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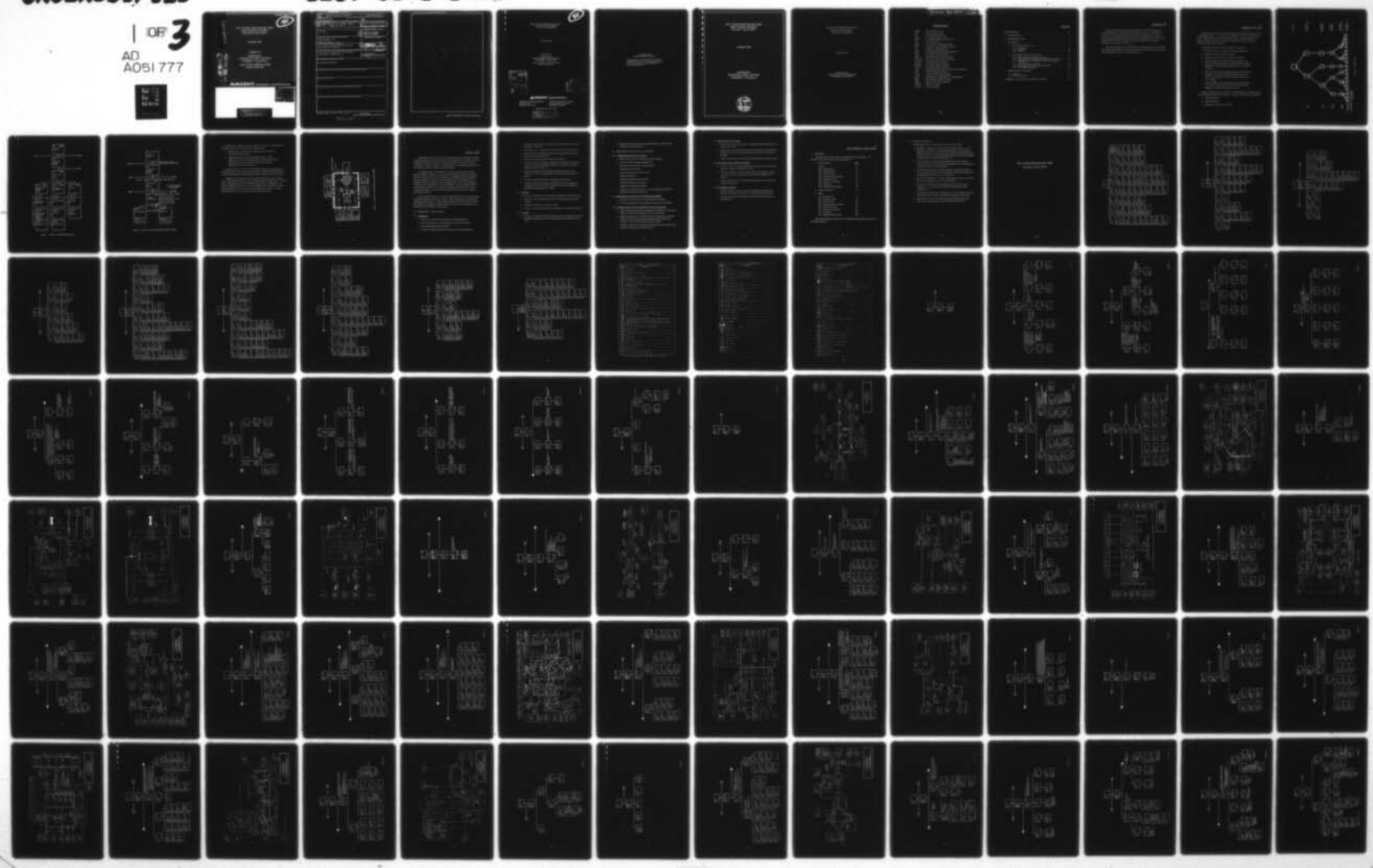

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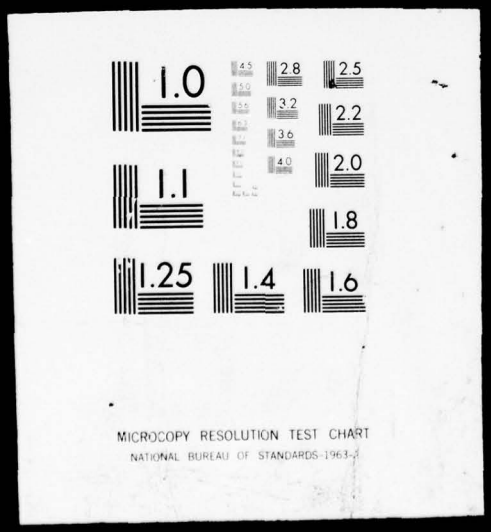

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SHIP SYSTEMS DEFINITION AND INDEX (SWBS STAGING DIAGRAMS) FOR DDG-2 CLASS SHIPS

November 1976

Prepared for

PERA(CRUDES)
PHILADELPHIA NAVAL SHIPYARD
Philadelphia, Pennsylvania

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CORPORATE HEADQUARTERS
2551 Riva Road
Annapolis, MD 21401

HONOLULU SUPPORT OFFICE
245 Fort Street, Suite 211
Honolulu, HI 96801

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ABBREVIATIONS

ASROC	–	Anti-submarine rocket
ASW	–	Anti-submarine warfare
CDC	–	Component Dictionary Code
COSAL	–	Coordinated Shipboard Allowance List
CPO	–	Chief petty officer
CSMP	–	Current Ship's Maintenance Project
DART	–	Detection, Action, Response Technique
EIC	–	Equipment identification code
EOSS	–	Equipment Operational Sequencing System
FMP	–	Fleet Modernization Program
MDCS	–	Maintenance Data Collection System
NAVELEX	–	Naval Electronics Systems Command
NAVSEA	–	Naval Sea Systems Command
NAVSEC	–	Naval Ships Engineering Center
NAVSUP	–	Naval Supply System Command
PERA	–	Planning and Engineering for Repairs and Alterations
PMS	–	Planned Maintenance System
POT&I	–	Preoverhaul Test and Inspection
SECAS	–	Ship Equipment Configuration Accounting System
SSDI	–	Ship Systems Definition and Index
SWBS	–	Ship Work Breakdown Structure
SYSCOM	–	Systems command
TYCOM	–	Type commander

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ABBREVIATIONS iii

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1
INTRODUCTION

The Ship Systems Definition and Index (SSDI) is an orderly identification and structuring of the systems and subsystems that make up a ship. In defining ship systems as well as their boundaries and interfaces, the SSDI creates a common language for communicating information about ship configurations. The SSDI is thus useful to all Navy activities involved in the life-cycle operation, maintenance, modernization, and support of ships.

This report discusses the general properties of SSDIs (Section 2), and the many ways SSDIs can be utilized by the various Navy activities (Section 3); and presents the SSDIs developed for the DDG-2 ship class (Section 4).

2
PROPERTIES OF SSDI

The hierarchical concept on which the Ship Systems Definition and Index is based is illustrated in Figure 1. As can be seen, the SSDI is structured such that the summation of SSDI items at any level defines the total ship. An actual application of Figure 1, showing a typical ship breakdown from the major system to the sub-subsystem level, is shown in Figure 2.

As illustrated by Figures 1 and 2, the SSDI is structured to:

a. Provide a multi-level breakdown of a ship's configuration.

b. Completely define the ship at each level.

c. Contain no redundancies in its definition of the ship.

d. Utilize the Ship Work Breakdown Structure (SWBS). This provides a standard language based on the same nomenclature and three-level coding system mandatory for use on a Navy-wide basis.

e. Utilize a standard Navy Component Dictionary Code list (see Appendix A) for assigning fifth-level identification codes. The last two characters of the identifier are from this list, e.g., 2551M7.

f. Tailor the SWBS to the configuration of a specific ship class. The ship class diagrams can in turn be tailored to the configuration of individual ships within the class.

Figure 3 extends a portion of Figure 2 to an additional level of detail to demonstrate the information provided in the SSDI. As shown, the following are identified:

a. System equipments

b. System boundaries

c. Shipboard maintenance work centers

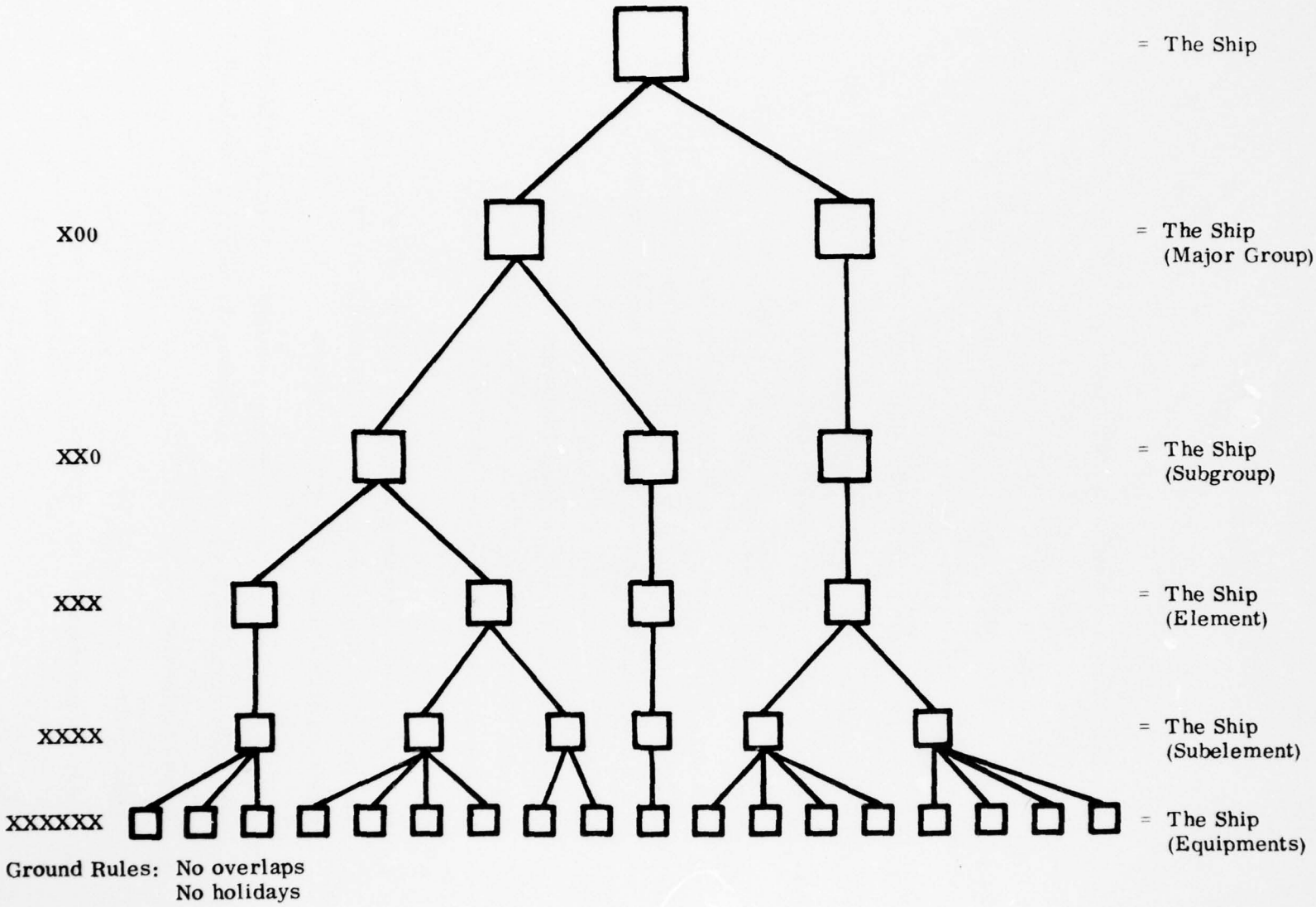

Figure 1. SSDI Concept

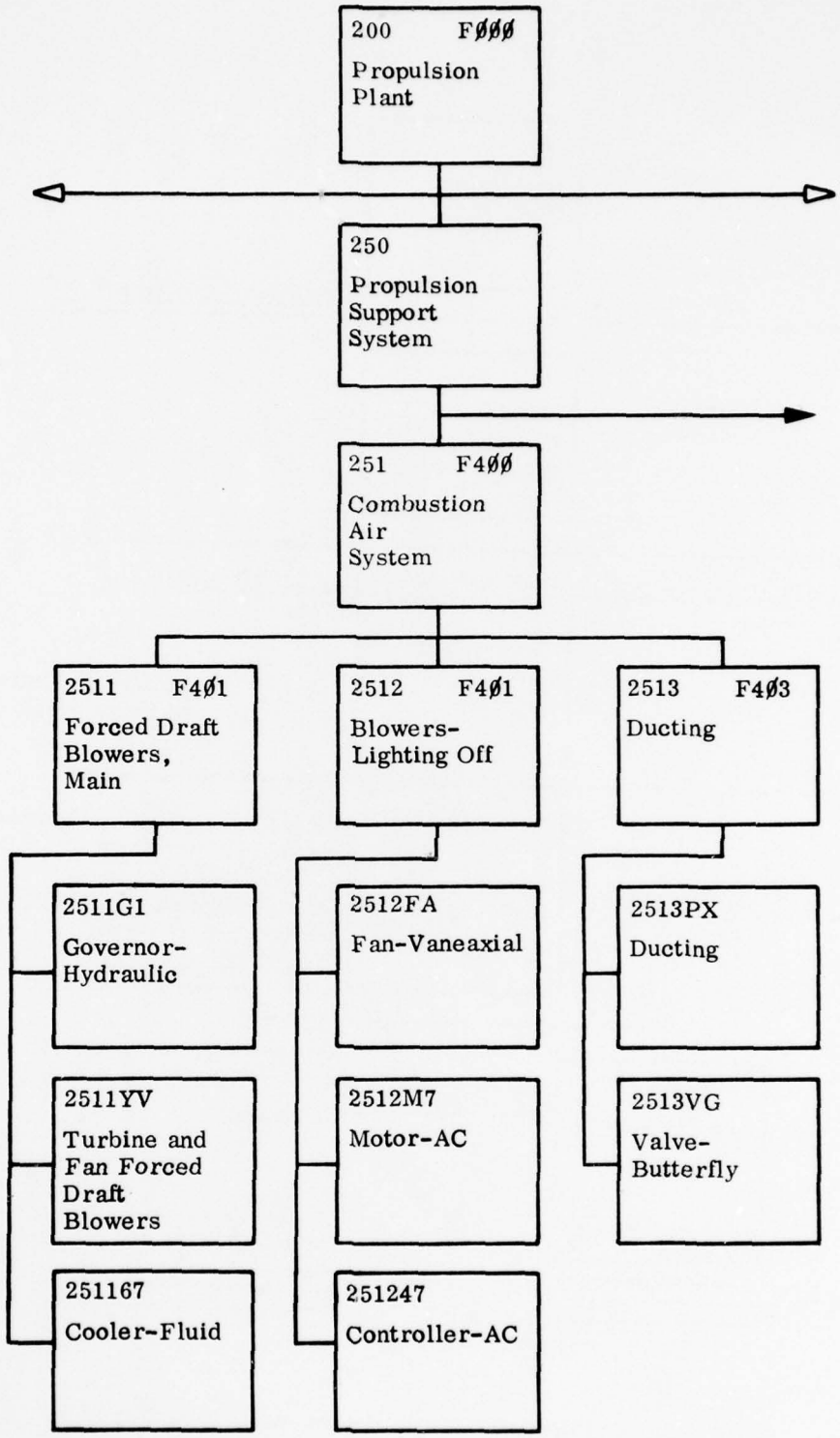

Figure 2. Portion of a Typical Ship's System

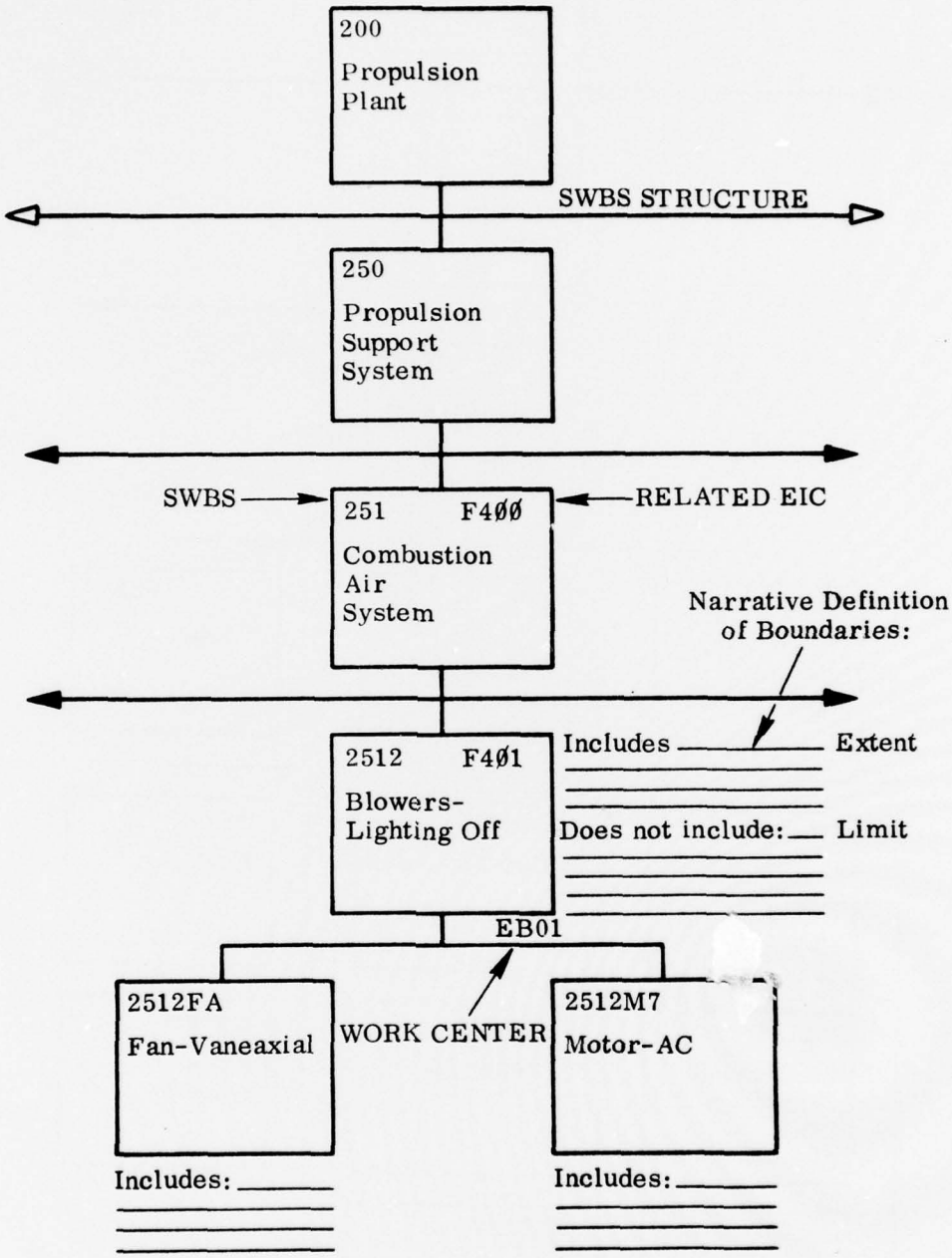

Figure 3. Example of System Diagrams Included in SSDI

In some cases, notably for the more complicated systems, the SSDI provides still further information in the form of line diagrams that:

a. Show the major hardware items within the system boundaries and their interrelationships.

b. Depict graphically the verbal descriptions given on system diagrams for selected SWBS-coded items. Those systems which are complex and interface with other complex systems are diagrammed as Figure 4 indicates.

In a line diagram, solid lines with the system boundary denote equipments or components which are part of that particular system. Dashed lines show interfaces between those equipments/components and elements of other systems (see Figure 4).

Although some line diagrams show functional relationships, that is not their intent. Their specific purpose is to aid in the identification of ship systems. For that reason the schematics are greatly simplified from the actual configuration. For example, although there may be two or more identical forced-draft blowers used in a condensate system, only one is shown on the schematic (see Figure 4). This is because all blowers of the same type are part of the same system.

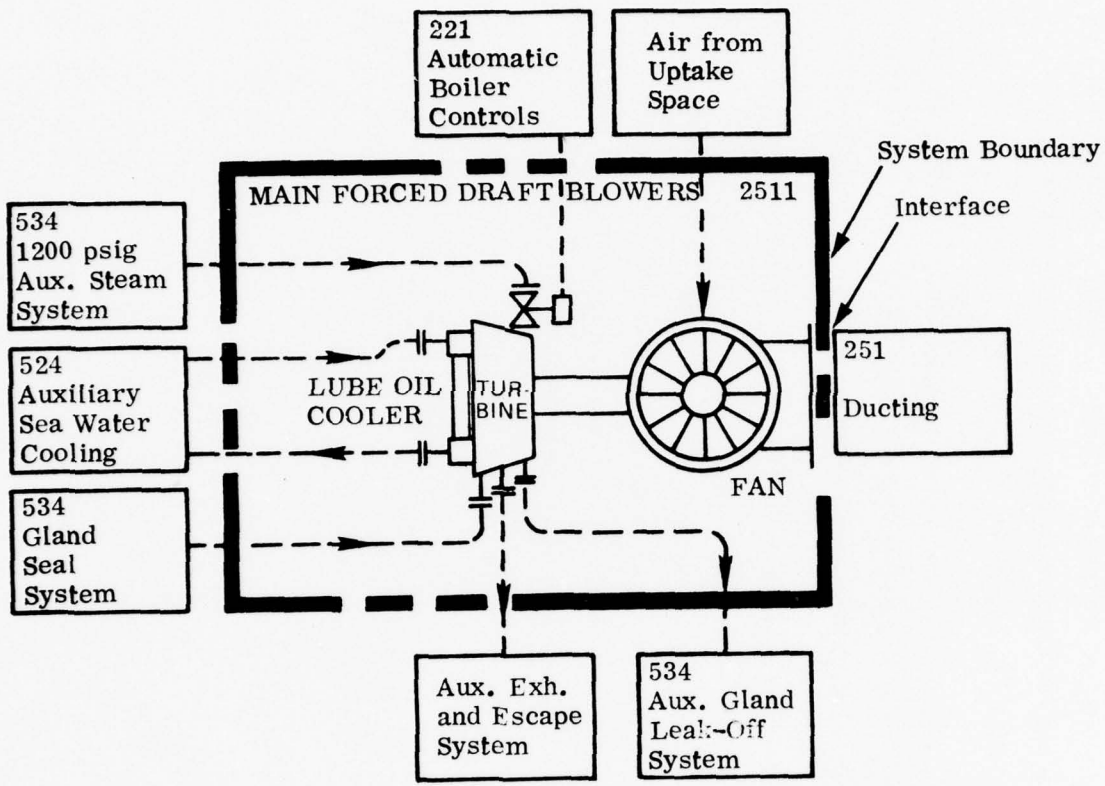

Figure 4. Example of Line Diagrams Included in SSDI

3
USES OF SSDI

Throughout a ship's life, ship's force personnel submit a vast amount of system, equipment, and parts information to their type commander and fleet support activities. Requests for alteration, reports of maintenance action, work requests, and parts requisitions are but a few examples. In each instance the submitted information must be related to a specific, definable portion of the ship.

