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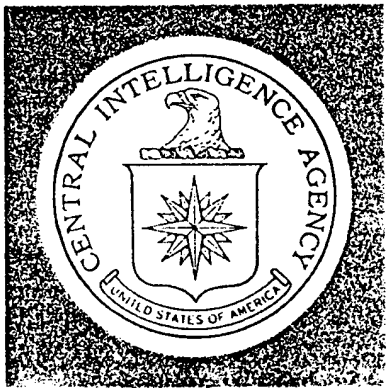

DIRECTOR OF
INTELLIGENCE

Intelligence Handbook

Soviet Submarines

~~Secret~~

Copy No. 129

SR IH 68-1
February 1968

WARNING

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CENTRAL INTELLIGENCE AGENCY
Directorate of Intelligence
February 1968

INTELLIGENCE HANDBOOK

Soviet Submarines

Ballistic Missile Submarines

Cruise Missile Submarines

Torpedo Attack Submarines

The performance characteristics and dimensions listed include data and estimates derived from various intelligence sources. Some figures, such as those for the W Class, are from Soviet manuals. The inactive Q and M-V classes are not included.

Note: This handbook was produced solely by CIA. It was prepared by the Office of Strategic Research and coordinated with the Office of Scientific Intelligence.

USSR Submarines

Nuclear Powered Ballistic Missile - SSBN

New Class

PRODUCTION

Date first unit operational	estimated mid-1968

CHARACTERISTICS

Complement	about 100
Length	425 ft
Beam	30 ft
Displacement	
Surfaced	9,000 tons
Submerged	10,000 tons
Propulsion	nuclear
Operating depth	
Normal	1,000 to 1,200 ft
Collapse	1,500 to 1,800 ft
Submerged speed	20 to 22 kts
Patrol radius	
0 days on station	8,600 nm
20 days on station	5,800 nm
Patrol duration	60 days

ARMAMENT

Ballistic missiles	16 of at least 1,350-nm range

REMARKS

This new Polaris-type submarine is being built at the Severodvinsk shipyard. It is expected to carry 16 missiles in the hull.

USSR Submarines

Nuclear Powered Ballistic Missile - SSBN

H Class

PRODUCTION

Initial construction	1959
Number built	8

CHARACTERISTICS

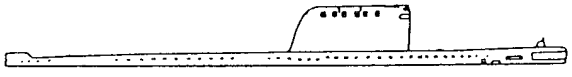
Complement	100
Length	330 ft
Beam	30 ft
Displacement	
Surfaced	5,000 tons
Submerged	5,700 tons
Propulsion	nuclear (2 screws)
Operating depth	
Normal	900 ft
Collapse	1,300 ft
Submerged speed	22 kts maximum
Patrol radius	
0 days on station	8,600 nm
20 days on station	5,800 nm
Patrol duration	60 days

ARMAMENT

Ballistic missiles	3 SS-N-4's or SS-N-5's in sail
Torpedoes	32

REMARKS

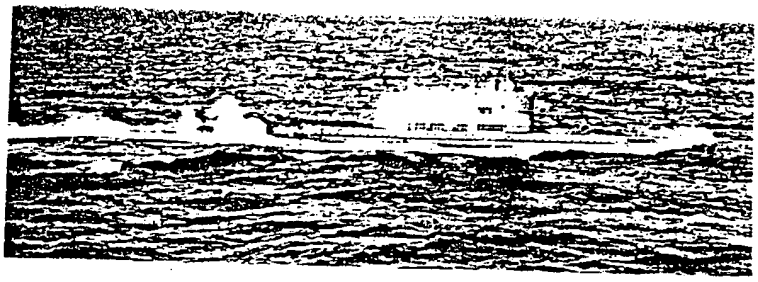
Most of the H class have been converted to fire the underwater-launched SS-N-5, which has a range of 700 nm. Two H-class units still carry the 350-nm, surface-launched SS-N-4.



