismantled. One ship converted to carrier.
Carrier	30,360	1	30,360	33.3	18-10,000	100mm dual purpose guns ... 6 Aircraft 52	
Cruisers (Class B)	6,500	4	26,000	35.0	18-6,000	150mm guns 6 80mm dual purpose guns ... 4 Torpedo tube 8	
Cruisers (Class C)	8,000	2	16,000	35.0	18-8,700	155mm guns 6 100mm dual purpose guns .. 8	One ship's construction suspended
Destroyers (Class A)	2,000	18	32,000	35.0	18-5,000	127mm guns 6 Torpedo tubes 8	The budget for 18 destroyers was approved, but the amount for the two destroyers was diverted to the construction of super-battleships.
Destroyers (Class B)	2,700	6	16,200	33.0	18-8,000	100mm dual purpose guns ... 8 Torpedo tubes 4	
Submarines (Class A)	2,200	1	2,200	Surface Speed 23.5	Surface Speed 16-16,000	140mm gun 1 Torpedo tubes 6 Aircraft 1	
Submarines (Class B)	1,950	14	27,300	23.6	16-14,000	140mm gun 1 Torpedo tubes 6 Aircraft 1	The budget for 15 submarines was approved, but the amount for one submarine was diverted to the construction of super-battleships.
Submarine (Navy Large Type)	1,500	10	15,000	23.1	16-8,000	25mm machine guns 4 Torpedo tubes 6	
Training ship	5,800	1	5,800	18.1	12-10,000	140mm guns 4 127mm dual purpose guns .. 3	
Flying boat tender	4,650	1	4,650	19.1	14-8,000	127mm dual purpose guns .. 4 (Facilities for loading 1 large type flying boat)	
Mineslayer	1,600	1	1,600	20.0	14-3,000	80mm dual purpose guns 2 Depth charge throwers 1	
Light minelayers	720	10	7,200	20.0	14-2,000	80mm dual purpose gun 1 Depth charge throwers 2	
Minesweepers	630	6	3,780	20.0	14-2,000	120mm guns 1 Large minesweeping equipment	
Subchasers	440	4	1,760	16.0	14-2,300	80mm dual purpose gun 1 Depth charge throwers 2	
Oil tanker	4,460	1	4,460	18.0	14-9,000	120mm dual purpose guns .. 2 Gasoline supply equipment for an aircraft carrier at sea.	
Total		80	322,310				