In carrying out their responsibilities, the type commander and the support activities (PERAs, shipyards, etc.) must not only identify a specific item within the total ship, but also be aware of its interfaces. In planning alterations or modifications, for example, one must be able to identify the various systems that will be affected by a particular change to a ship's configuration. Also, when preparing for overhaul or other availabilities, the type commander, PERA, and repair activities must be able to organize a work package on the basis of specific as well as interrelated ship systems. This is done to ensure that the work package is completely and effectively defined.

Since so many activities are involved in supporting the ship, it is necessary that both ship and support personnel use a single, uniform language when communicating configuration information. The Ship Systems Definition and Index provides this common language by describing a specific ship in terms common to all ships of the fleet. Potential uses of the SSDI are outlined below.

3.1 SSDI SUPPORT TO SHIP'S FORCE

3.1.1 Maintenance

a. Serves as a checklist for planning and conducting inspections.

b. Provides the basis for comparing repair items with alterations.

c. Aids in establishing repair priorities.

d. Assists in identifying shipyard, ship's force, and tender interfaces.

e. Assists in making manpower assignments by ensuring that all systems of the ship are considered.

f. Aids ship's force in "buttoning up" all systems for post-repair testing.

g. Aids in alteration planning and analysis by showing possible interfaces in terms of various ship systems.

h. Aids in standardizing shipboard validation procedures.

i. Provides a means for identifying deficiencies in shipboard documentation such as the Coordinated Shipboard Allowance List (COSAL), Planned Maintenance System (PMS), etc.

j. Assists in identifying related Equipment Identification Codes (EIC) necessary for CSMP and Maintenance Data Collection System (MDCS) inputs.

k. Provides a standard language for maintenance documentation.

l. Provides a common set of system descriptions for the development of maintenance instructions (PMS) and operating instructions (Equipment Operational Sequencing System, EOSS).

3.1.2 Operation

a. Serves as a checklist for determining the completeness of EOSS coverage.

b. Provides a means of identifying the interrelationships among operating systems.

c. Identifies the boundaries for system testing.

d. Provides a means of determining test equipment and support requirements.

3.1.3 Training

a. Provides a disciplined method for displaying a ship's configuration, thereby identifying training requirements from the equipment through the system level.

b. Supports training shipboard operation/maintenance personnel in ship systems and system interfaces.

3.2 SSDI SUPPORT TO OTHER NAVAL ACTIVITIES

3.2.1 PERAs/Shipyards/Industrial Activities

a. Defines ship systems for alteration and repair planning.

b. Provides a standard indexing language for:

- Ship Alteration and Repair Package (SARP)
- Specification preparation
- Cost estimating and cost progressing
- Drawing numbering
- Material identification and ordering
- POT&I planning and organization
- Management information systems

c. Assists in determining priorities of work by displaying the affected equipment in relation to its system.

3.2.2 Ship Equipment Configuration Accounting System (SECAS)

a. Provides a standard structure for total shipboard validation.

b. Provides information for determining the desired level of validation.

3.2.3 Technical Systems Commands (NAVSEA, NAVELEX, NAVSUP)

a. Aids in determining the SWBS identification of alterations for inclusion in shipalt records and subsequently in other Navy data bases.

b. Identifies ship systems such that the impact of alterations can be determined and decisions made concerning recommended priorities for inclusion in the Fleet Modernization Program (FMP).

c. Provides a means for ensuring that standard failure-data correlation and analysis is performed to the desired level.

3.2.4 Type Commanders (TYCOMs)

a. Aids in determining work priorities by displaying the affected equipment in relation to its system.

b. Identifies the system such that the impact of alterations can be determined and decisions made concerning recommended priorities for inclusion in the FMP.

c. Enables the TYCOM to properly identify and budget the system for repairs.

3.2.5 Naval Ships Engineering Center (NAVSEC)

a. Provides a vehicle for ensuring that standard failure-data correlation and analysis is performed to the desired level.

b. Defines the systems for design consideration and subsequent corrective measures such as the Detection, Action, Response Technique (DART) program.

c. Provides information for determining the required level of repair parts support requirements.

3.2.6 Fleet Support Activities

a. Identifies shipboard systems as an aid in determining personnel and material requirements in response to solving specific ship problems.

b. Serves as a tool for establishing required support capabilities (people and equipment).

4
SSDI FOR DDG-2 CLASS SHIPS

4.1 SSDI INDEX

The SSDI for DDG-2 class ships is presented on the following pages. The diagrams are presented in the order indicated below.

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	700 - Armament	213
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The Legend of Symbols supports the line diagrams that accompany certain of the ship system diagrams.

4.2 GENERAL COMMENTS

The following general comments apply to the DDG-2 class SSDIs:

a. This SSDI is structured to encompass the entire DDG-2 class, i.e., all identified combinations of systems and equipments have been included. Individual ships will not necessarily have all identified components because of such conditions as ship alterations that have/have not been accomplished, variations due to construction differences, etc.

b. In each WBS group, elements X01 through X09 are used for general requirements, and element X98 for operating liquids. These nonhardware elements are indicated by dashed blocks.

c. To maintain the principle of having equipments/components at the fifth level, some element titles have been repeated at the fourth and fifth levels and appropriately numbered, e.g., element 115.

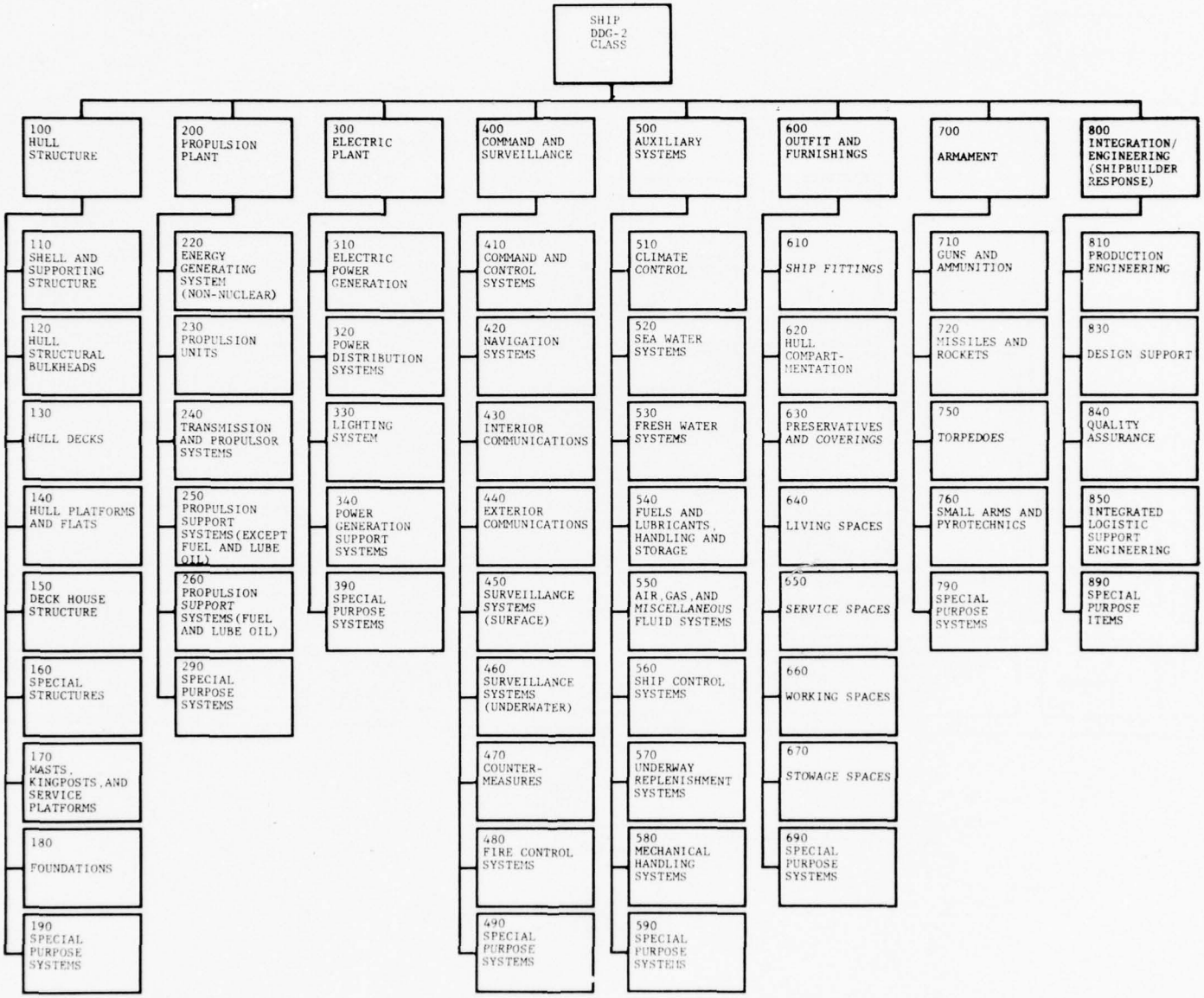
d. The term "With System", or "W.S.", indicates that the item is coded with the system of which it is a part or which it serves.

e. EIC cross-references are entered only blocks with a direct cross-reference, i.e., same system, subsystem, equipment as an SWBS classification.

f. Work center assignments are representative. Use of the SSDI for specific ships of the class will require verification of applicable work centers.

g. Elements where no specific equipments can be identified at this time (e.g., future installations) are shown by double-dashed blocks.

SHIP SYSTEM DEFINITION AND INDEX FOR DDG-2 CLASS SHIPS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120 HULL STRUCTURAL BULKHEADS
130 HULL DECKS
140 HULL PLATFORMS AND FLATS
150 DECK HOUSE STRUCTURE
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170 MASTS, KINGPOSTS, AND SERVICE PLATFORMS
180 FOUNDATIONS
190 SPECIAL PURPOSE SYSTEMS
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220 ENERGY GENERATING SYSTEM (NON-NUCLEAR)
230 PROPULSION UNITS
240 TRANSMISSION AND PROPULSOR SYSTEMS
250 PROPULSION SUPPORT SYSTEMS (EXCEPT FUEL AND LUBE OIL)
260 PROPULSION SUPPORT SYSTEMS (FUEL AND LUBE OIL)
290 SPECIAL PURPOSE SYSTEMS
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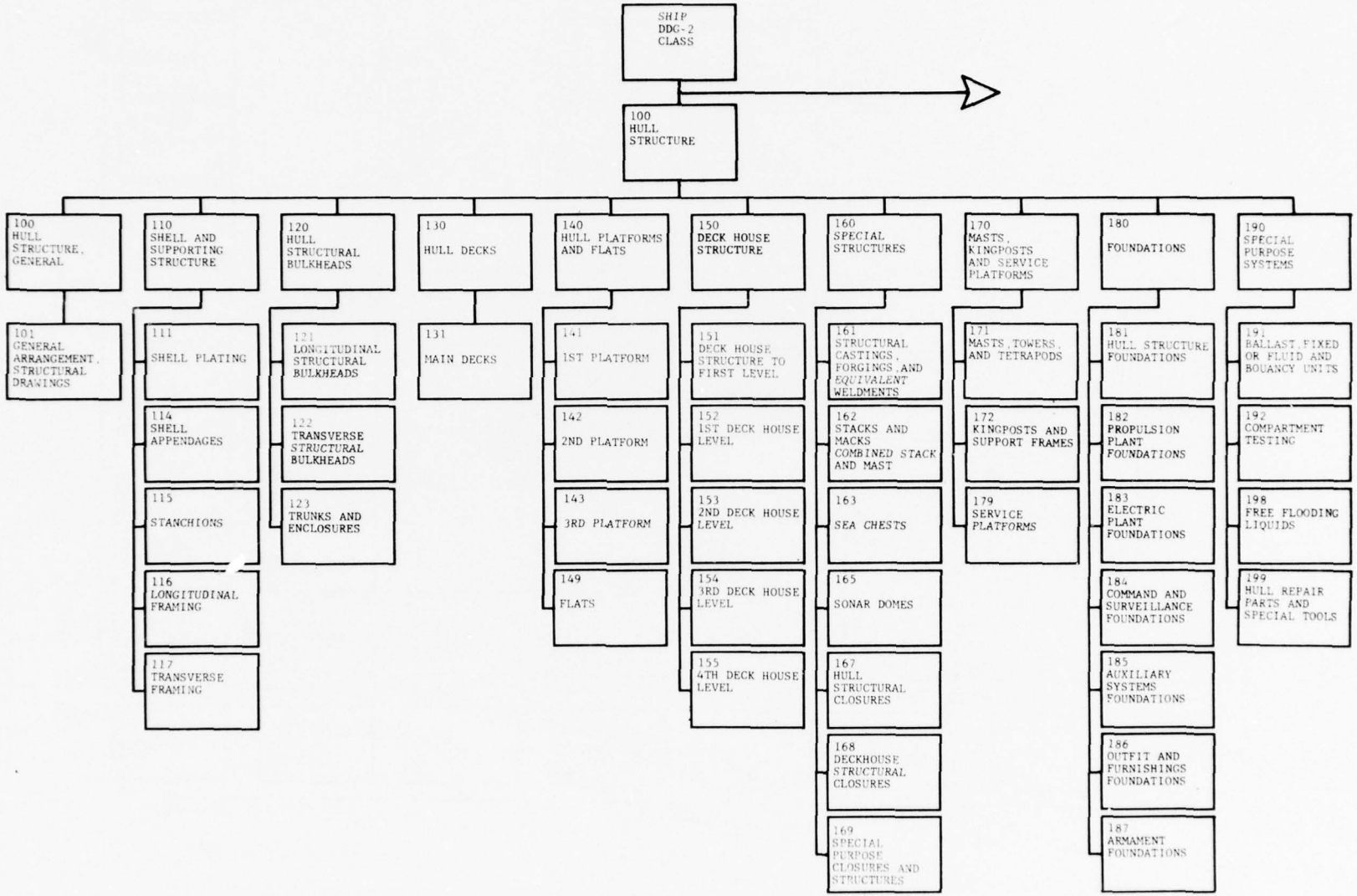
320 POWER DISTRIBUTION SYSTEMS
330 LIGHTING SYSTEM
340 POWER GENERATION SUPPORT SYSTEMS
390 SPECIAL PURPOSE SYSTEMS
400 COMMAND AND SURVEILLANCE
410 COMMAND AND CONTROL SYSTEMS
420 NAVIGATION SYSTEMS
430 INTERIOR COMMUNICATIONS
440 EXTERIOR COMMUNICATIONS
450 SURVEILLANCE SYSTEMS (SURFACE)
460 SURVEILLANCE SYSTEMS (UNDERWATER)
470 COUNTER-MEASURES
480 FIRE CONTROL SYSTEMS
490 SPECIAL PURPOSE SYSTEMS
500 AUXILIARY SYSTEMS
510 CLIMATE CONTROL
520 SEA WATER SYSTEMS
530 FRESH WATER SYSTEMS
540 FUELS AND LUBRICANTS, HANDLING AND STORAGE
550 AIR, GAS, AND MISCELLANEOUS FLUID SYSTEMS
560 SHIP CONTROL SYSTEMS
570 UNDERWAY REPLENISHMENT SYSTEMS
580 MECHANICAL HANDLING SYSTEMS
590 SPECIAL PURPOSE SYSTEMS
600 OUTFIT AND FURNISHINGS
610 SHIP FITTINGS
620 HULL COMPART-MENTATION
630 PRESERVATIVES AND COVERINGS
640 LIVING SPACES
650 SERVICE SPACES
660 WORKING SPACES
670 STOWAGE SPACES
690 SPECIAL PURPOSE SYSTEMS
700 ARMAMENT
710 GUNS AND AMMUNITION
720 MISSILES AND ROCKETS
750 TORPEDOES
760 SMALL ARMS AND PYROTECHNICS
790 SPECIAL PURPOSE SYSTEMS
800 INTEGRATION/ ENGINEERING (SHIPBUILDER RESPONSE)
810 PRODUCTION ENGINEERING
830 DESIGN SUPPORT
840 QUALITY ASSURANCE
850 INTEGRATED LOGISTIC SUPPORT ENGINEERING
890 SPECIAL PURPOSE ITEMS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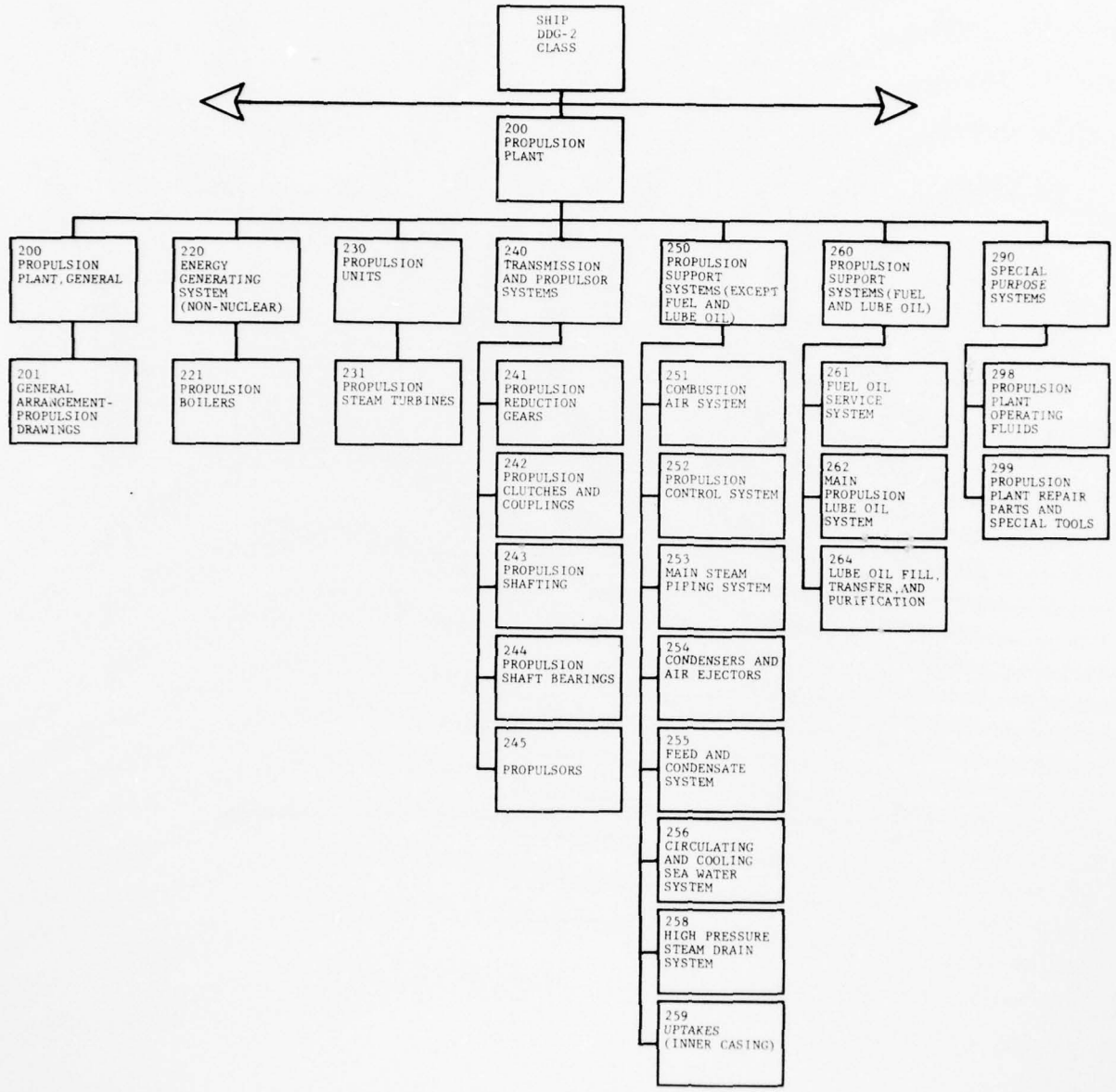
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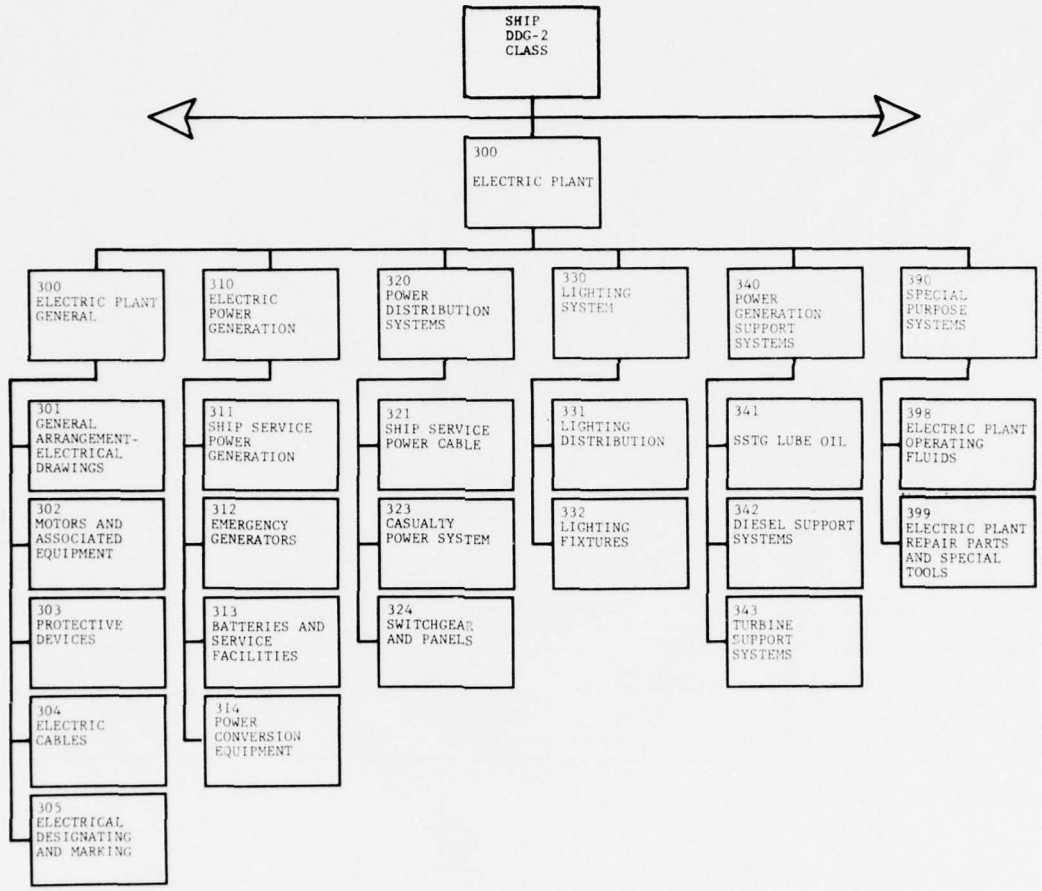
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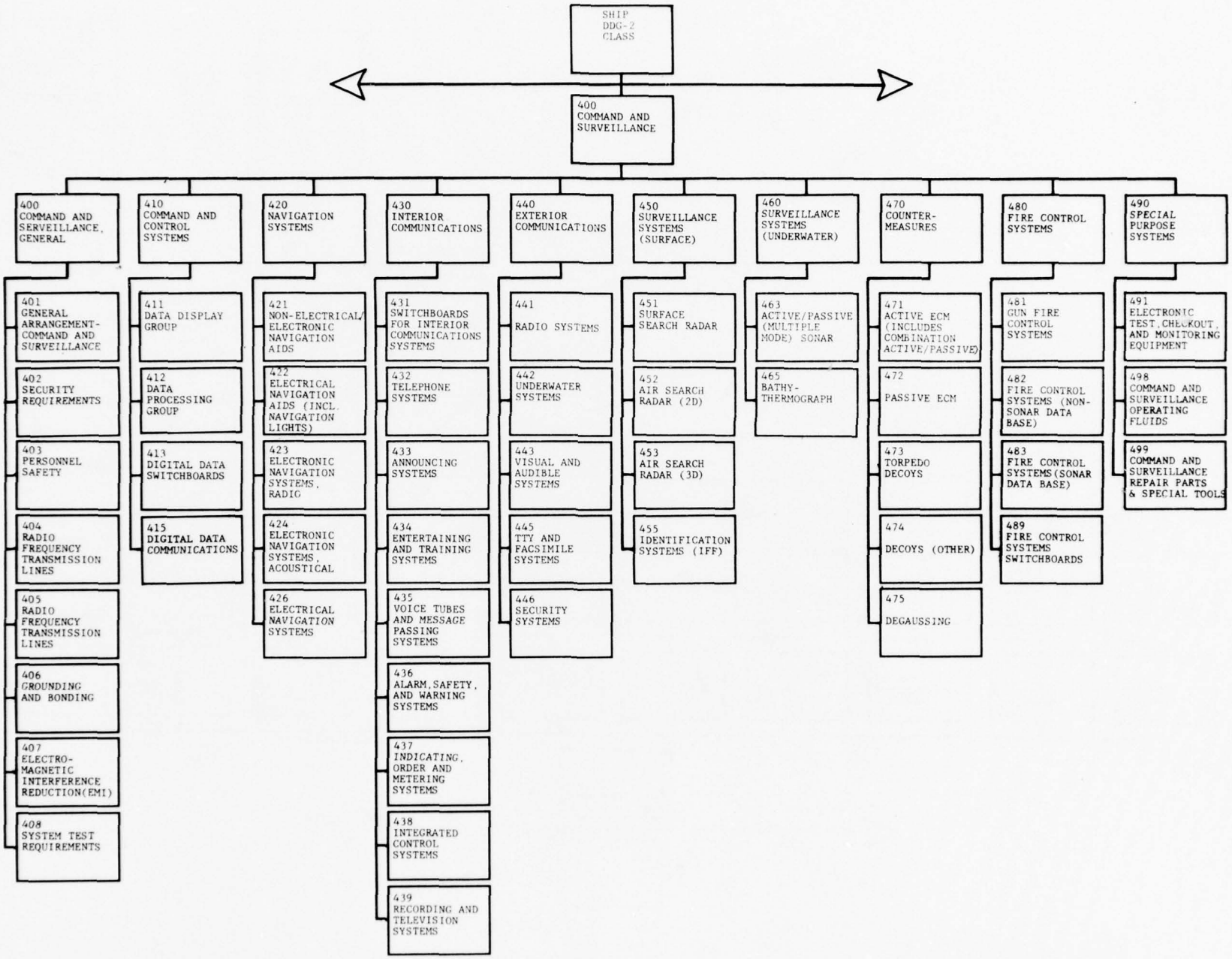
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SERVEILLANCE,
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OPERATING
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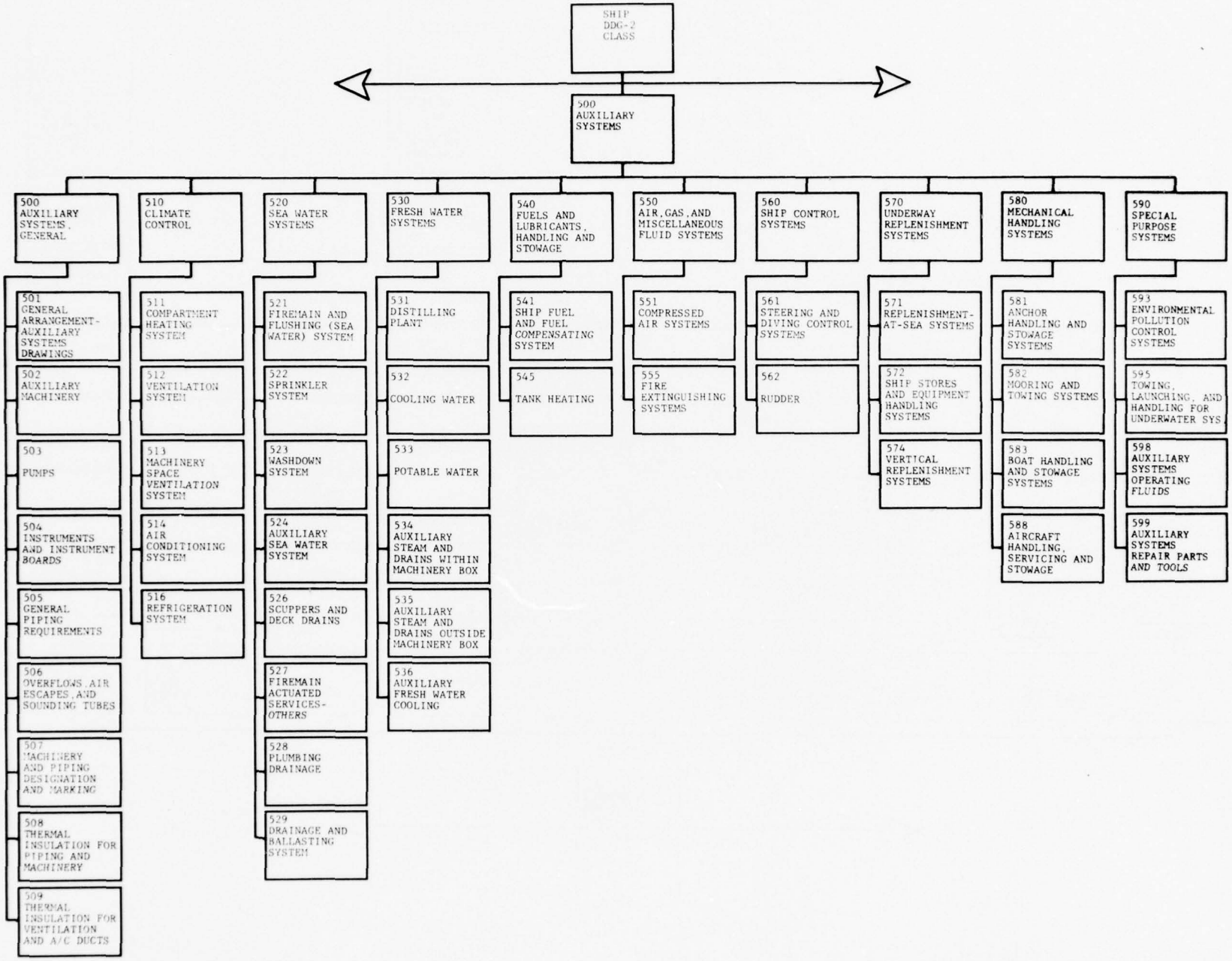
SURVEILLANCE
REPAIR PARTS
& SPECIAL TOOLS