USSR Submarines

Ballistic Missile - SSB

G Class



PRODUCTION

Initial construction	1958
Number built	23

CHARACTERISTICS

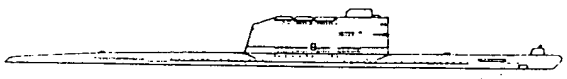
Complement	85
Length	320 ft
Beam	28 ft
Displacement	
Surfaced	2,300 tons
Submerged	2,800 tons
Propulsion	diesel (3 screws)
Operating depth	
Normal	900 ft
Collapse	1,400 ft
Submerged speed	
Maximum	16 kts for 12 nm
Economical	3 kts for 250 nm
Patrol radius	
0 days on station	3,600 nm
20 days on station	2,400 nm
Patrol duration	60 days

ARMAMENT

Ballistic missiles	3 SS-N-4's or SS-N-5's in sail
Torpedoes	26

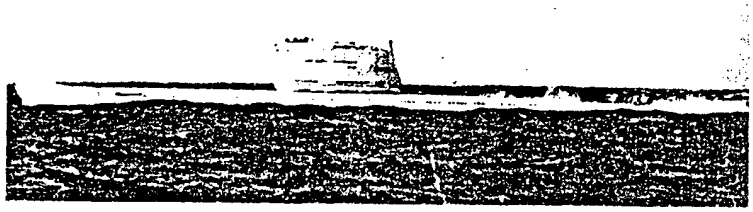
REMARKS

A few units of this class have been converted to fire the underwater-launched, 700-nm SS-N-5. Components for one G class unit were supplied to Communist China.



Ballistic Missile - SSB

Z-Conversion Class



PRODUCTION

Initial conversion	1956
Number converted	6

CHARACTERISTICS

Complement	80
Length	295 ft
[illegible]	26 ft
Displacement	
[illegible]	[illegible]ons
Submerged	2,4[illegible]
Propulsion	[illegible]sel (3 screws)
Operating depth	
Normal	750 ft
Collapse	1,100 ft
Submerged speed	
Maximum	15 kts for 15 nm
Economical	3 kts for 1[illegible]
Patrol radius	
0 days on station	3,600 nm
20 days on station	2,400 nm
Patrol duration	60 days

ARMAMENT

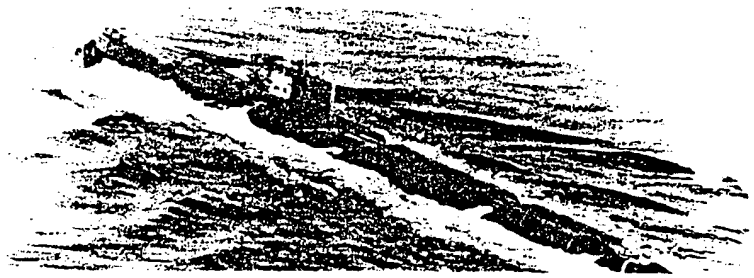
Ballistic missiles	2 350-nm SS-N-4's launched from surface

REMARKS

Conversion of the Z class was the initial Soviet effort to equip a submarine with ballistic missiles.

Nuclear Powered Cruise Missile - SSGN

E-II Class



PRODUCTION

Initial construction	1962
Number built	26

CHARACTERISTICS

Complement	[illegible]
Length	[illegible]
Beam	[illegible]
Displacement	
Surfaced	5,200 tons
Submerged	6,200 tons
Propulsion	nuclear (2 sc[illegible]
Operating depth	
Normal	1,000 ft
Collapse	1,500 ft
Submerged speed	22 kts maximum
Patrol radius	
0 days on station	8,600 nm
20 days on station	5,800 nm
Patrol duration	60 days

ARMAMENT

Cruise missiles	8 SS-N-3's with 250-nm operational range
Torpedoes	32

REMARKS

This class is built in Northern and Pacific Fleet shipyards.