SHIP
DDG-2
CLASS
500
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SYSTEMS
500
AUXILIARY
SYSTEMS,
GENERAL
501
GENERAL
ARRANGEMENT-
AUXILIARY
SYSTEMS
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UNDERWATER SYS.
598
AUXILIARY
SYSTEMS
OPERATING
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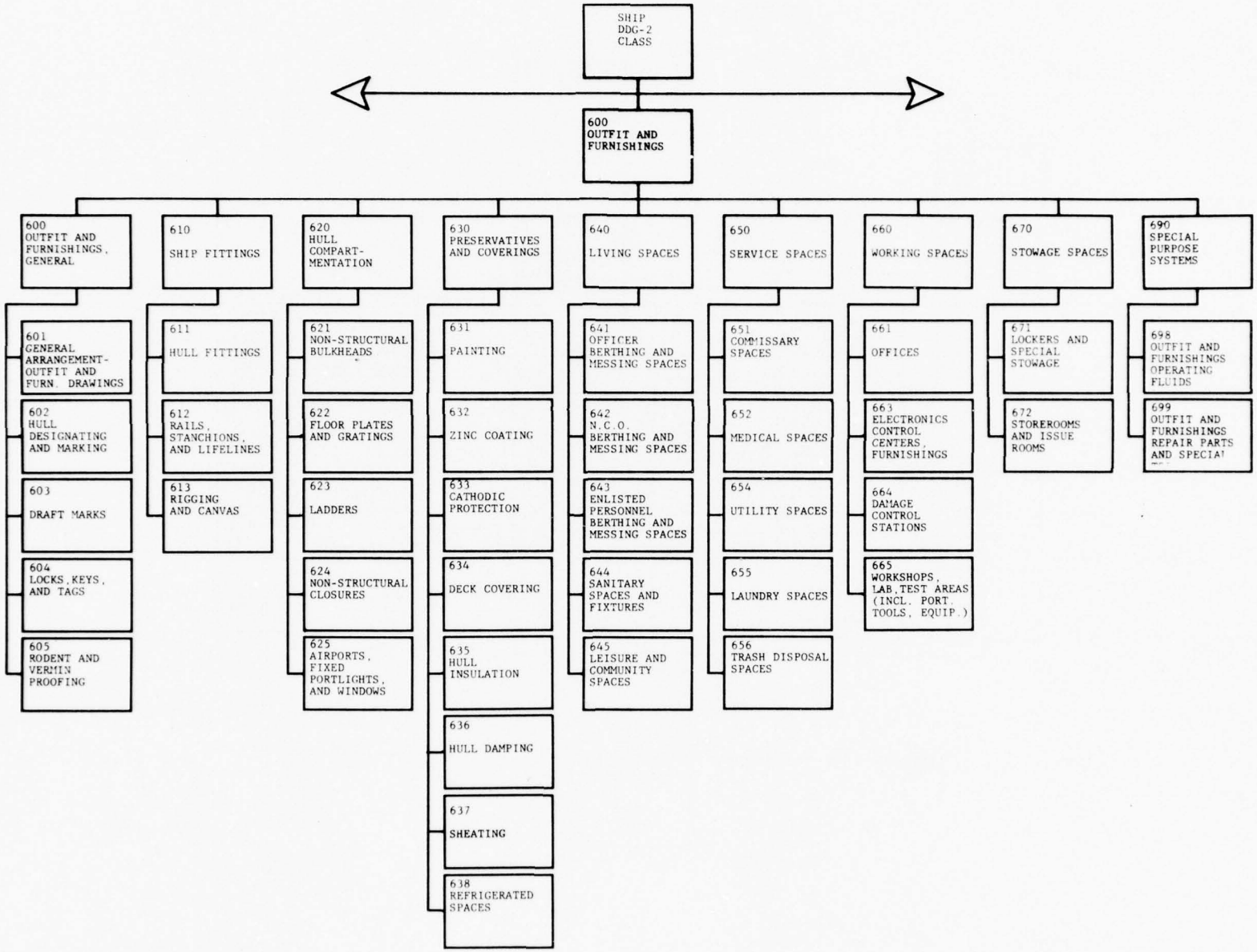
599
AUXILIARY
SYSTEMS
REPAIR PARTS
AND TOOLS


SHIP
DDG-2
CLASS
600
OUTFIT AND
FURNISHINGS
600
OUTFIT AND
FURNISHINGS,
GENERAL
601
GENERAL
ARRANGEMENT-
OUTFIT AND
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OUTFIT AND
FURNISHINGS
REPAIR PARTS
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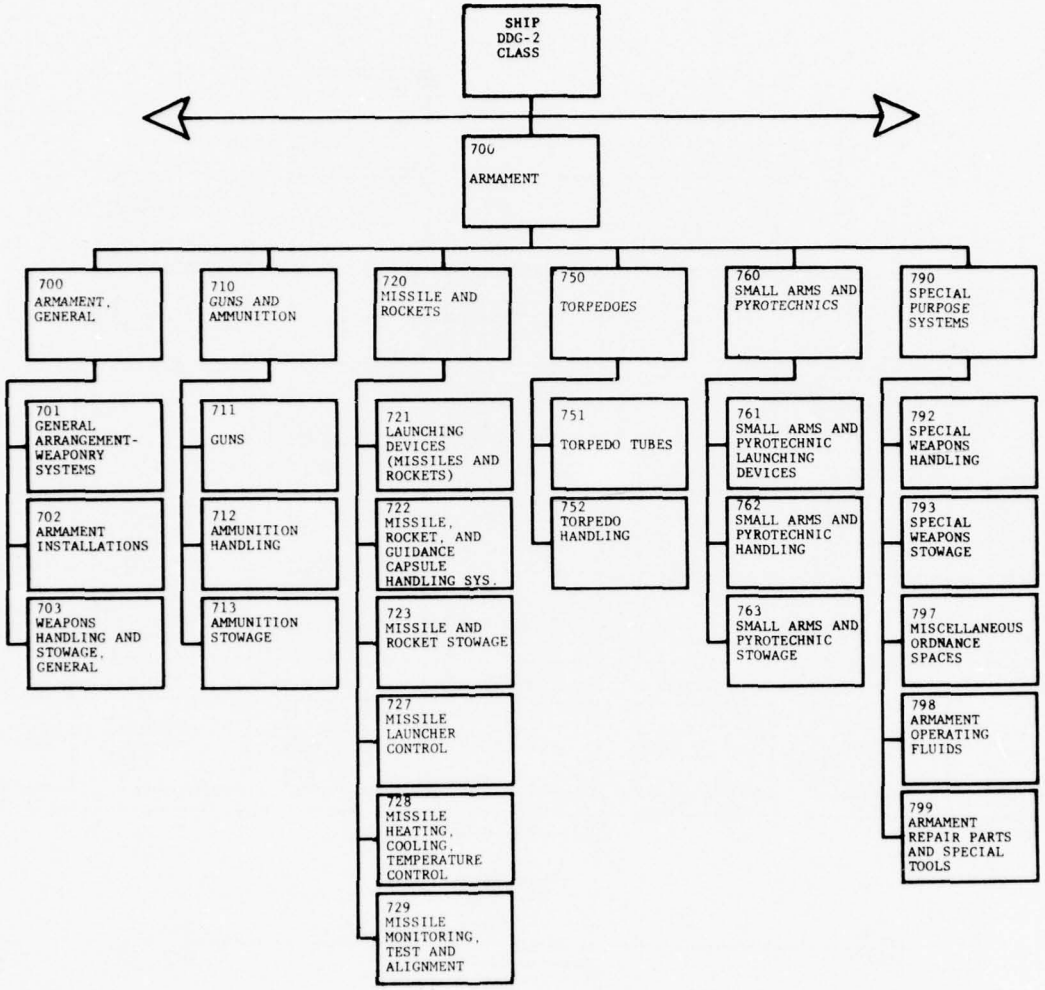
SHIP
DDG-2
CLASS
700
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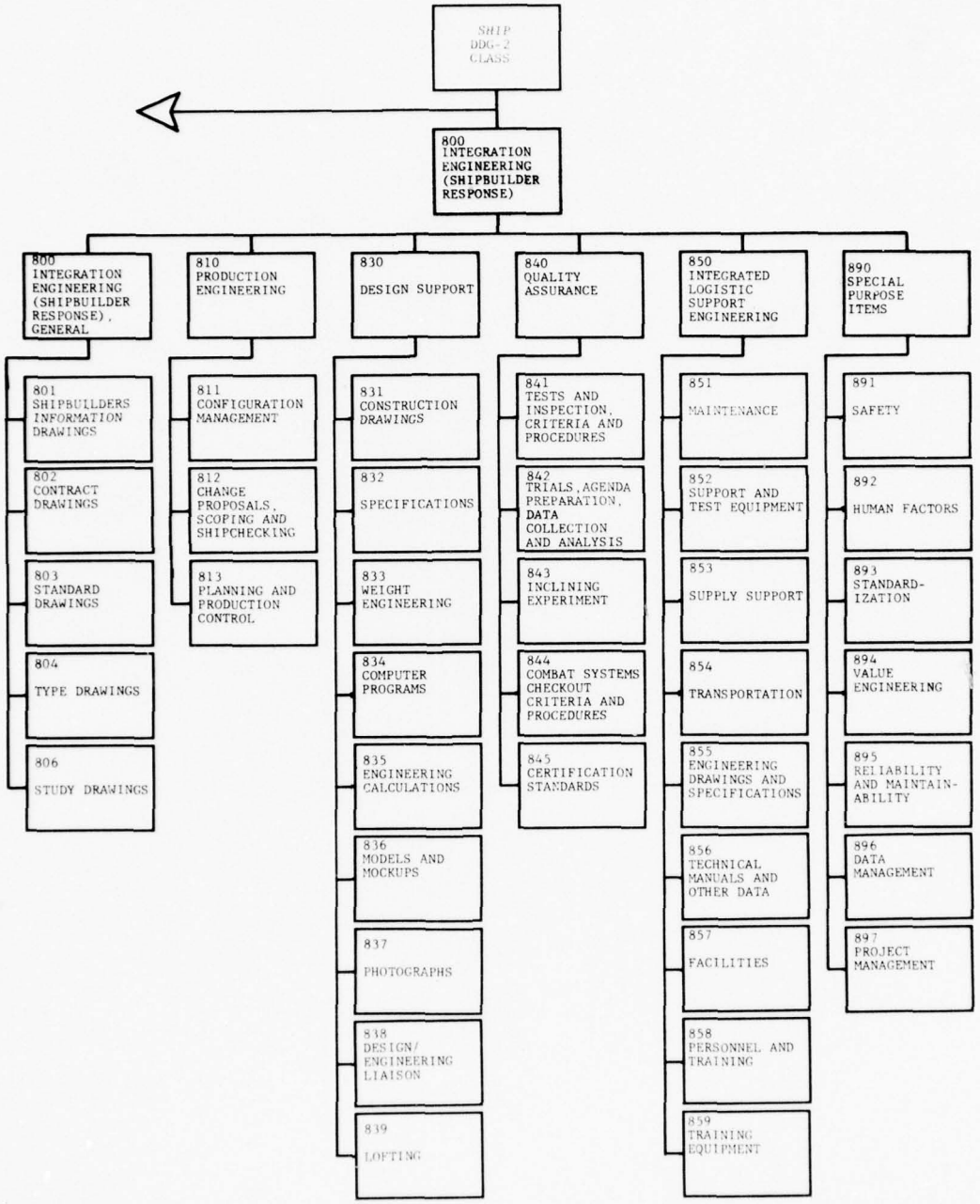
SHIP
DDG-2
CLASS
800
INTEGRATION
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(SHIPBUILDER
RESPONSE)
800
INTEGRATION
ENGINEERING
(SHIPBUILDER
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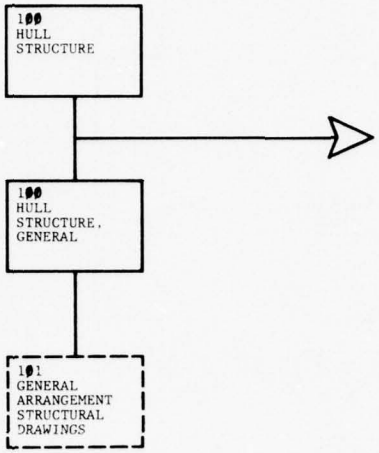
MANAGEMENT

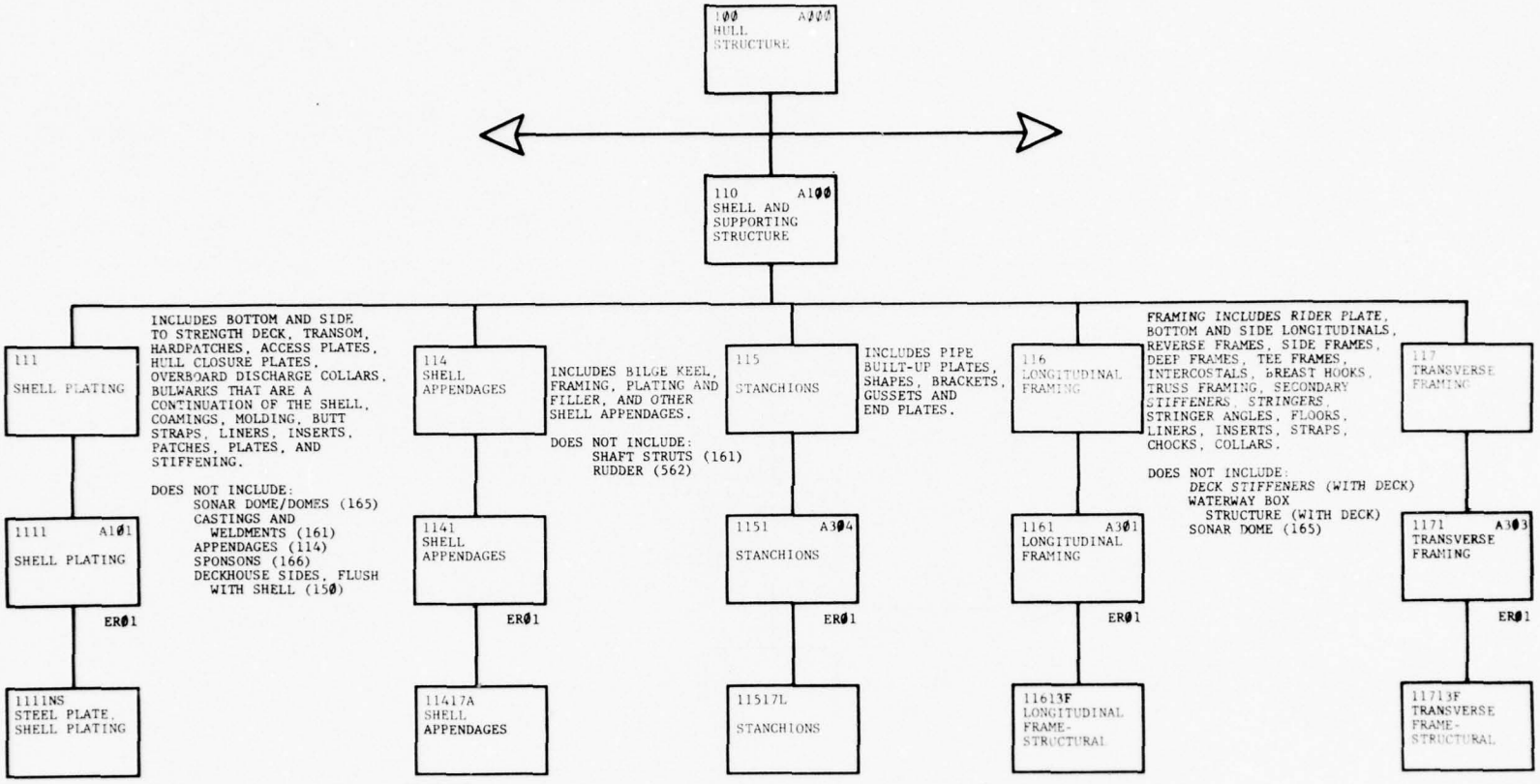
LEGEND OF SYMBOLS	
SYMBOL	DESCRIPTION
	GLOBE VALVE
	GLOBE VALVE, LOCKED OPEN
	GLOBE VALVE, LOCKED CLOSED
	GLOBE VALVE, MANUALLY OPERATED IN PLACE OR PNEUMATICALLY FROM MAIN DECK
	AIR MOTOR OPERATED VALVE
	GLOBE VALVE WITH MANUAL GEAR OPERATED IN PLACE AND AJACENT SPACE
	GLOBE VALVE, ANGLE
	GLOBE VALVE, REMOTE OPERATED
	GLOBE STOP CHECK VALVE
	GATE VALVE
	BUTTERFLY VALVE
	SWING CHECK VALVE
	LIFT CHECK VALVE
	NEEDLE VALVE
	STOP COCK PLUG OR CYLINDER VALVE 3 WAY, 2 PORT
	CONTROLLED VALVE, BOILER FEED
	PRESSURE REDUCING OR PRESSURE REGULATING INCREASED ACTUATING PRESSURE CLOSES
	PRESSURE REDUCING OR PRESSURE REGULATING DECREASED ACTUATING PRESSURE CLOSES
	PRESSURE REGULATING VALVE AIR PILOT OPERATED
	PUMP GOVERNOR
	THERMOSTATICALLY CONTROLLED VALVE
	DUMP VALVE
	PILOT VALVE
	FLOAT OPERATED VALVE
	ANGLE LIFT CHECK VALVE
	CONTROL VALVE
	HOSE CONNECTION AND GLOBE VALVE

NOTE: VALVES OTHER THAN THE GLOBE VALVE MAY USE THE MODIFIERS SHOWN. IN ADDITION COMBINATIONS OF VALVE MODIFIERS MAY BE USED.

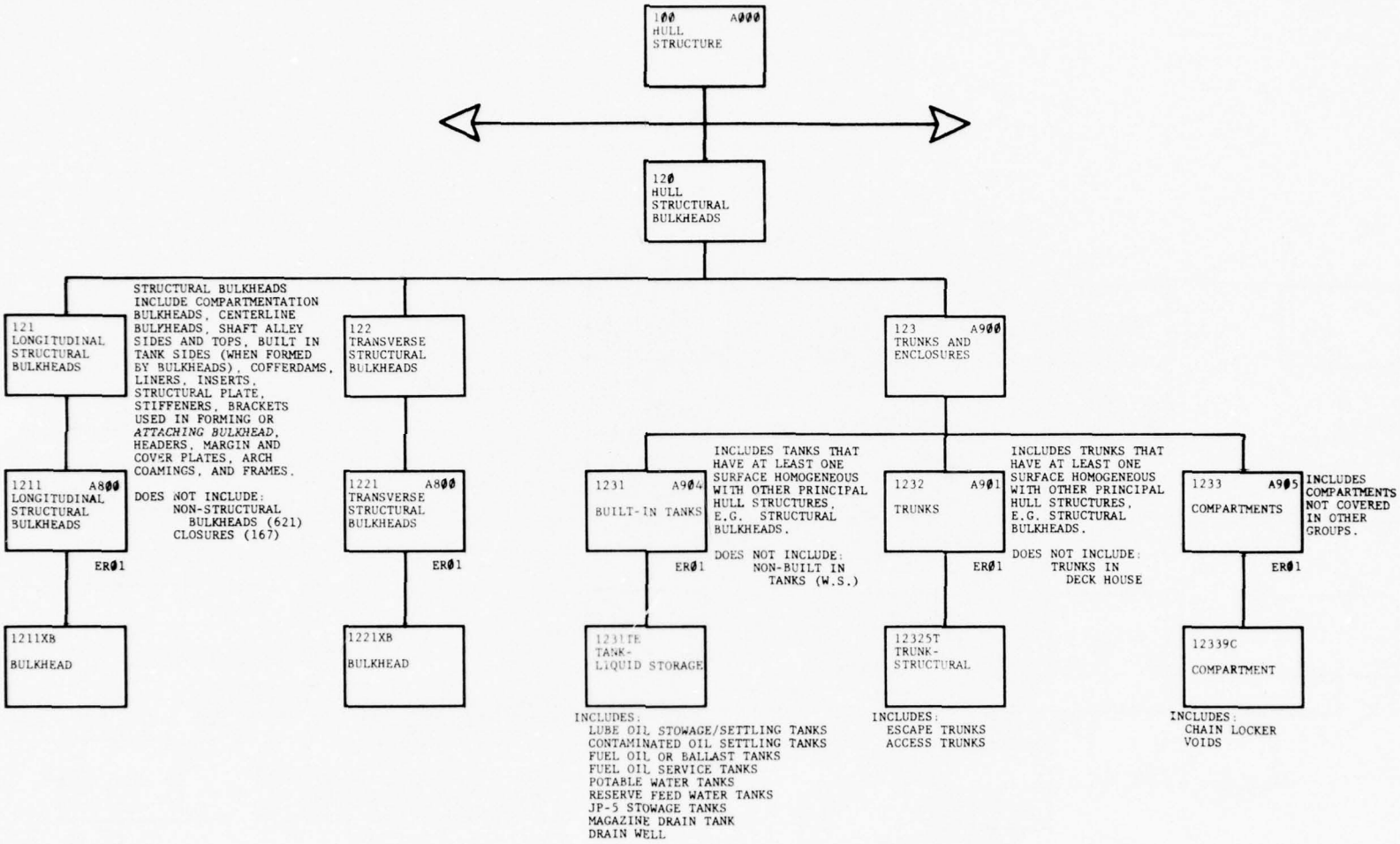
LEGEND OF SYMBOLS	
SYMBOL	DESCRIPTION
	VENT
	BOILER DRUM SAFETY VALVE
	ANGLE RELIEF VALVE (ENCLOSED SPRING)
	COMBINED EXHAUST AND RELIEF VALVE
P	PRESSURE GAUGE
VP	VACUUM - PRESSURE GAUGE
DX	DUPLEX PRESSURE GAUGE
A	ABSOLUTE PRESSURE GAUGE
	DISTANT READING PRESSURE GAUGE
	DISTANT READING THERMOMETER
	SIGHT READING THERMOMETER
	THERMO ELEMENT
	METER, SIGHT FLOW
	PRESSURE BREAKDOWN ORIFICE
	OPEN FUNNEL
	SPECTACLE FLANGE
	DUPLEX STRAINER
	Y STRAINER
	STRAINER
	IMPULSE TRAP & STRAINER
	SALINITY CELL
	ORIFICE PLATE
C	MOTOR CONTROLLER
	TEST TEE
	DESUPERHEATER
	MANIFOLD
	EDUCTOR

LEGEND OF SYMBOLS	
SYMBOL	DESCRIPTION
	PUSHBUTTON & INDICATOR LIGHT
	PUSHBUTTON
	EXPANSION JOINT
	GAGE GLASS
	DUPLEX (TWIN BASKET) MAGNETIC STRAINER
T	THERMOCOUPLE CONNECTION OR THERMOSTAT
T	THERMOMETER ANY ANGLE DIAL, BARE BULB TYPE DIRECT READING
T	THERMOMETER DISTANT READING BARE BULB TYPE
	CONSTANT FLOW FITTING
	FUNNEL WITH SWING COVER
	CONCENTRIC REDUCER
	REDUCER
	HOSE ADAPTER
	SOUND ISOLATION FITTING
	FLEXIBLE HOSE
	FLOW MEASURING NOZZLE
	SHAFT TURBINE END, COUPLING OIL SPRAY
	ANGLE STOP VALVE
	BALL CHECK STOP VALVE
	PRESSURE VENT
	LOCK SHIELD VALVE, HIGH LIFT
	BOTTOM BLOWDOWN VALVE, HIGH LIFT
	TOP BLOWDOWN VALVE, HIGH LIFT
	AIR OPERATED VALVE SPRING CLOSING
	AUTOMATIC RECIRCULATING VALVE
	CROSS VALVE
P	MOTOR PRESSURE SWITCH
LS	LIMIT SWITCHES