USSR Submarines

Nuclear Powered Cruise Missile - SSGN

E-I Class

PRODUCTION

Initial construction	1960
Number built	5

CHARACTERISTICS

Complement	100
Length	385 ft
Beam	30 ft
Displacement	
[illegible]	4,300
Propulsion	nuclear, 2 screws
[illegible] depth	
Normal	900 [illegible]
[illegible]llapse	1,300 ft
[illegible] speed	22 [illegible] maxi
Patrol radius	
0 days on station	[illegible]
20 days on station	
Patrol duration	60 [illegible]

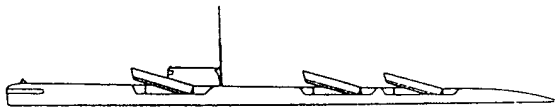
ARMAMENT

Cruise missiles	6 250-nm SS-N-3's
Torpedoes	32

REMARKS

All E-I class submarines were built in Pacific Fleet shipyards.

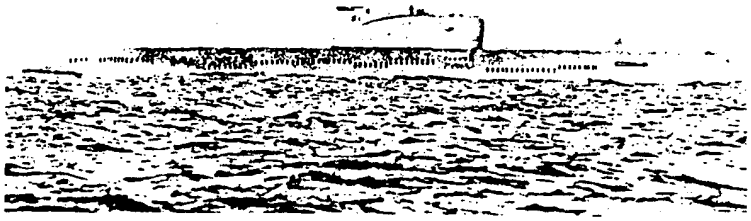
Drawing of "E-I" Class SSGN with missile launching tubes in stowed position.



Drawing of "E-I" Class SSGN with missile launching tubes in elevated position.

Cruise Missile - SSG

J Class



PRODUCTION

Initial construction	1962
Number built	11

CHARACTERISTICS

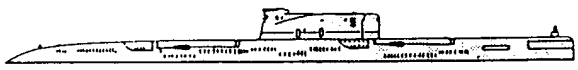
Complement	80
Length	280 ft
Beam	33 ft
Displacement	
Surfaced	2,700 tons
Submerged	3,500 tons
Propulsion	diesel (2 screws)
Operating depth	
Normal	1,000 ft
Collapse	1,500 ft
Submerged speed	
Maximum	16 kts for 12 nm
Economical	3 kts for 250 nm
Patrol radius	
0 days on station	3,600 nm
20 days on station	2,400 nm
Patrol duration	60 days

ARMAMENT

Cruise missiles	4 250 nm SS-N-3's
Torpedoes	32

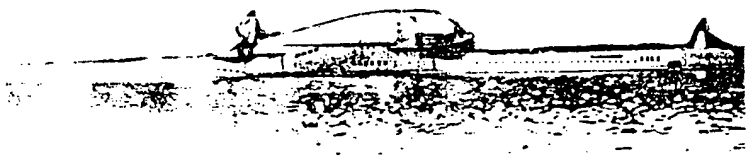
REMARKS

This class probably is still being built but construction is expected to end soon.



Cruise Missile - SSG

W-Conversion Class
Long Bin



PRODUCTION

Initial conversion	1962
Number converted	7

CHARACTERISTICS

Complement	60
Length	275 [illegible]
	21 [illegible]
Displacement	[illegible]
	[illegible] tons
Propulsion	diesel (2 screws)
Operating depth	
Normal	656 f[illegible]
Collapse	1,000 [illegible]
Submerged speed	
Maximum	12 kts for 12 nm
Economical	2.5 kts for 125 nm
Patrol radius	
0 days on station	2,400 nm
20 days on station	1,200 nm
Patrol duration	40 days

ARMAMENT

Cruise missiles	4 250-nm SS-N-3's
Torpedoes	12

REMARKS

The Long Bin is basically a W-class hull with a 25-ft section added, a new sail, and four missile launchers.