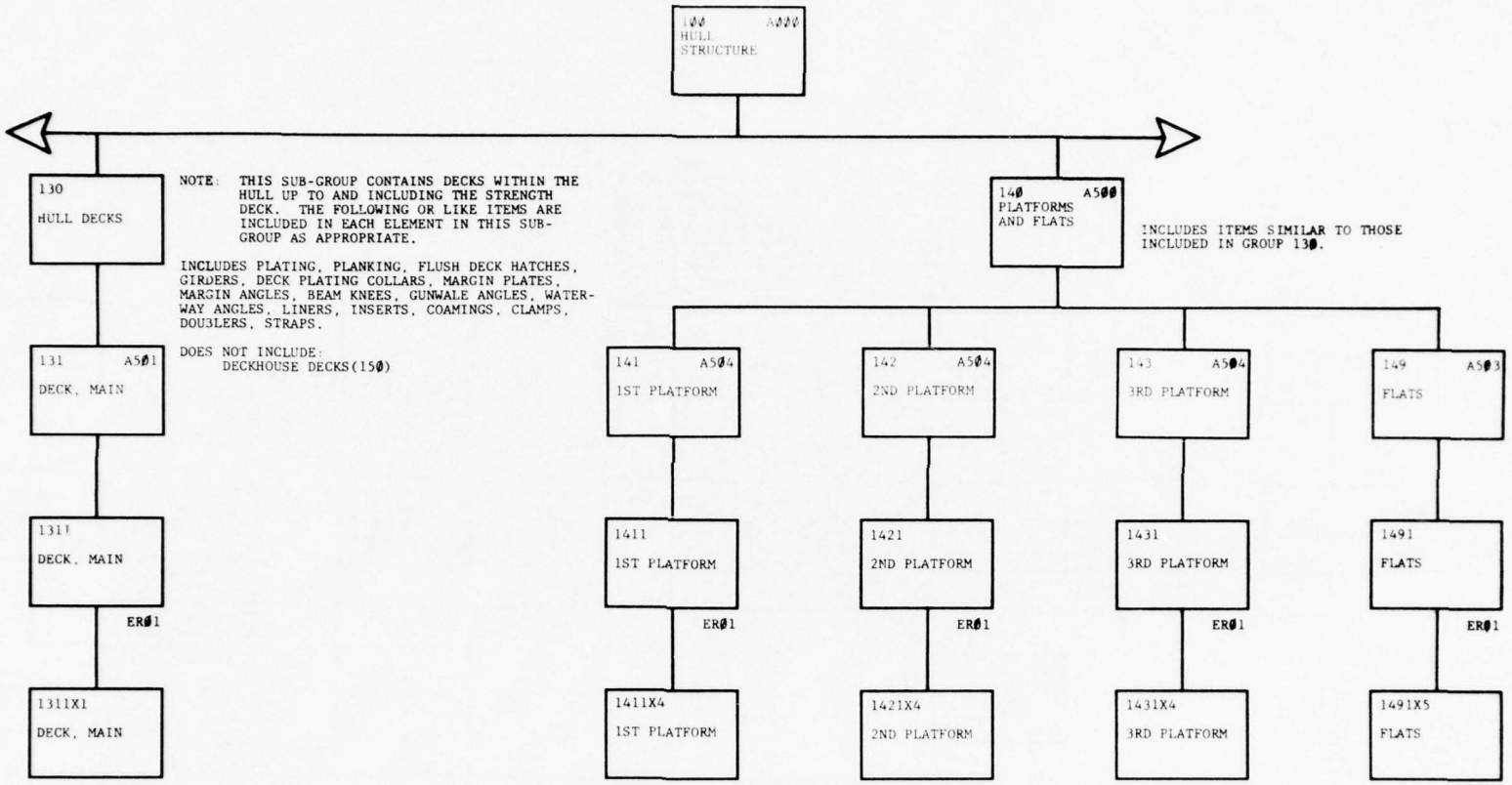

100
HULL
STRUCTURE
100
HULL
STRUCTURE,
GENERAL
101
GENERAL
ARRANGEMENT
STRUCTURAL
DRAWINGS



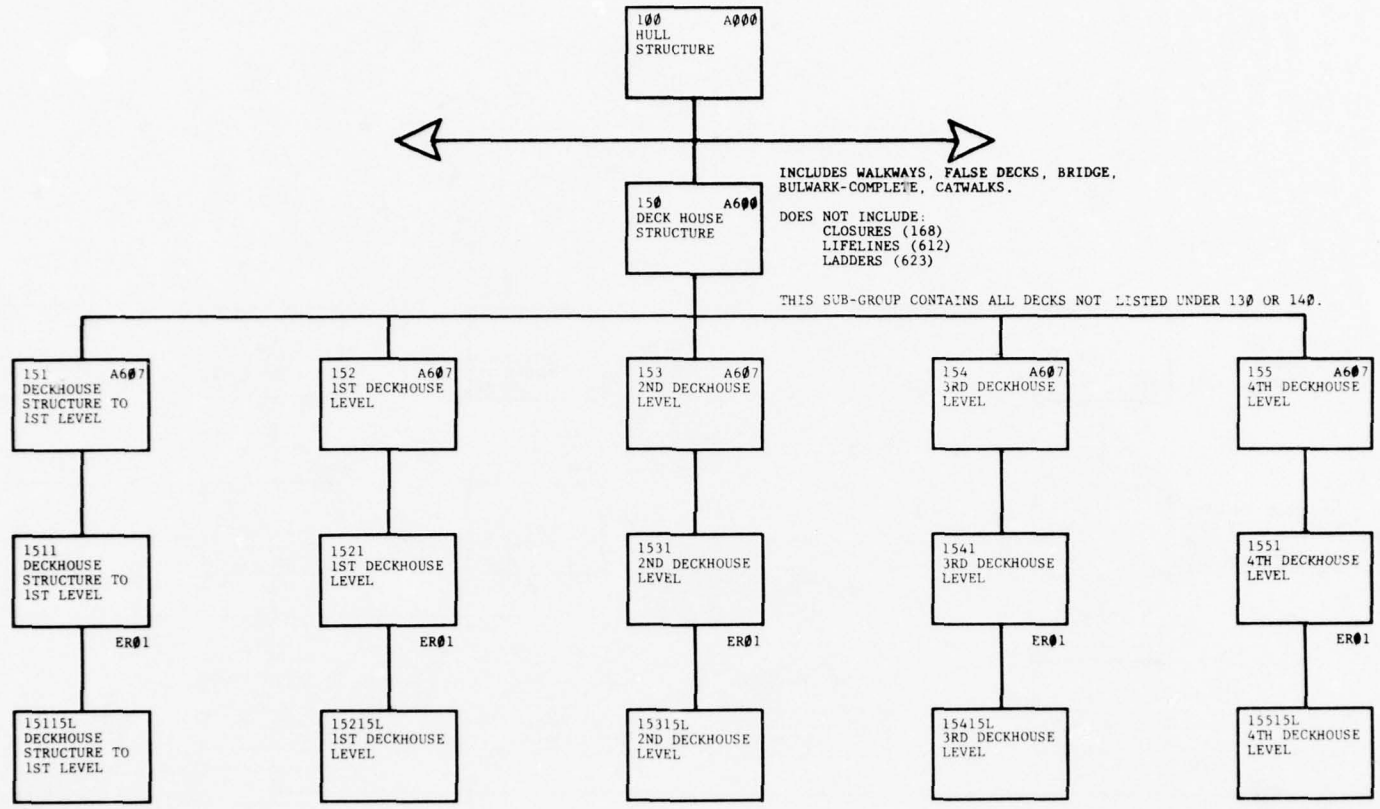
DDG-2 CLASS
PREPARED 10-7-76



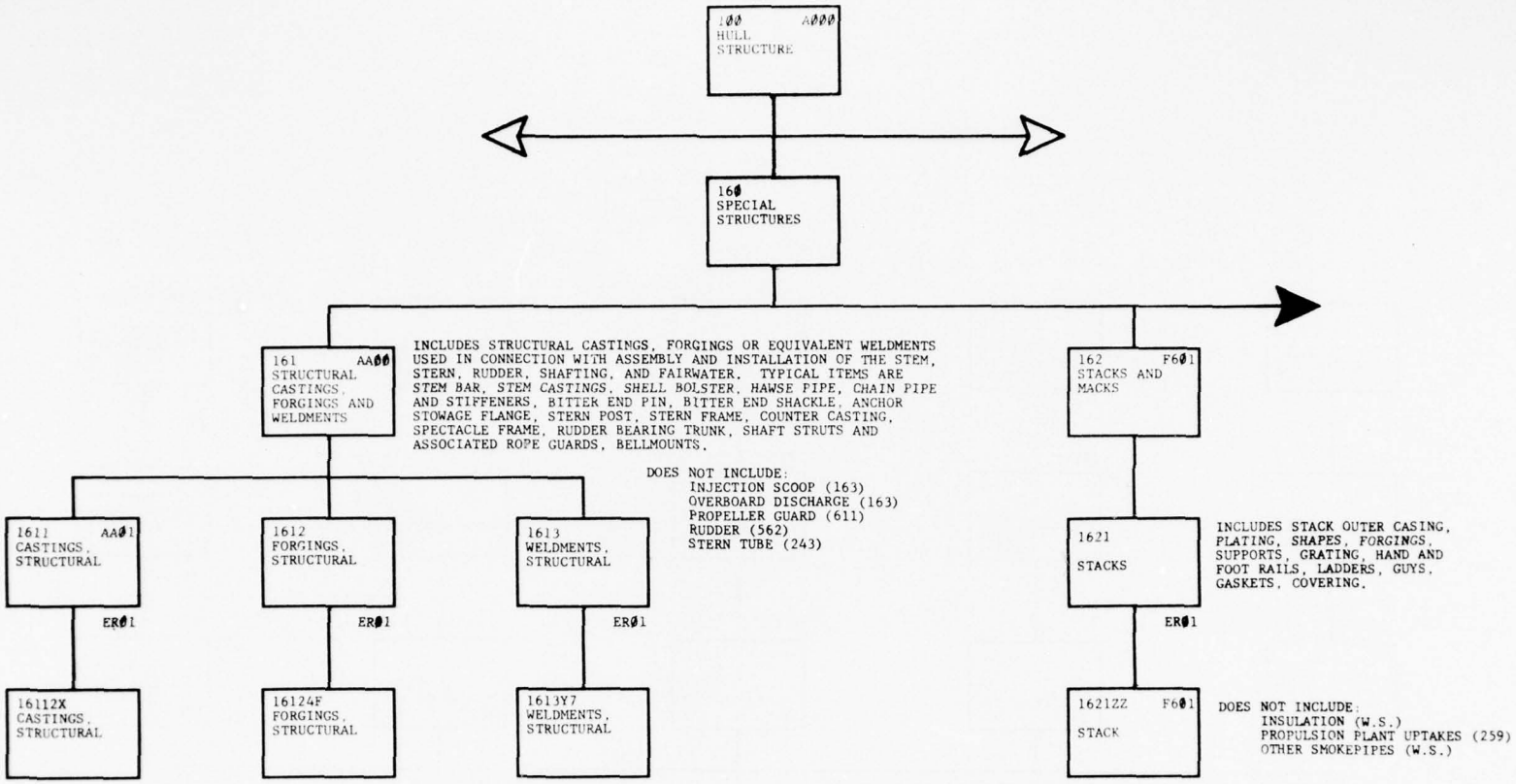
DDG-2 CLASS
PREPARED 10-7-76



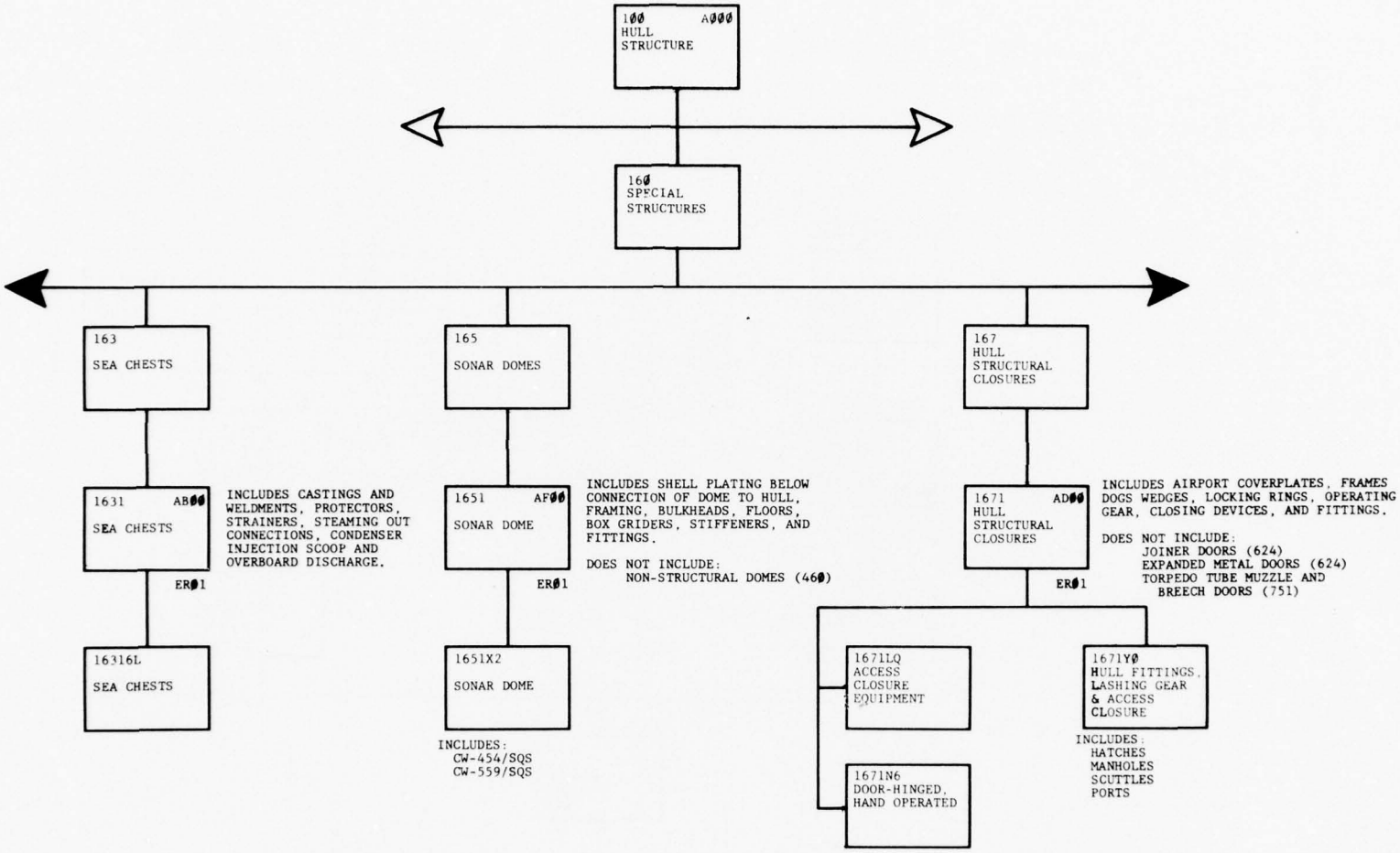
DDG-2 CLASS
PREPARED 10-7-76



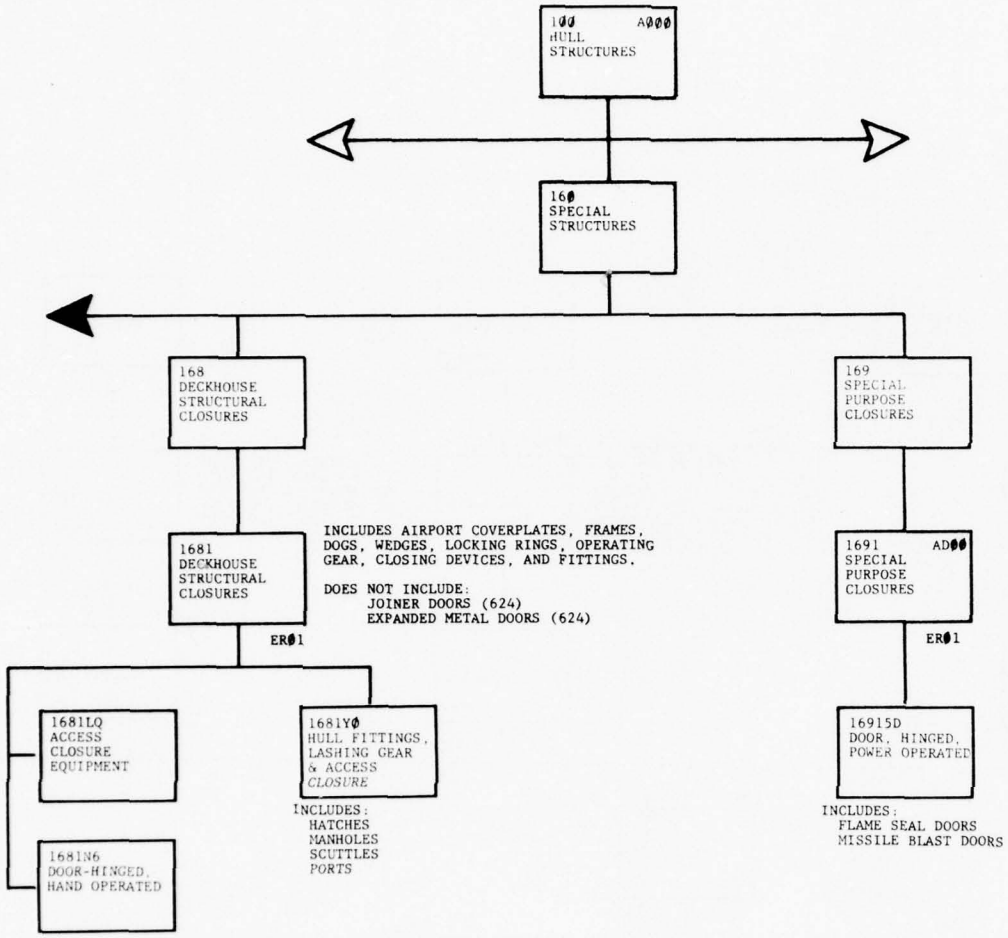
DDG-2 CLASS
PREPARED 10-7-76



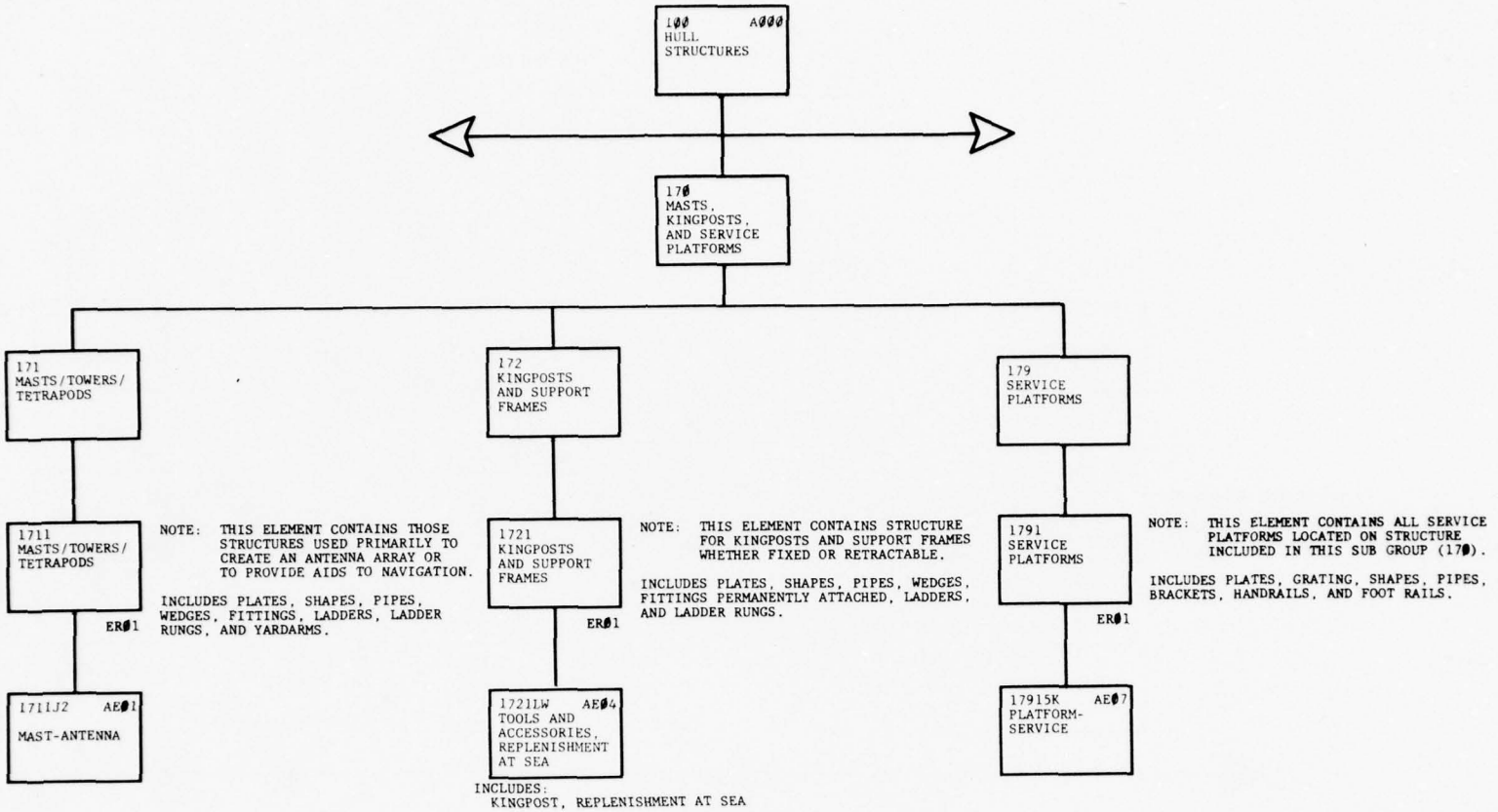
DDG-2 CLASS
PREPARED 10-7-76



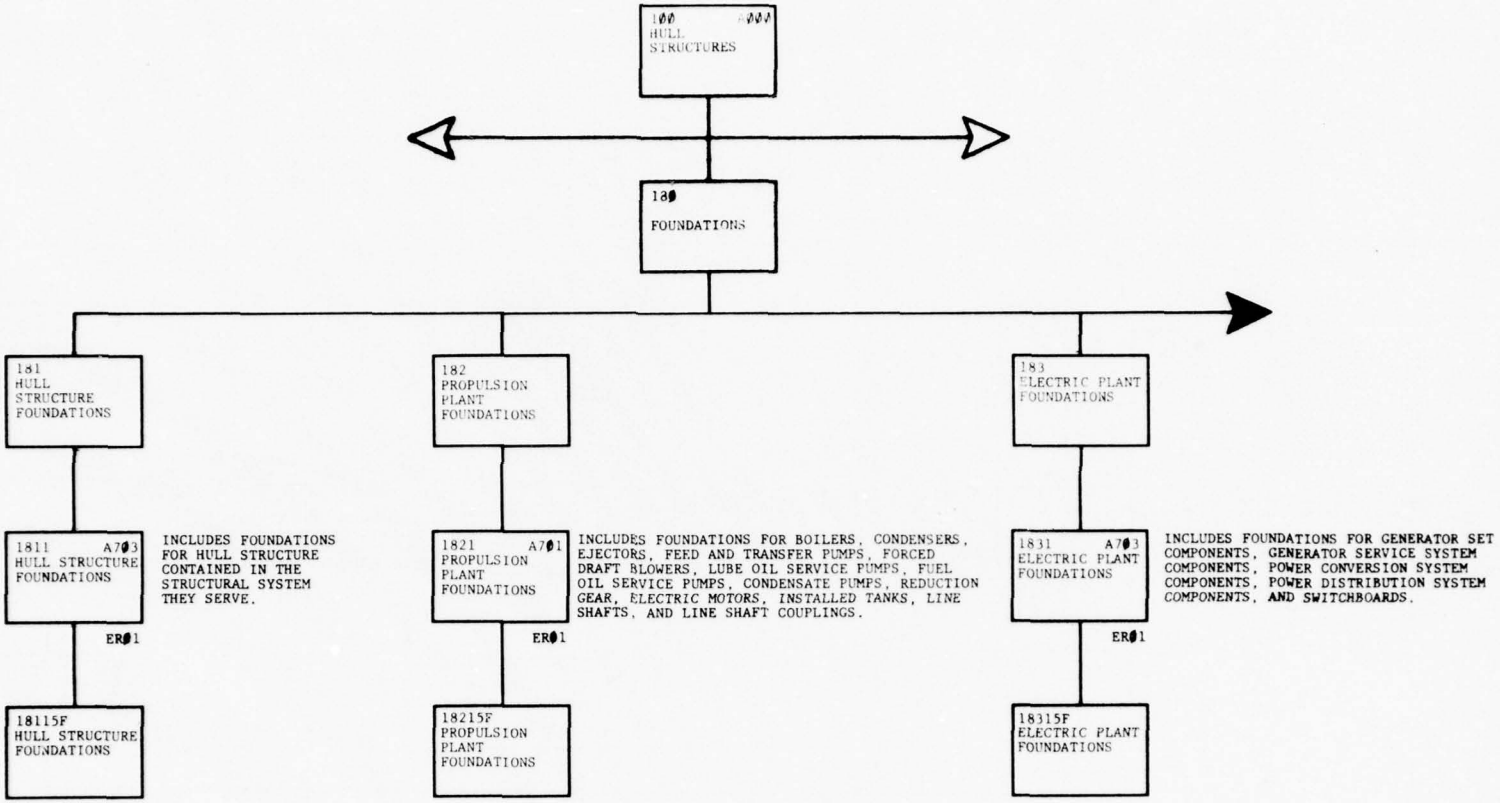
DDG-2 CLASS
PREPARED 10-7-76



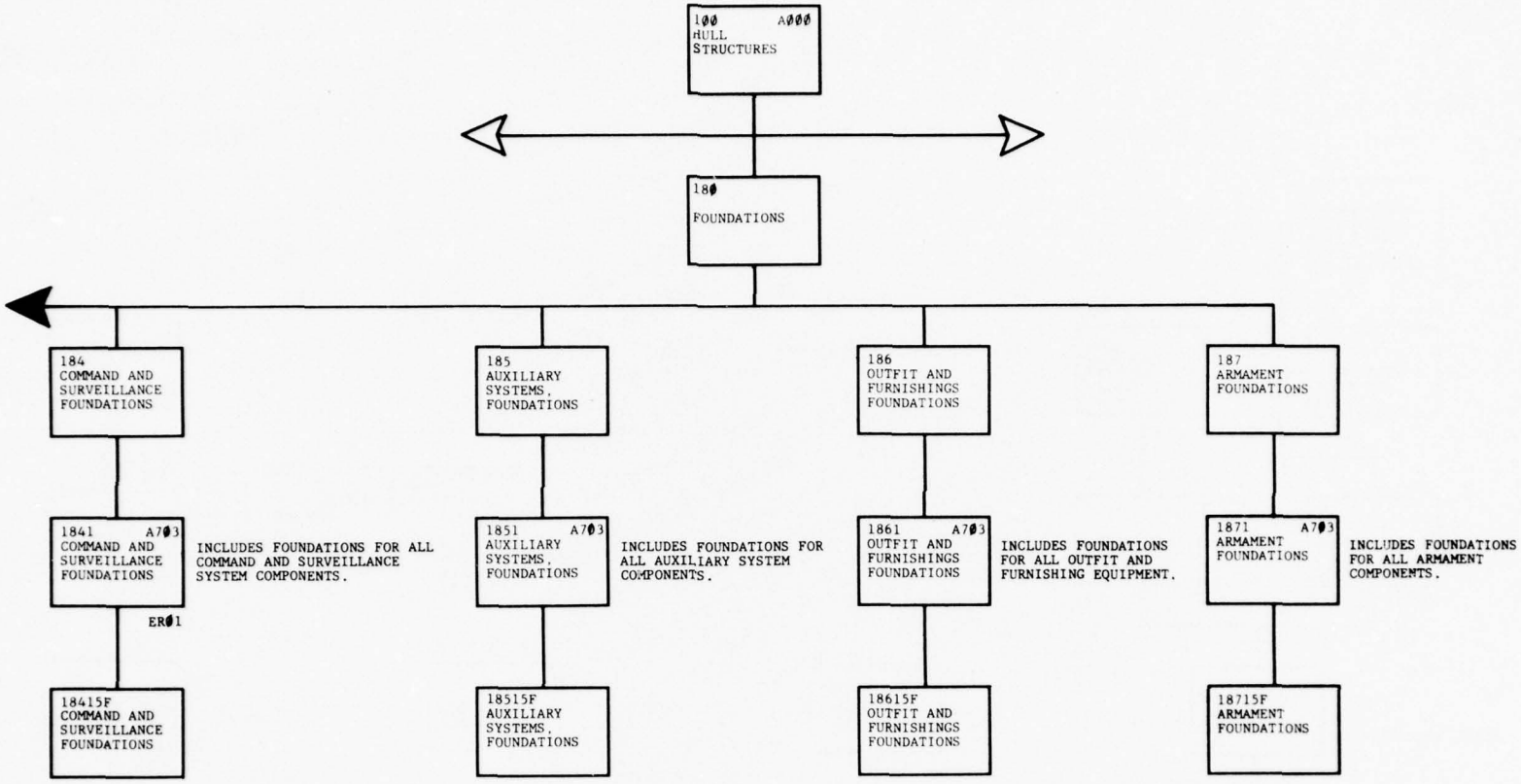
DDG-2 CLASS
PREPARED 10-7-76



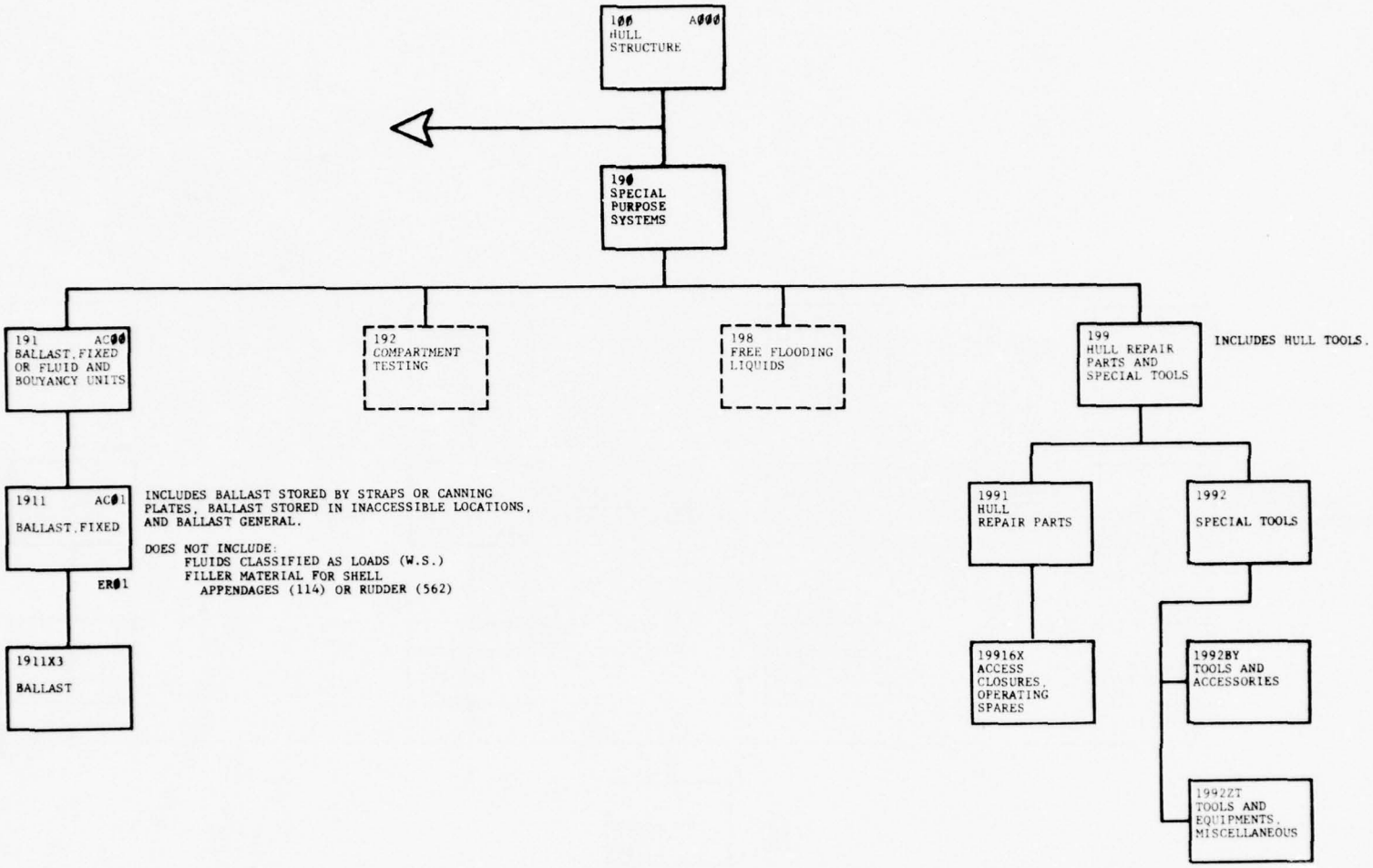
DDG-2 CLASS
PREPARED 10-7-76



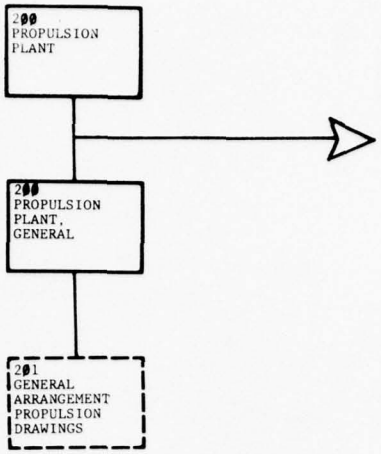
DDG-2 CLASS
PREPARED 10-7-76

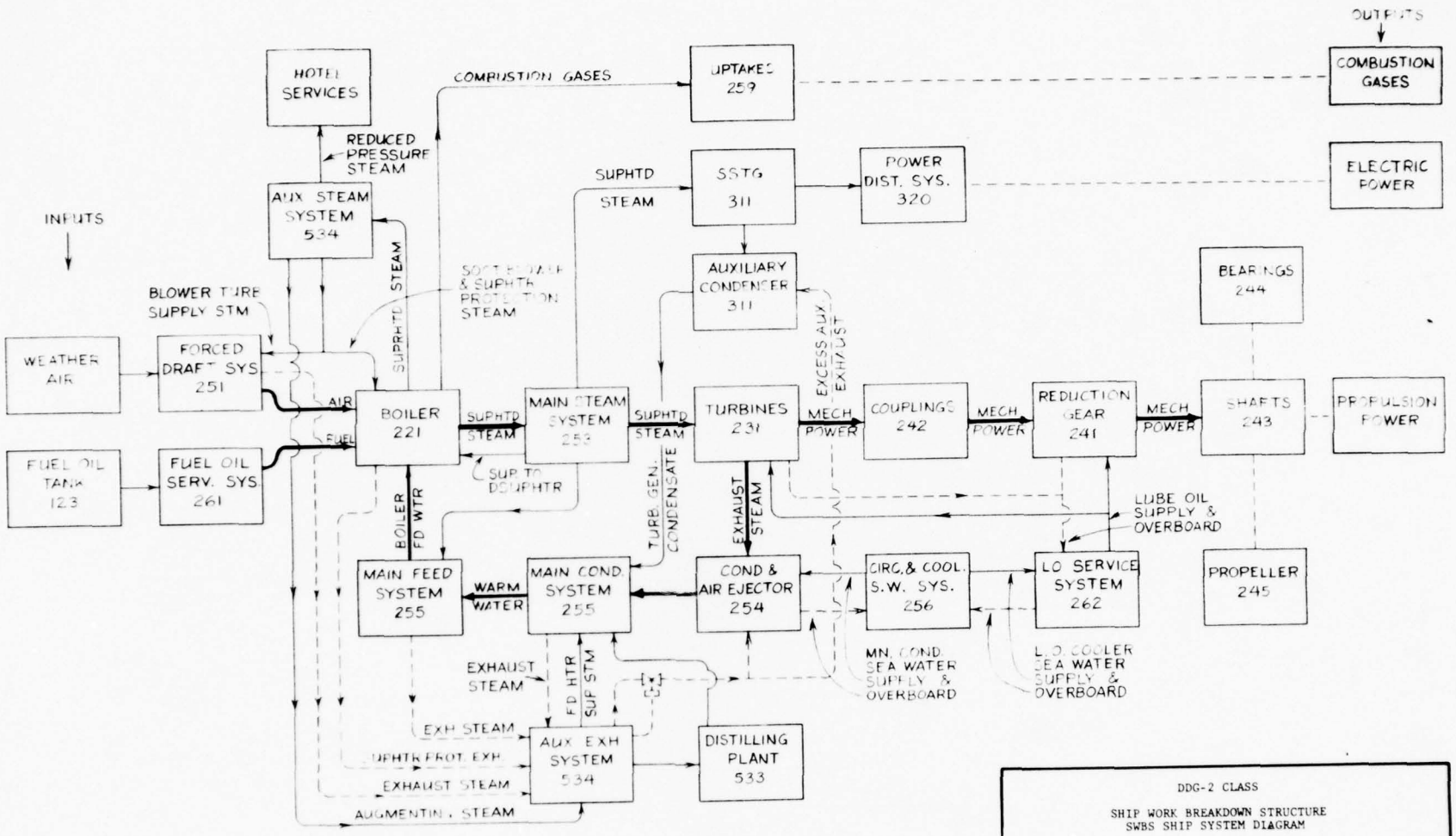


DDG-2 CLASS
PREPARED 10-7-76



DDG-2 CLASS
PREPARED 10-7-76

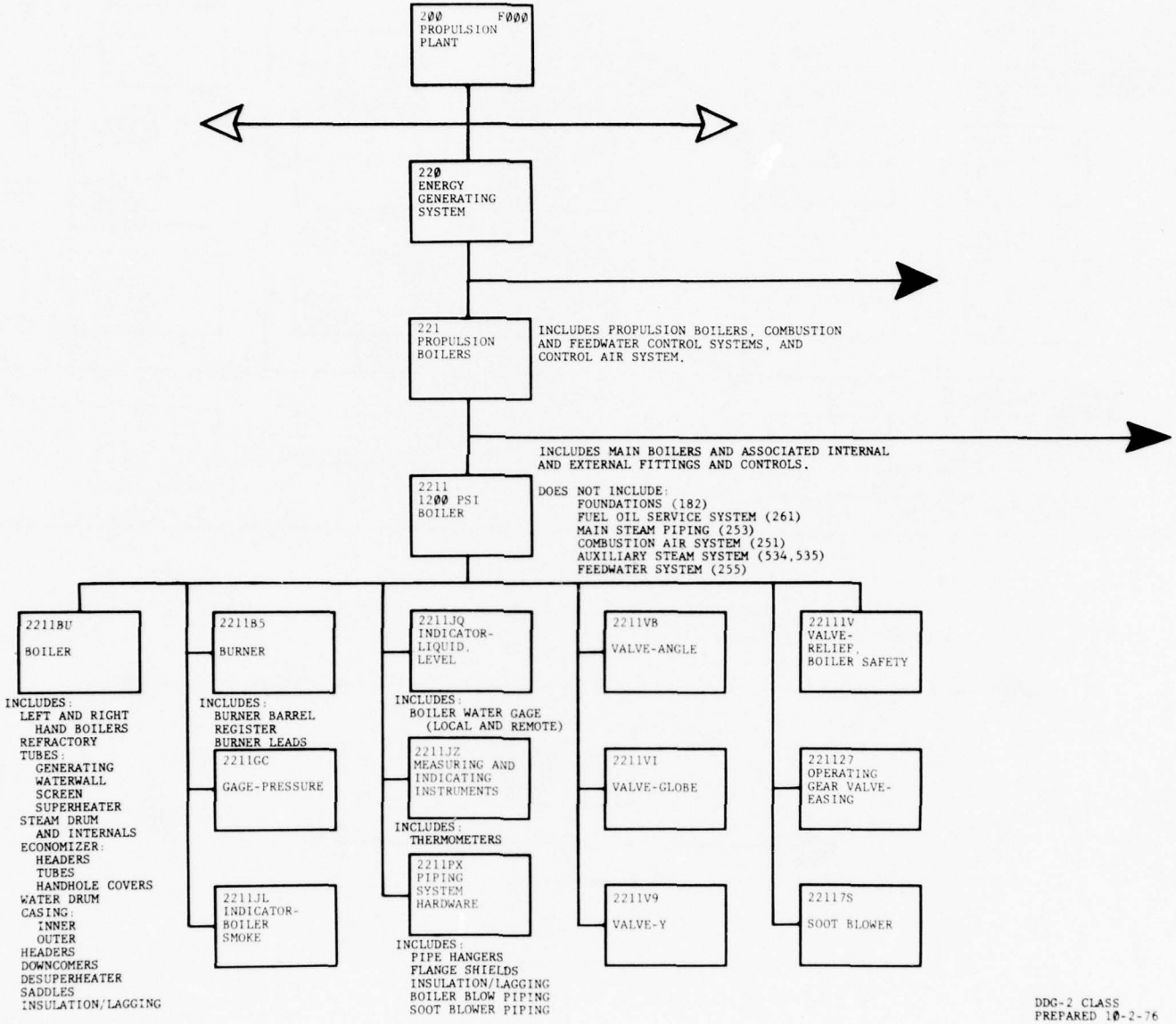

200
PROPULSION
PLANT
200
PROPULSION
PLANT,
GENERAL
201
GENERAL
ARRANGEMENT
PROPULSION
DRAWINGS



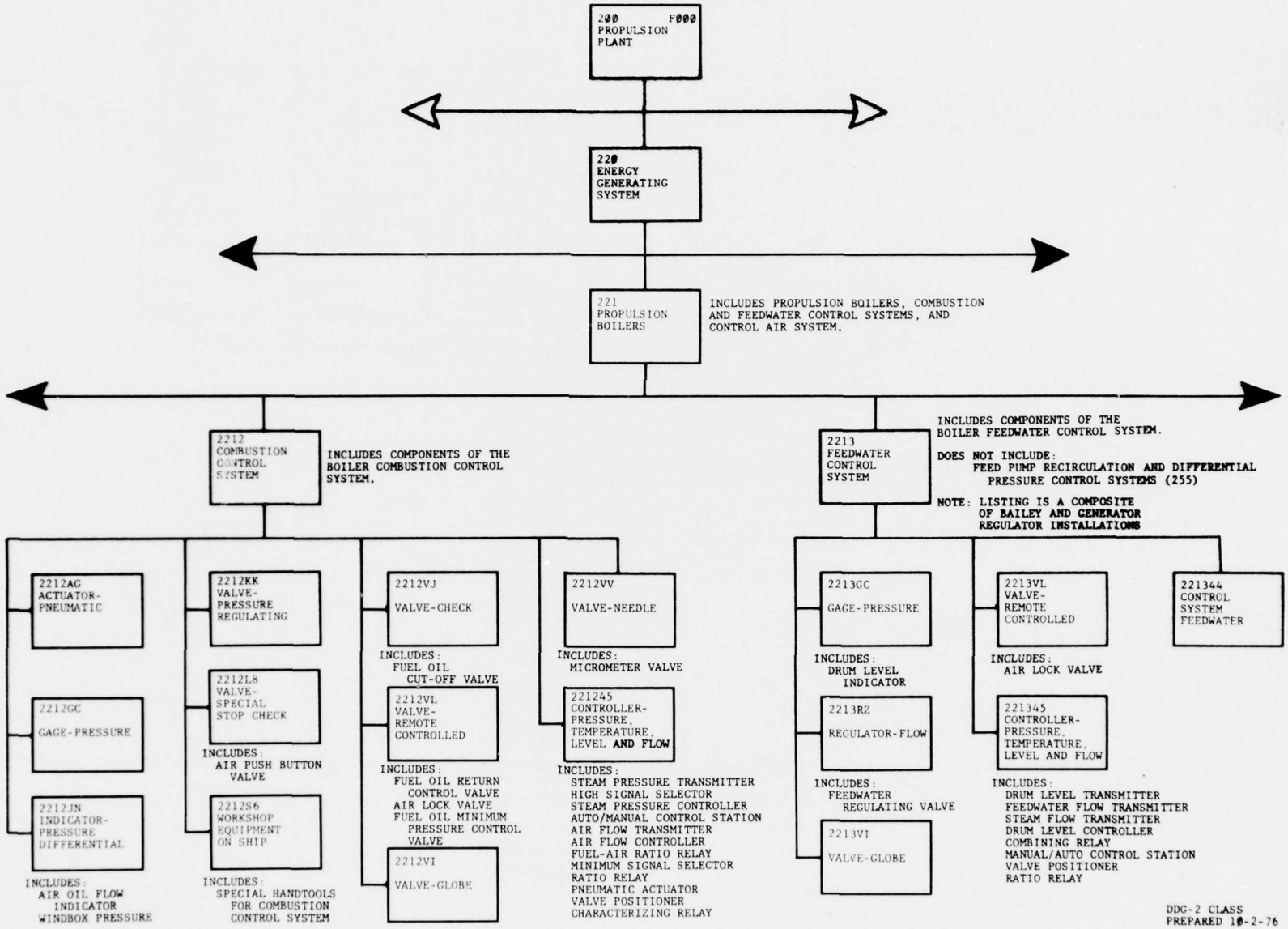
DDG-2 CLASS

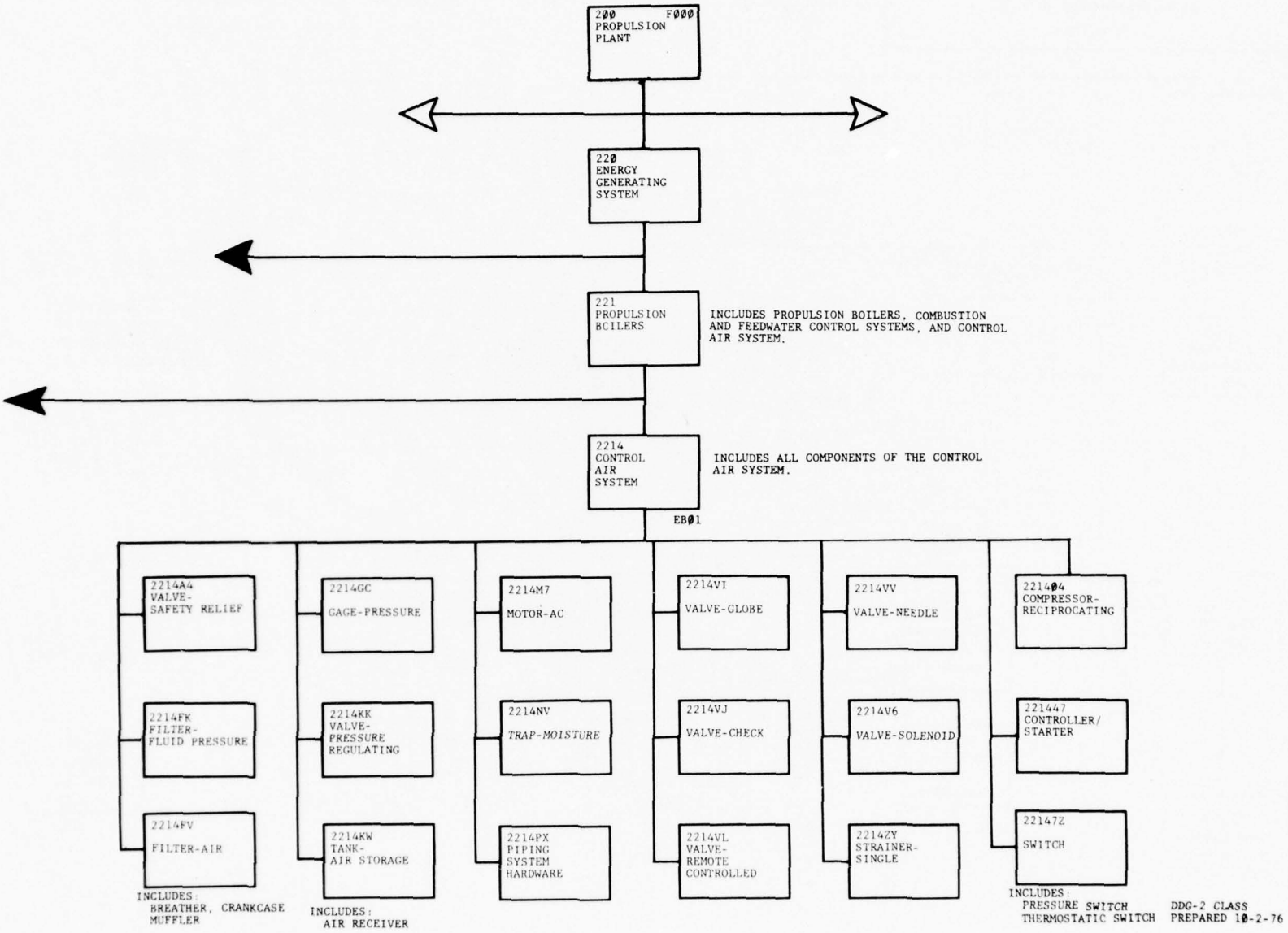
SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM

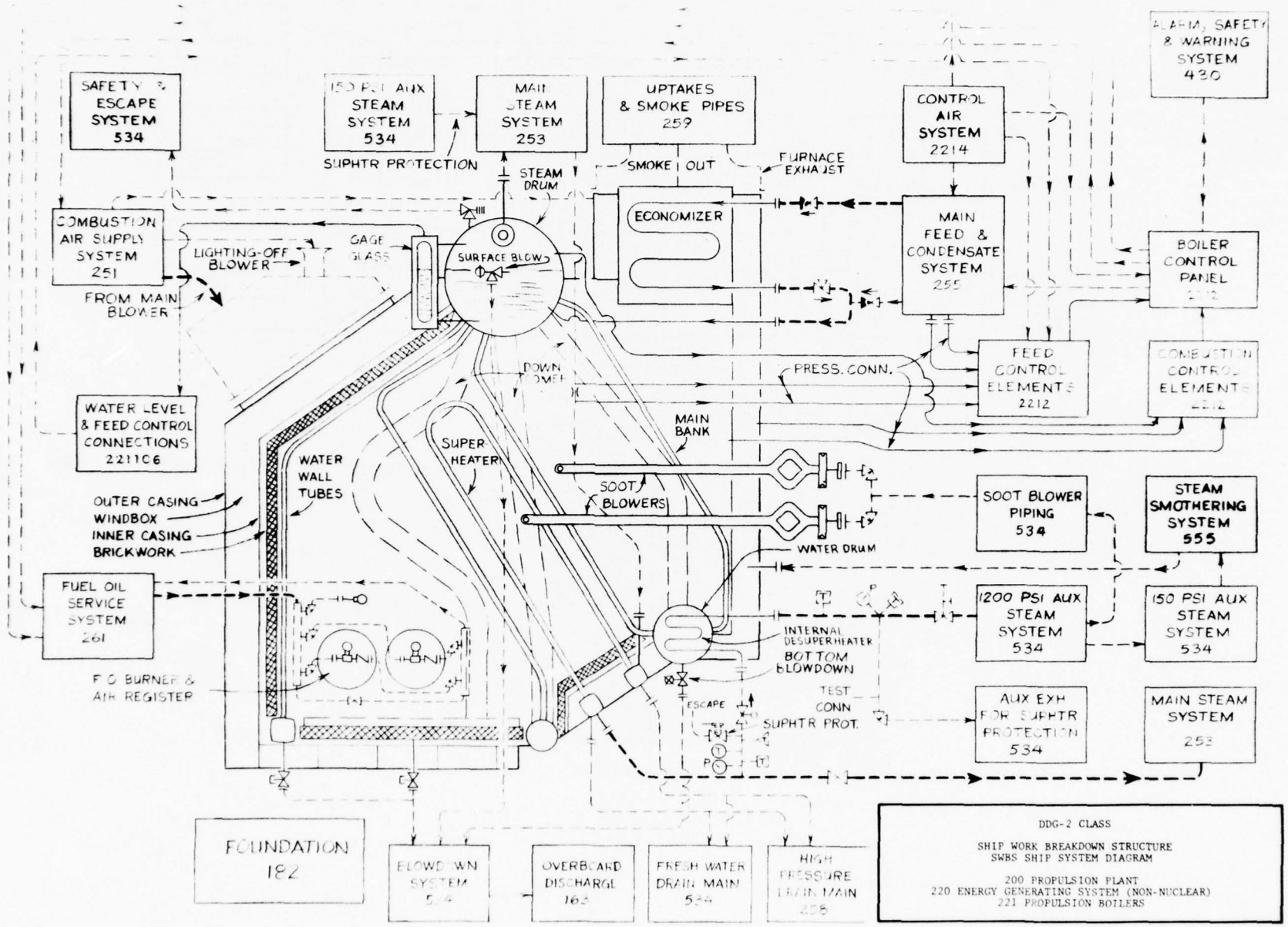
200 PROPULSION PLANT
INDEX



DDG-2 CLASS
PREPARED 10-2-76


200 F000
PROPULSION PLANT
220
ENERGY GENERATING SYSTEM
221
PROPULSION BOILERS
INCLUDES PROPULSION BOILERS, COMBUSTION AND FEEDWATER CONTROL SYSTEMS, AND CONTROL AIR SYSTEM.
2212
COMBUSTION CONTROL SYSTEM
INCLUDES COMPONENTS OF THE BOILER COMBUSTION CONTROL SYSTEM.
2213
FEEDWATER CONTROL SYSTEM
INCLUDES COMPONENTS OF THE BOILER FEEDWATER CONTROL SYSTEM.
DOES NOT INCLUDE:
FEED PUMP RECIRCULATION AND DIFFERENTIAL PRESSURE CONTROL SYSTEMS (255)
NOTE: LISTING IS A COMPOSITE OF BAILEY AND GENERATOR REGULATOR INSTALLATIONS
2212AG
ACTUATOR-PNEUMATIC
2212GC
GAGE-PRESSURE
2212JN
INDICATOR-PRESSURE DIFFERENTIAL
INCLUDES:
AIR OIL FLOW INDICATOR
WINDBOX PRESSURE
2212KK
VALVE-PRESSURE REGULATING
2212L8
VALVE-SPECIAL STOP CHECK
INCLUDES:
AIR PUSH BUTTON VALVE
2212S6
WORKSHOP EQUIPMENT ON SHIP
INCLUDES:
SPECIAL HANDTOOLS FOR COMBUSTION CONTROL SYSTEM
2212VJ
VALVE-CHECK
INCLUDES:
FUEL OIL CUT-OFF VALVE
2212VL
VALVE-REMOTE CONTROLLED
INCLUDES:
FUEL OIL RETURN CONTROL VALVE
AIR LOCK VALVE
FUEL OIL MINIMUM PRESSURE CONTROL VALVE
2212VI
VALVE-GLOBE
2212VV
VALVE-NEEDLE
INCLUDES:
MICROMETER VALVE
221245
CONTROLLER-PRESSURE, TEMPERATURE, LEVEL AND FLOW
INCLUDES:
STEAM PRESSURE TRANSMITTER
HIGH SIGNAL SELECTOR
STEAM PRESSURE CONTROLLER
AUTO/MANUAL CONTROL STATION
AIR FLOW TRANSMITTER
AIR FLOW CONTROLLER
FUEL-AIR RATIO RELAY
MINIMUM SIGNAL SELECTOR
RATIO RELAY
PNEUMATIC ACTUATOR
VALVE POSITIONER
CHARACTERIZING RELAY
2213GC
GAGE-PRESSURE
INCLUDES:
DRUM LEVEL INDICATOR
2213RZ
REGULATOR-FLOW
INCLUDES:
FEEDWATER REGULATING VALVE
2213VI
VALVE-GLOBE
2213VL
VALVE-REMOTE CONTROLLED
INCLUDES:
AIR LOCK VALVE
221345
CONTROLLER-PRESSURE, TEMPERATURE, LEVEL AND FLOW
INCLUDES:
DRUM LEVEL TRANSMITTER
FEEDWATER FLOW TRANSMITTER
STEAM FLOW TRANSMITTER
DRUM LEVEL CONTROLLER
COMBINING RELAY
MANUAL/AUTO CONTROL STATION
VALVE POSITIONER
RATIO RELAY
221344
CONTROL SYSTEM FEEDWATER
DDG-2 CLASS
PREPARED 10-2-76

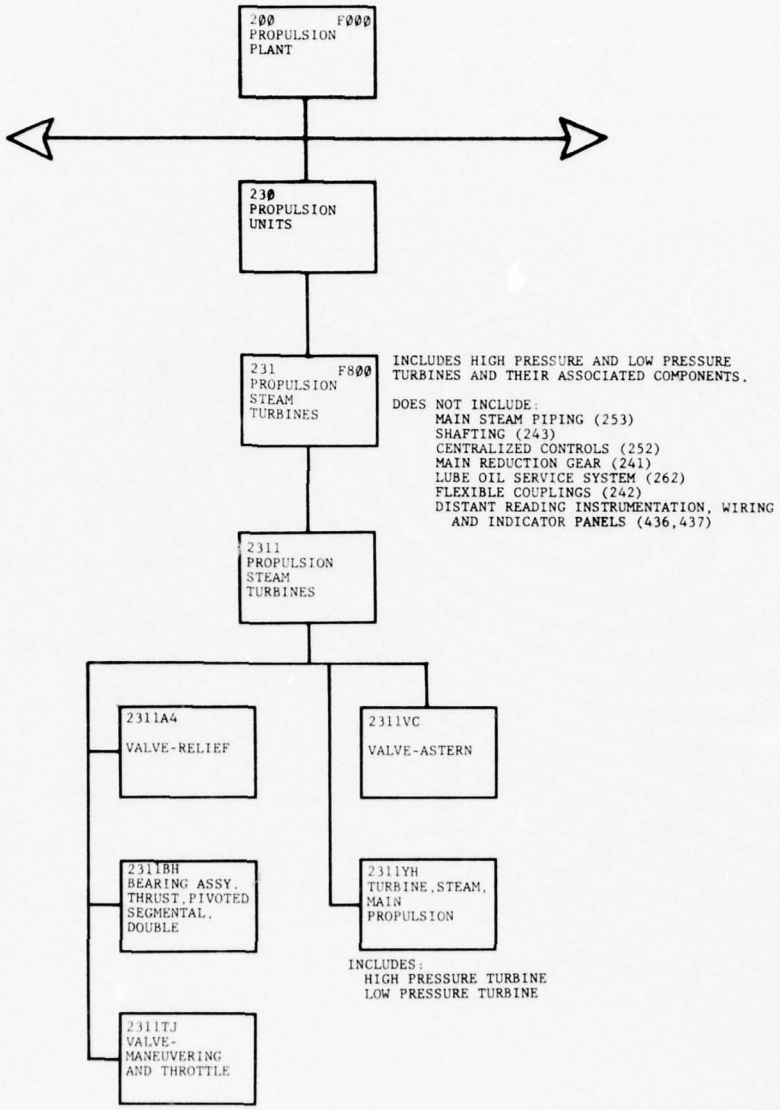

200 F000
PROPULSION PLANT
220
ENERGY GENERATING SYSTEM
221
PROPULSION BOILERS
INCLUDES PROPULSION BOILERS, COMBUSTION AND FEEDWATER CONTROL SYSTEMS, AND CONTROL AIR SYSTEM.
2214
CONTROL AIR SYSTEM
INCLUDES ALL COMPONENTS OF THE CONTROL AIR SYSTEM.
EB01
2214A4
VALVE-SAFETY RELIEF
2214FK
FILTER-FLUID PRESSURE
2214FV
FILTER-AIR
INCLUDES:
BREATHER, CRANKCASE MUFFLER
2214GC
GAGE-PRESSURE
2214KK
VALVE-PRESSURE REGULATING
2214KW
TANK-AIR STORAGE
INCLUDES:
AIR RECEIVER
2214M7
MOTOR-AC
2214NV
TRAP-MOISTURE
2214PX
PIPING SYSTEM HARDWARE
2214VI
VALVE-GLOBE
2214VJ
VALVE-CHECK
2214VL
VALVE-REMOTE CONTROLLED
2214VV
VALVE-NEEDLE
2214V6
VALVE-SOLENOID
2214ZY
STRAINER-SINGLE
2214Ø4
COMPRESSOR-RECIPROCATING
221447
CONTROLLER/STARTER
22147Z
SWITCH
INCLUDES:
PRESSURE SWITCH
THERMOSTATIC SWITCH
DDG-2 CLASS
PREPARED 10-2-76