Cruise Missile - SSG

W-Conversion Class
Twin Cylinder

PRODUCTION

Initial conversion	1961
Number converted	5

CHARACTERISTICS

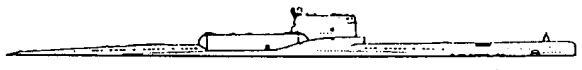
[illegible]	56
[illegible]gth	
[illegible]	21 ft
Displ[illegible]	
Surfaced	1,100 tons
Submerged	1,400 tons
Propulsion	diesel
Operating depth	
Normal	656 ft
Collapse	1,000 ft
Submerged speed	
Maximum	12 kts for 12 nm
Economical	2.5 kts for 125 nm
Patrol radius	
0 days on station	2,400 nm
20 days on station	1,200 nm
Patrol duration	40 days

ARMAMENT

Cruise missiles	2 250-nm SS-N-3's
Torpedoes	14

REMARKS

The Twin Cylinder is a standard W class fitted with two missile launchers aft of the sail.



Nuclear Powered Torpedo Attack - SSN

New Class

PRODUCTION

Initial construction	probably 1966

CHARACTERISTICS

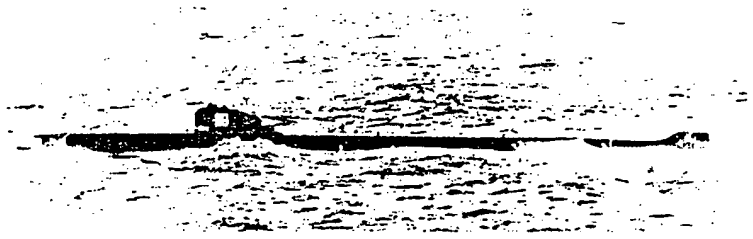
Length	300 ft
[illegible]	[illegible] ft
Propul[illegible]	estim[illegible]ed to be nuclear

REMARKS

A submarine reported at the Cork [illegible] shipyard in mid-1967 i[illegible] of [illegible] new torpedo-a[illegible] year before. No estimate of performanc[illegible] possible at the present time.

Nuclear Powered Torpedo Attack - SSN

N Class



PRODUCTION

Initial construction	1958
Number built	15

CHARACTERISTICS

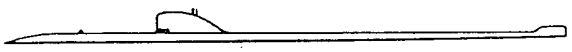
Length	
Displacement	
Surfaced	4,600 tons
Submerged	5,300 tons
Propulsion	nuclear (2 screws)
Operating depth	
Normal	900 ft
Collapse	1,300 ft
Submerged speed	25 kts maximum
Patrol radius	
0 days on station	8,600 nm
20 days on station	5,800 nm
Patrol duration	60 days

ARMAMENT

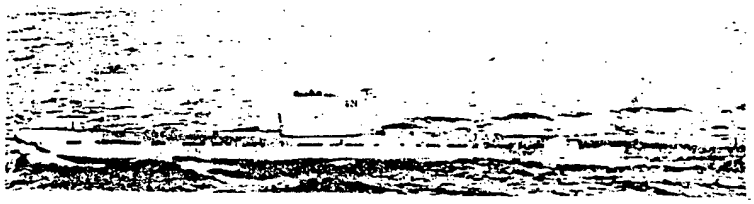
Torpedoes	32

REMARKS

The N class was the first nuclear-powered submarine built by the USSR. Production ended about 1966.



F Class



PRODUCTION

Initial construction	1958
Number built	48

CHARACTERISTICS

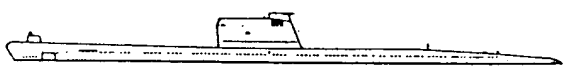
Complement	79
Length	300 ft
Beam	26 ft
Displacement	
Surfaced	2,100 ft
Submerged	2,500 ft
Propulsion	diesel (3 screws)
Operating depth	
Normal	900 ft
Collapse	1,400 ft
Submerged speed	
Maximum	17.5 kts for 13 nm
Economical	3 kts for 270 nm
Patrol radius	
0 days on station	3,600 nm
20 days on station	2,400 nm
Patrol duration	60 days

ARMAMENT

Torpedoes	26

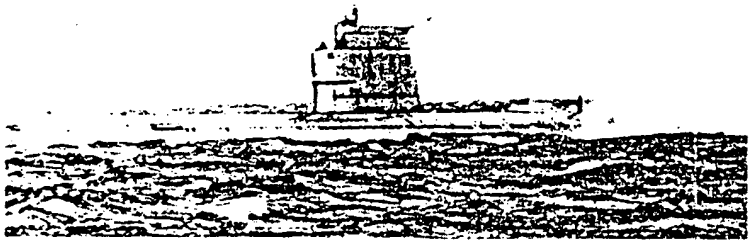
REMARKS

F-class submarines are being sold to India.



Torpedo Attack - SS

Z Class



PRODUCTION

Initial construction	1958
Number built	20

CHARACTERISTICS

Complement	
Length	295 ft
Displacement	
Surfaced	1,100 tons
Submerged	1,500 tons
Propulsion	diesel (3 screws)
Operating depth	
Normal	750 ft
Collapse	1,100 ft
Submerged speed	
Maximum	15 kts for 15 nm
Economical	3 kts for 200 nm
Patrol radius	
0 days on station	3,600 nm
20 days on station	2,400 nm
Patrol duration	60 days

ARMAMENT

Torpedoes	26

REMARKS

A few Z-class have been modified as test platforms for a large new sonar. The new sonar, or an improved version of it, probably is being installed in the new classes being built in the USSR.

Torpedo Attack - SS

R Class

PRODUCTION

Initial construction	1959
Number built	20

CHARACTERISTICS

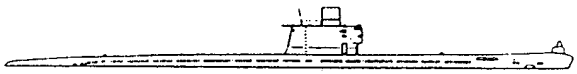
Complement	90
Length	251 ft
Beam	21 ft
Displacement	
Surfaced	1,100 tons
Submerged	1,400 tons
Propulsion	diesel (2 screws)
Operating depth	
Normal	900 ft
Collapse	1,400 ft
Submerged speed	
Maximum	15.5 kts for 12 nm
Economical	3.5 kts for 200 nm
Patrol radius	
0 days on station	2,400 nm
20 days on station	1,200 nm
Patrol duration	40 days

ARMAMENT

Torpedoes	14

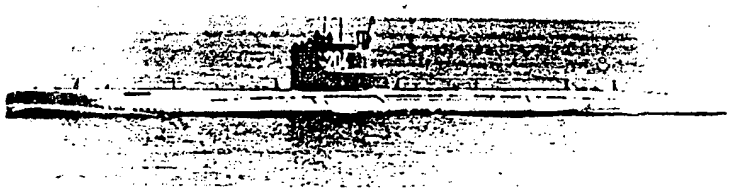
REMARKS

R-class submarines have been provided to Egypt, and this class is built in Communist China.



Torpedo Attack - SS

W Class



PRODUCTION

Initial construction	1950
Number built	230

CHARACTERISTICS

Complement	54
Length	250 ft
Beam	21 ft
Displacement	
Surfaced	1,055 tons
Submerged	1,355 tons
Propulsion	diesel (2 screws)
Operating depth	
Normal	656 ft
Collapse	1,000 ft
Submerged speed	
Maximum	13.5 kts for 13.5 nm
Economical	3.5 kts for 200 nm
Patrol radius	
0 days on station	2,400 nm
20 days on station	1,200 nm
Patrol duration	40 days

ARMAMENT

Torpedoes	14

REMARKS

The USSR has transferred more than 30 W-class submarines to other Communist countries and to Indonesia and Egypt. Some W-class units have been built in China from prefabricated sections manufactured in the USSR. The Soviets have modified a few W-class submarines to test new electronics equipment.