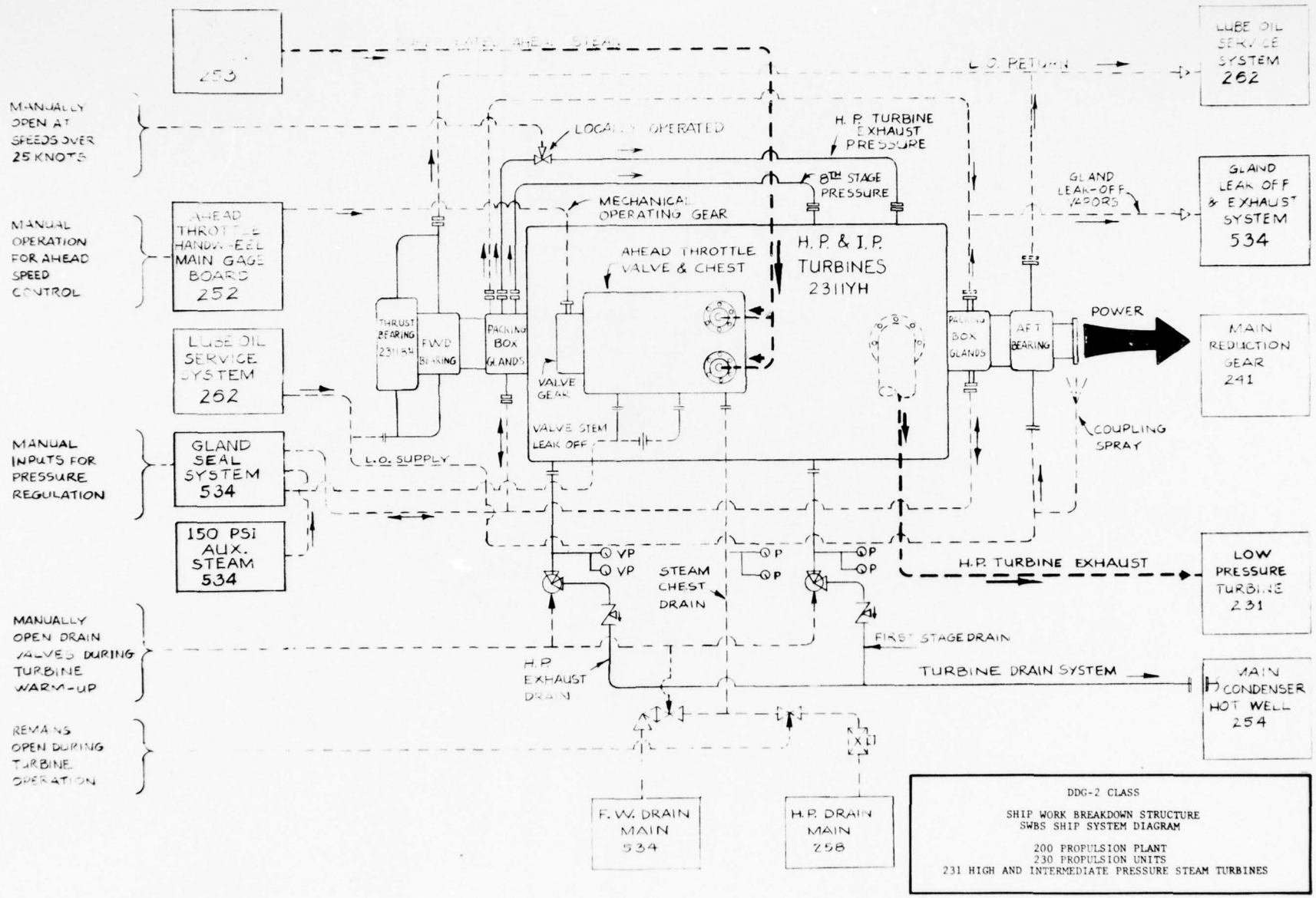
DDG-2 CLASS

SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM

200 PROPULSION PLANT
220 ENERGY GENERATING SYSTEM (NON-NUCLEAR)
221 PROPULSION BOILERS



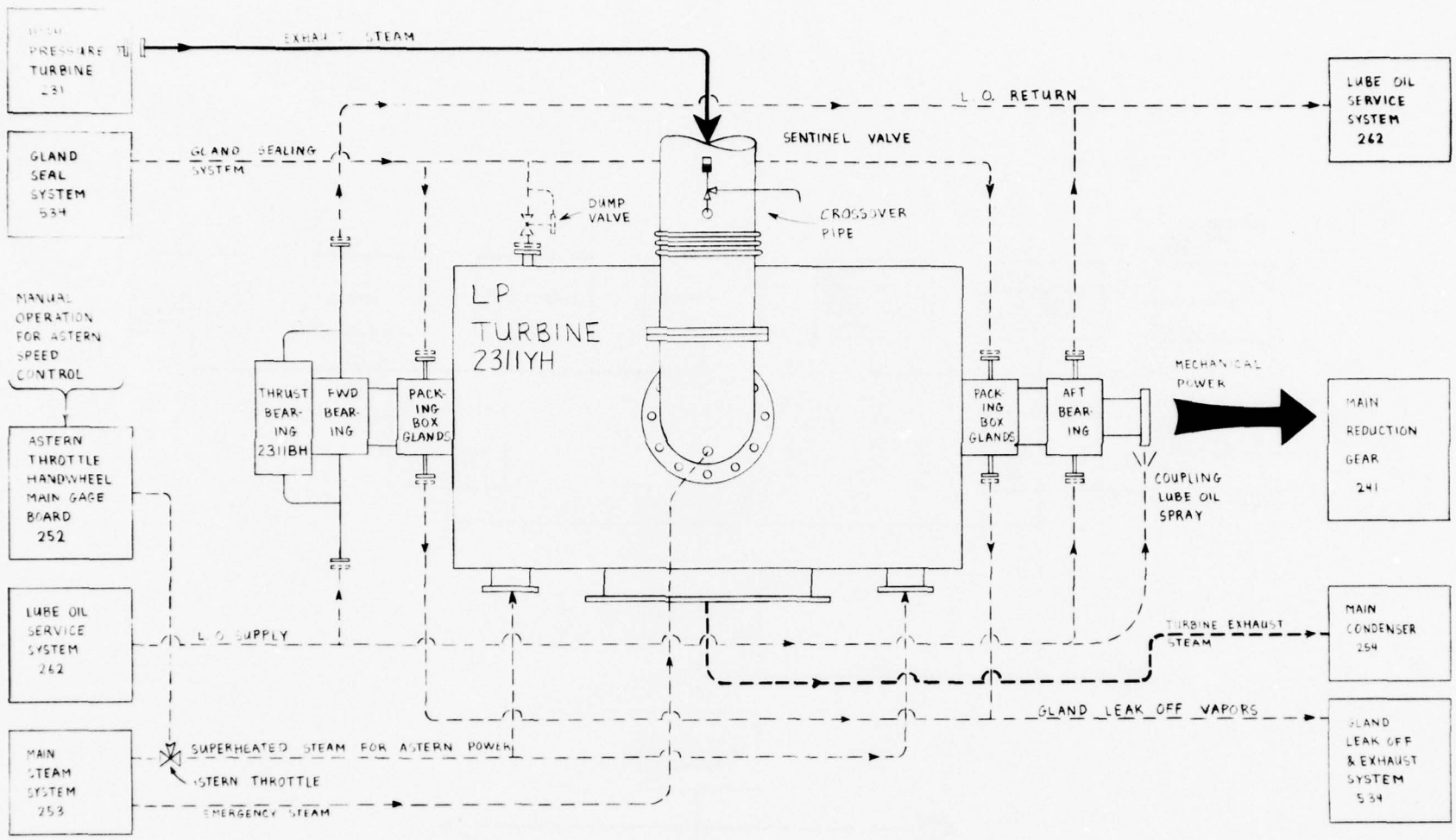
DDG-2 CLASS
PREPARED 10-2-76



DDG-2 CLASS

SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM

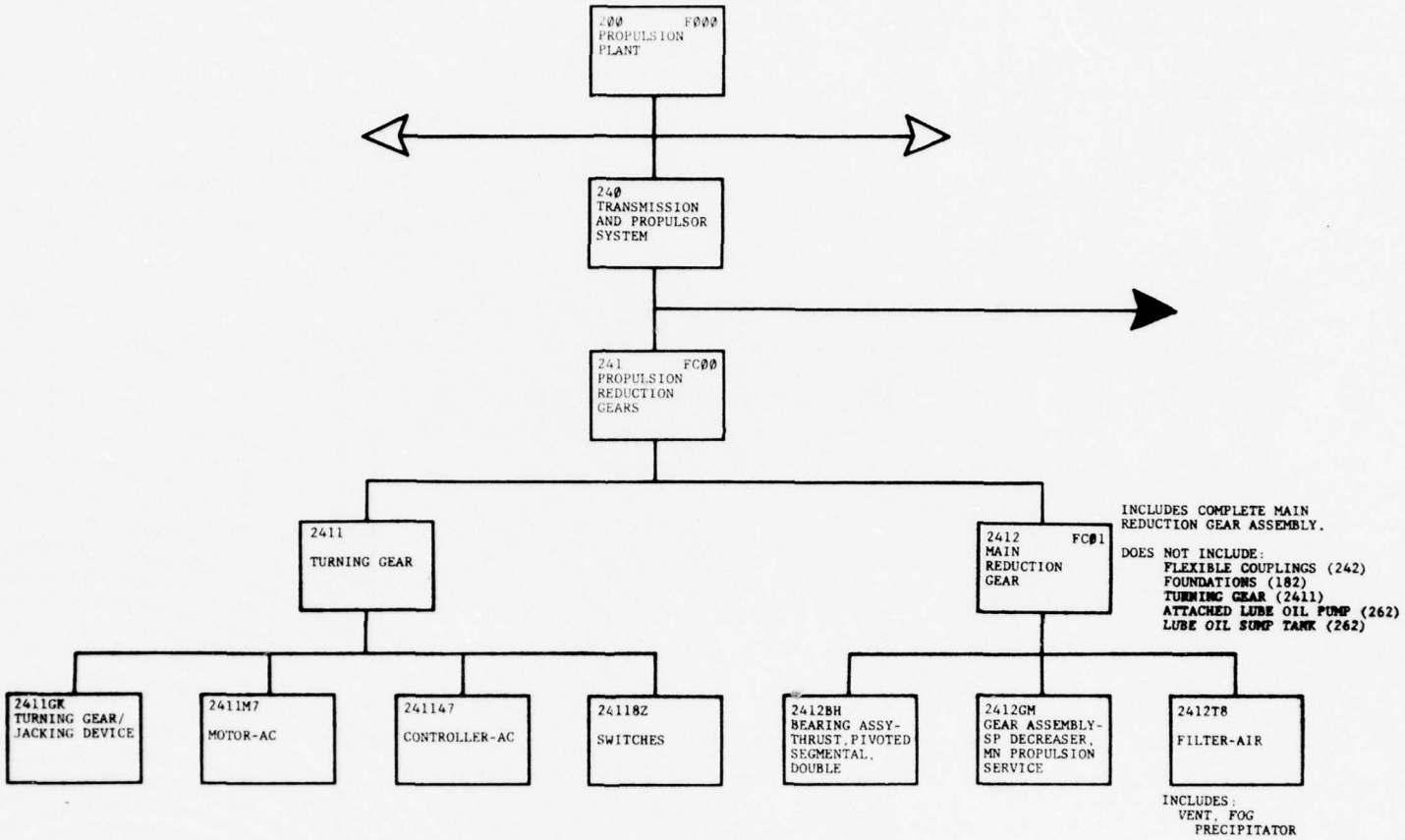
200 PROPULSION PLANT
230 PROPULSION UNITS
231 HIGH AND INTERMEDIATE PRESSURE STEAM TURBINES



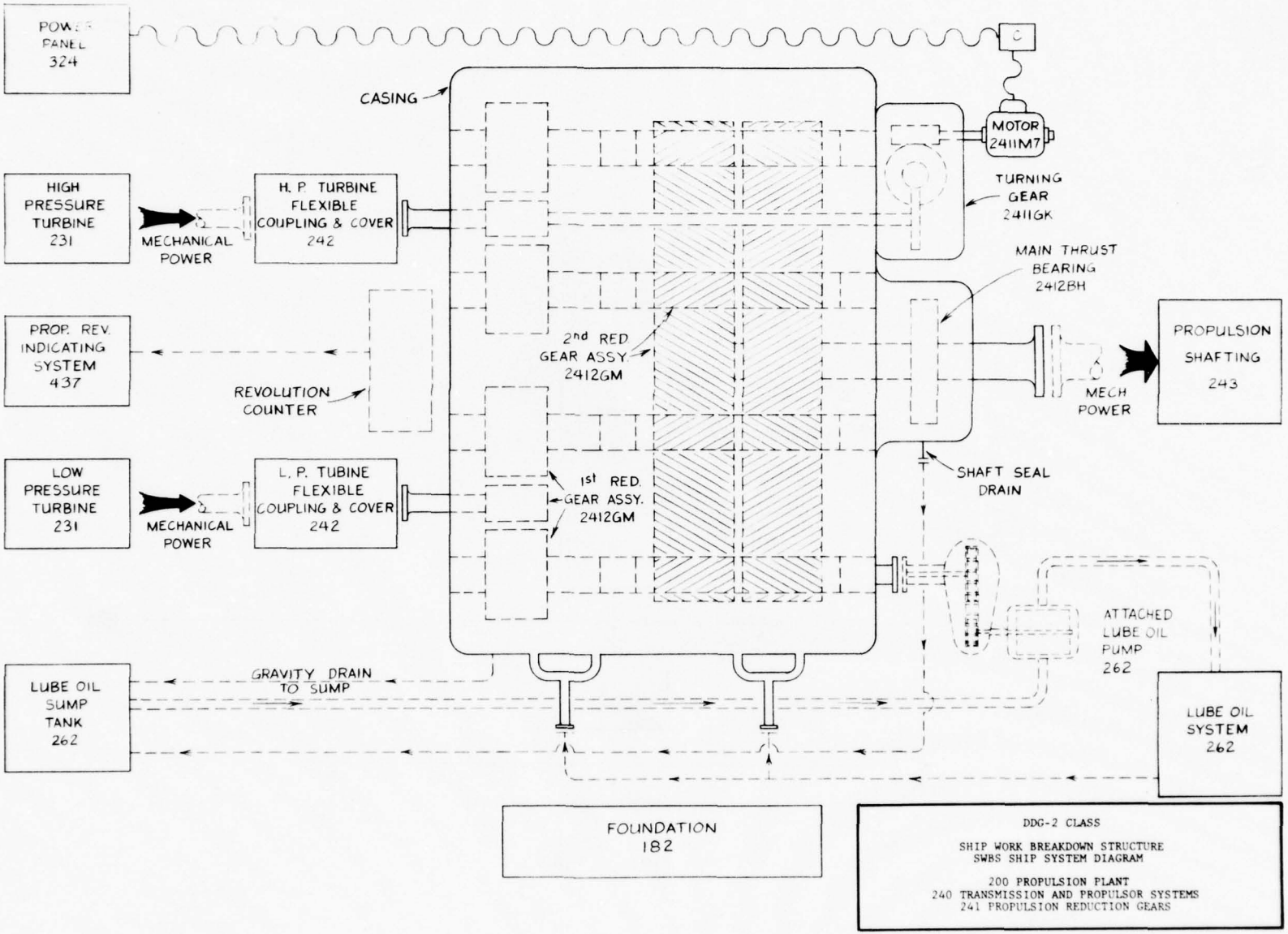
DDG-2 CLASS

SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM

200 PROPULSION PLANT
230 PROPULSION UNITS
231 LOW PRESSURE STEAM TURBINE



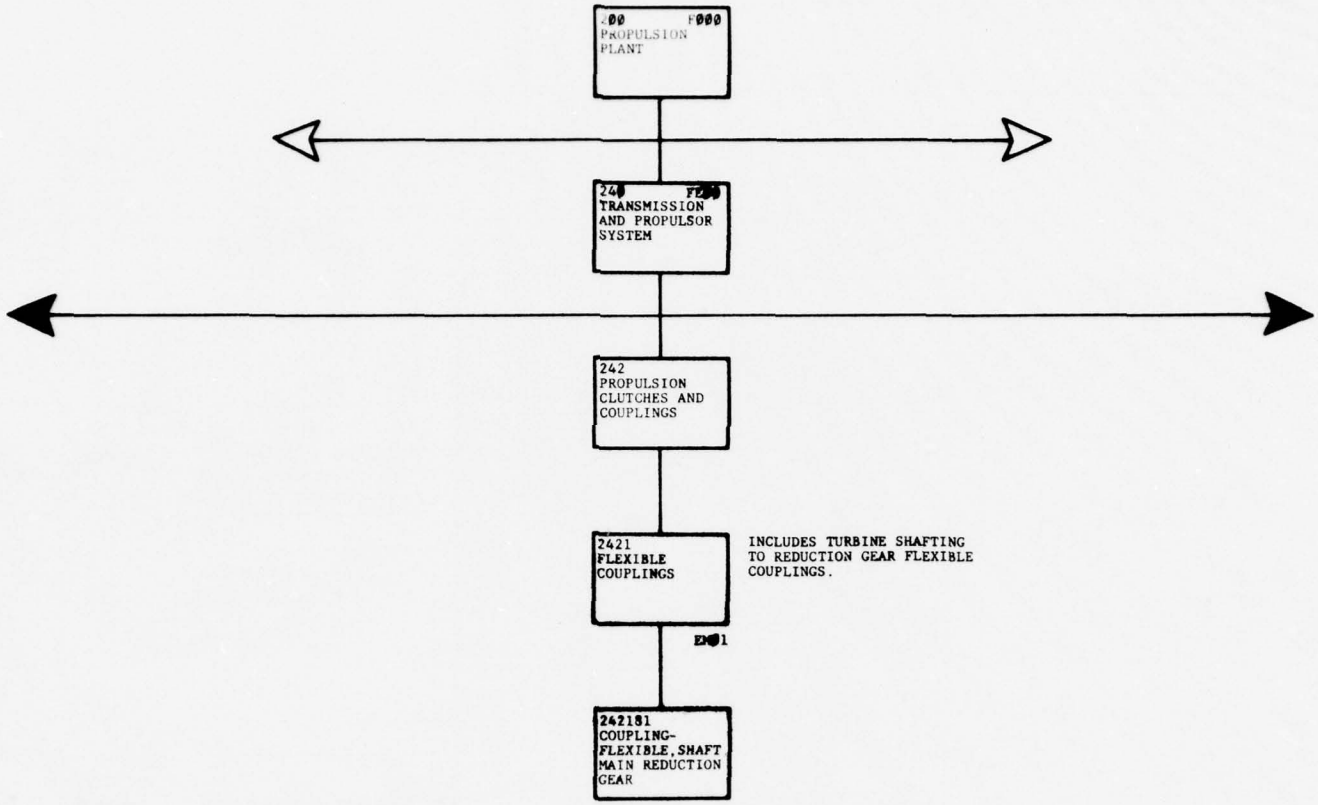
DDG-2 CLASS
PREPARED 10-2-76

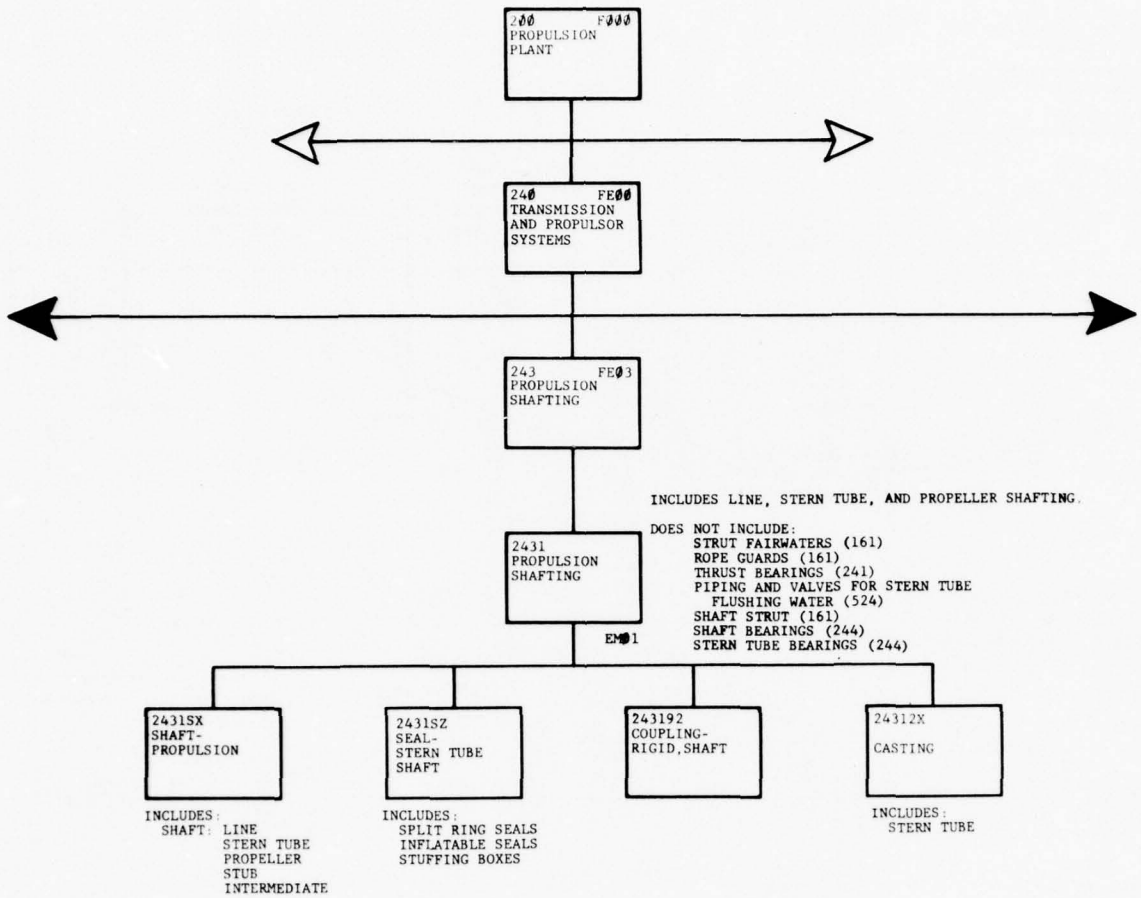


DDG-2 CLASS

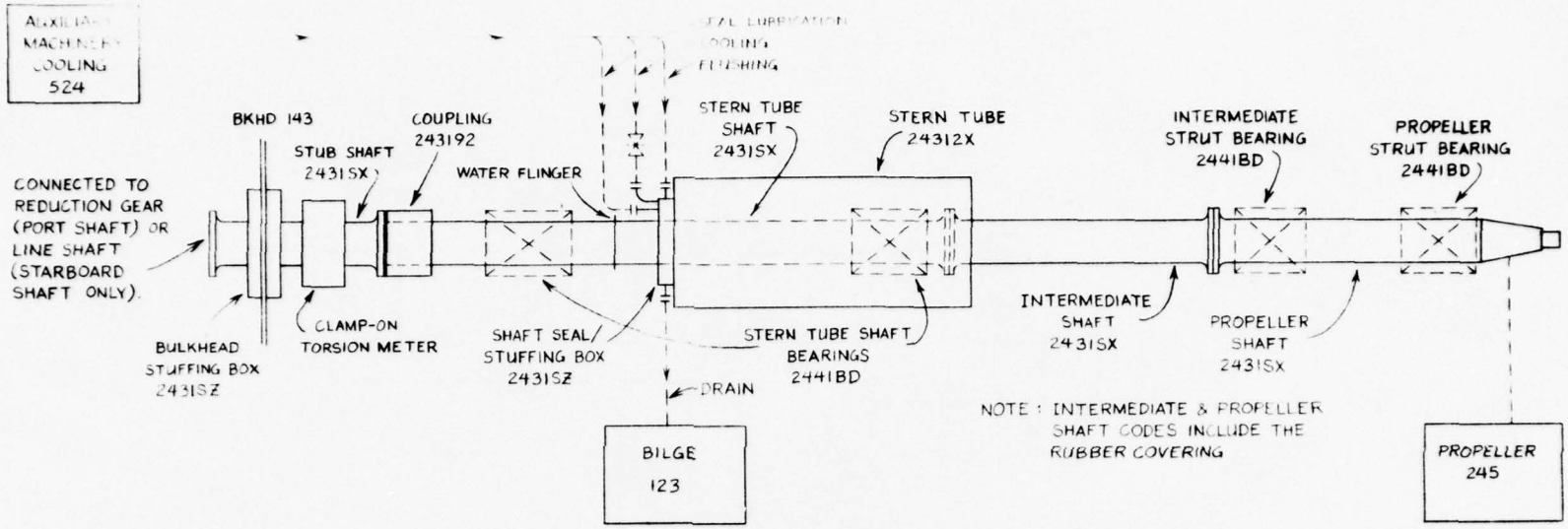
SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM

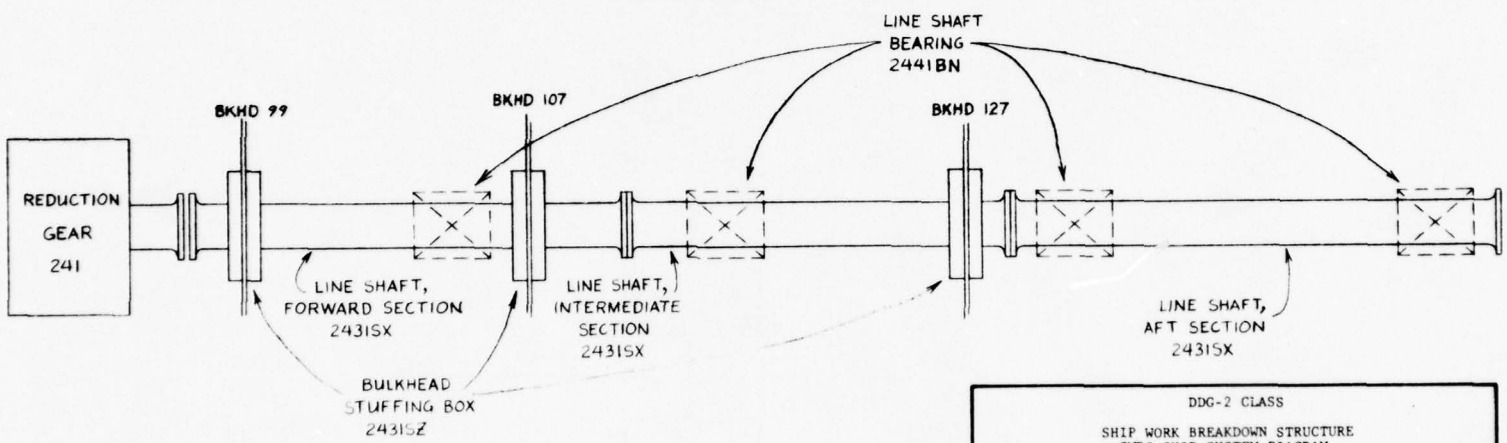
200 PROPULSION PLANT
240 TRANSMISSION AND PROPULSOR SYSTEMS
241 PROPULSION REDUCTION GEARS


200 F000
PROPULSION PLANT
240 F200
TRANSMISSION AND PROPULSOR SYSTEM
242
PROPULSION CLUTCHES AND COUPLINGS
2421
FLEXIBLE COUPLINGS
INCLUDES TURBINE SHAFTING TO REDUCTION GEAR FLEXIBLE COUPLINGS.
D01
242181
COUPLING-FLEXIBLE, SHAFT MAIN REDUCTION GEAR



DDG-2 CLASS
PREPARED 9-28-76

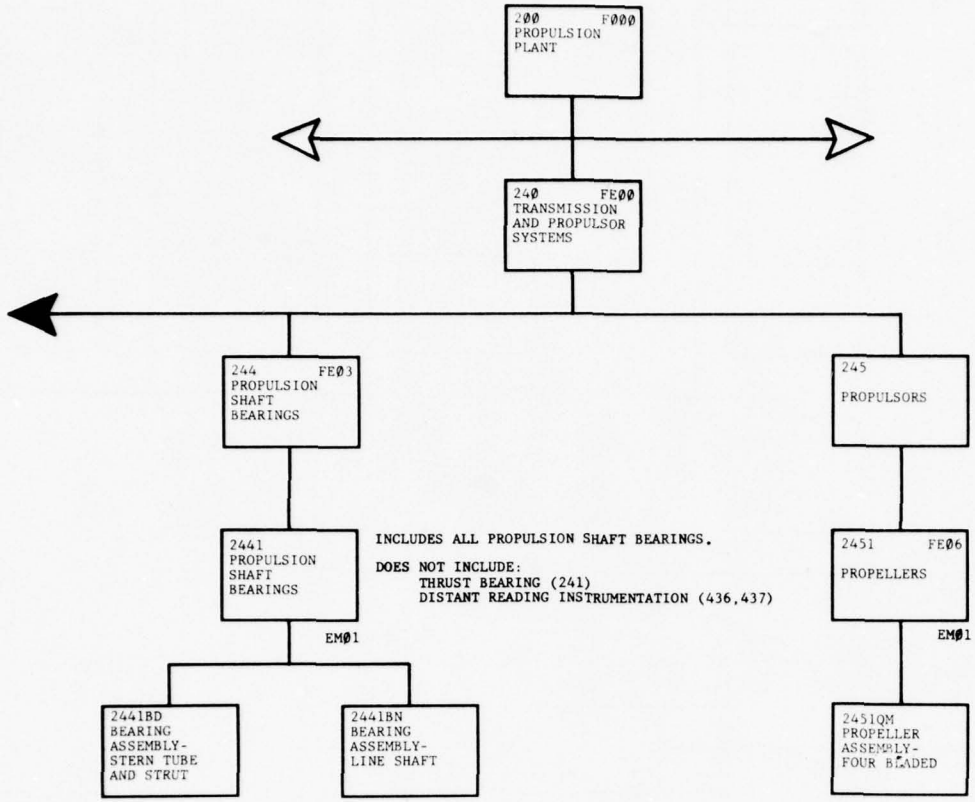




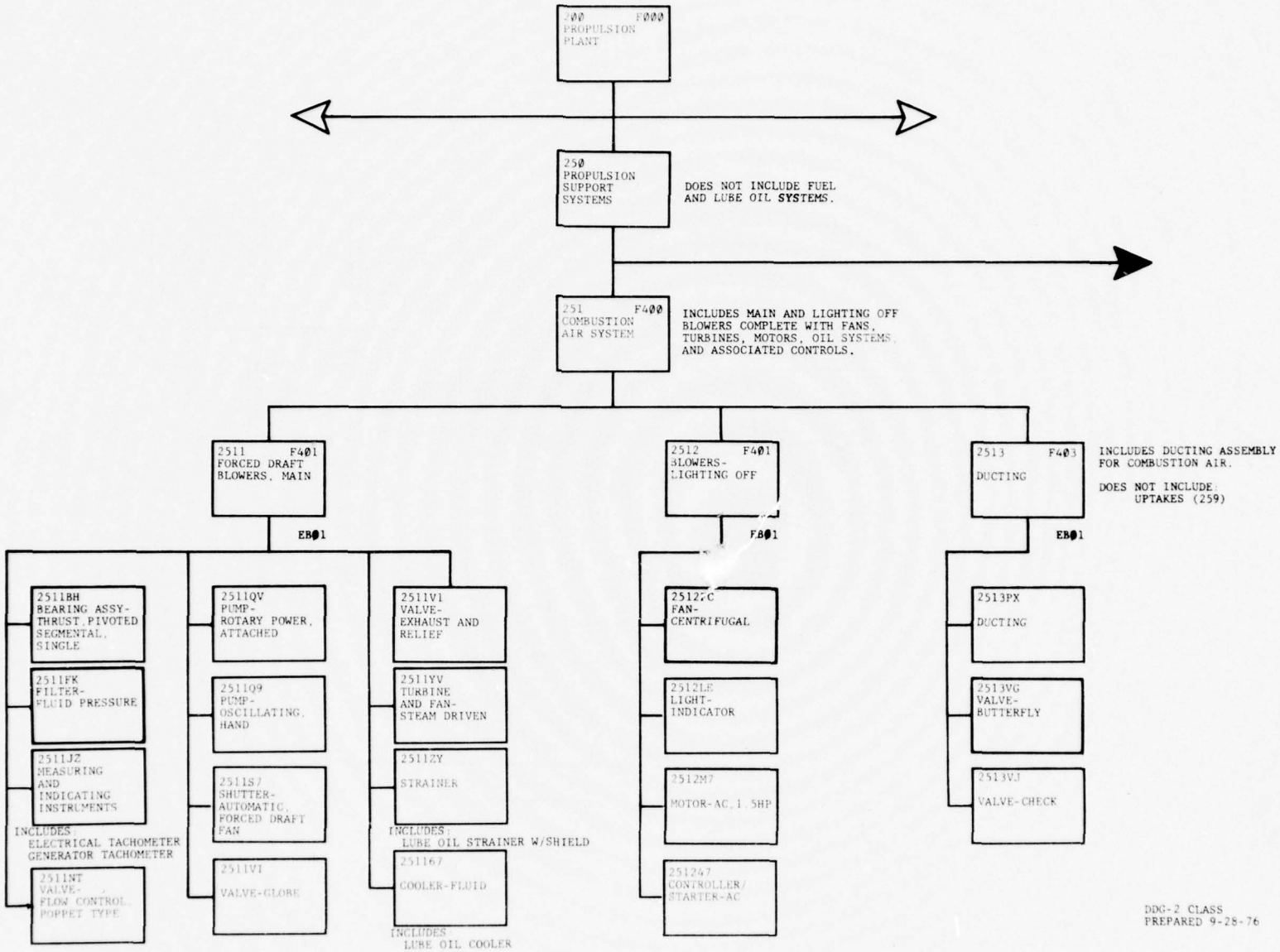
DDG-2 CLASS

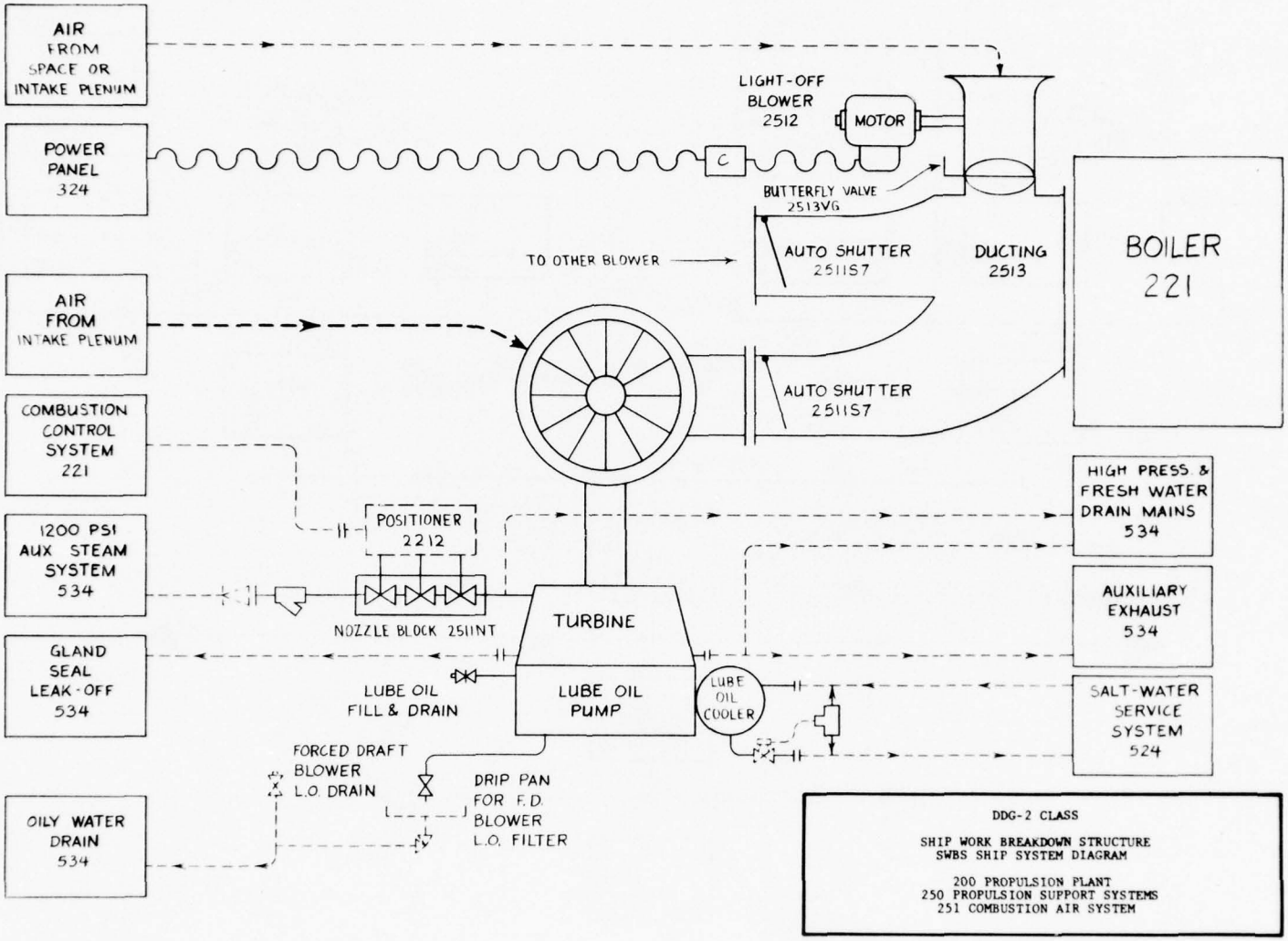
SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM

200 PROPULSION PLANT
240 TRANSMISSION AND PROPULSOR SYSTEMS
243 PROPULSION SHAFTING



DDG-2 CLASS
PREPARED 9-28-76

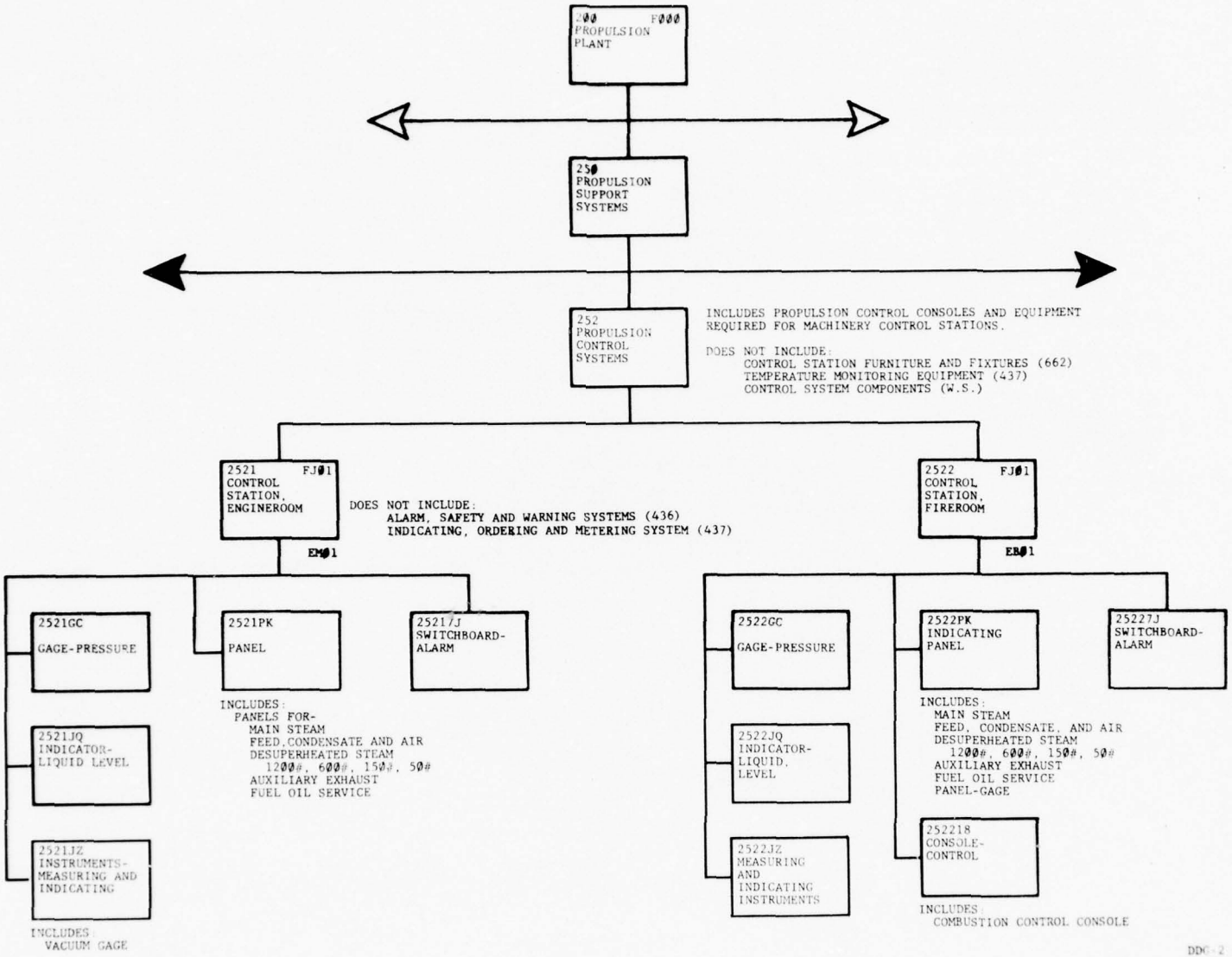

200 F000
PROPULSION PLANT
250
PROPULSION SUPPORT SYSTEMS
DOES NOT INCLUDE FUEL AND LUBE OIL SYSTEMS.
251 F400
COMBUSTION AIR SYSTEM
INCLUDES MAIN AND LIGHTING OFF BLOWERS COMPLETE WITH FANS, TURBINES, MOTORS, OIL SYSTEMS, AND ASSOCIATED CONTROLS.
2511 F401
FORCED DRAFT BLOWERS, MAIN
EB01
2511BH
BEARING ASSY-THRUST, PIVOTED SEGMENTAL, SINGLE
2511FK
FILTER-FLUID PRESSURE
2511JZ
MEASURING AND INDICATING INSTRUMENTS
INCLUDES:
ELECTRICAL TACHOMETER
GENERATOR TACHOMETER
2511NT
VALVE-FLOW CONTROL, POPPET TYPE
2511QV
PUMP-ROTARY POWER, ATTACHED
2511Q9
PUMP-OSCILLATING, HAND
2511S7
SHUTTER-AUTOMATIC, FORCED DRAFT FAN
2511VT
VALVE-GLOBE
2511V1
VALVE-EXHAUST AND RELIEF
2511YV
TURBINE AND FAN-STEAM DRIVEN
2511ZY
STRAINER
INCLUDES:
LUBE OIL STRAINER W/SHIELD
251167
COOLER-FLUID
INCLUDES
LUBE OIL COOLER
2512 F401
BLOWERS-LIGHTING OFF
EB01
2512TC
FAN-CENTRIFUGAL
2512LE
LIGHT-INDICATOR
2512M7
MOTOR-AC, 1.5HP
251247
CONTROLLER/STARTER-AC
2513 F403
DUCTING
INCLUDES DUCTING ASSEMBLY FOR COMBUSTION AIR.
DOES NOT INCLUDE: UPTAKES (259)
EB01
2513PX
DUCTING
2513VG
VALVE-BUTTERFLY
2513VJ
VALVE-CHECK
DDG-2 CLASS
PREPARED 9-28-76



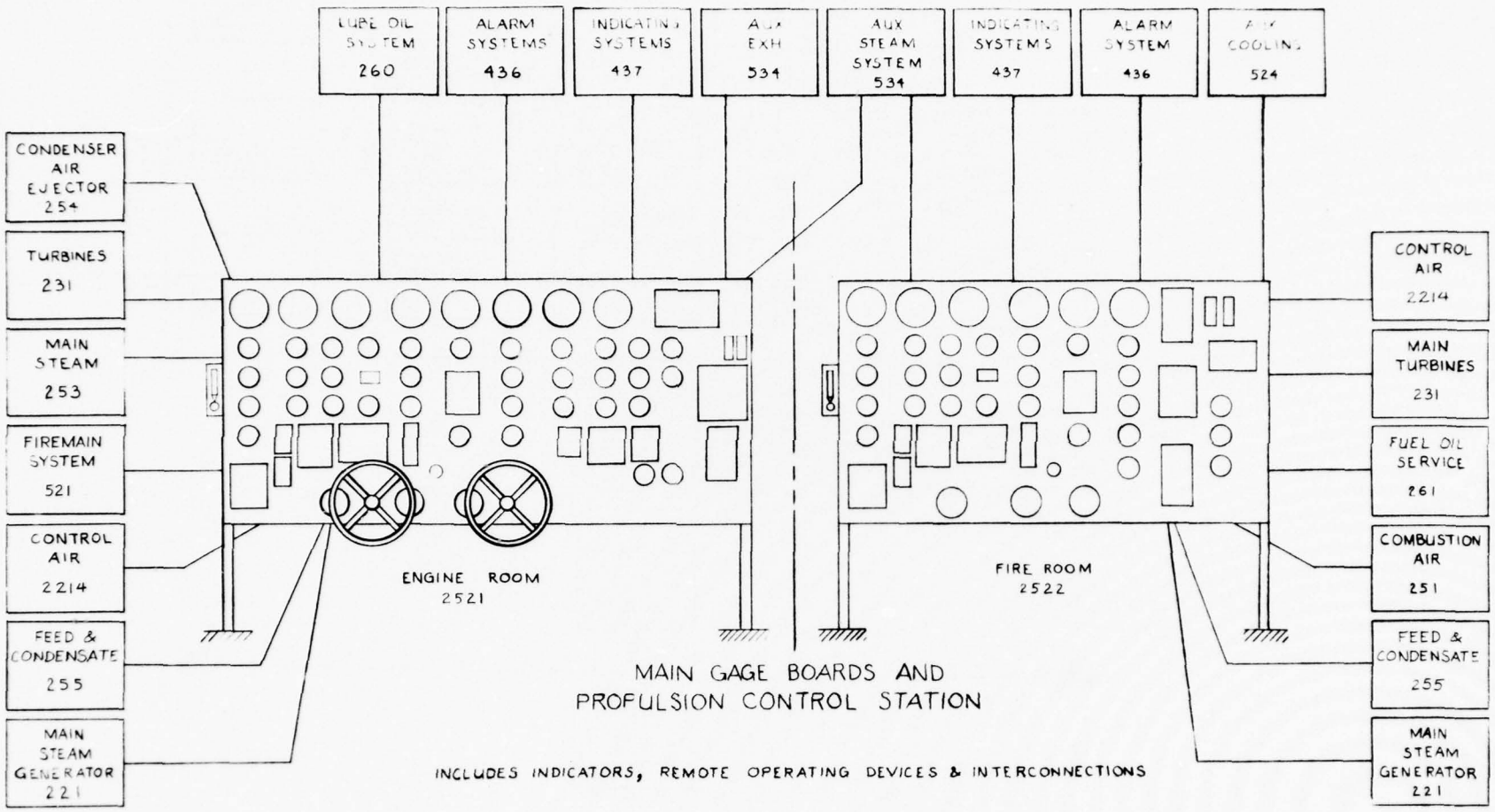
DDG-2 CLASS

SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM

200 PROPULSION PLANT
250 PROPULSION SUPPORT SYSTEMS
251 COMBUSTION AIR SYSTEM



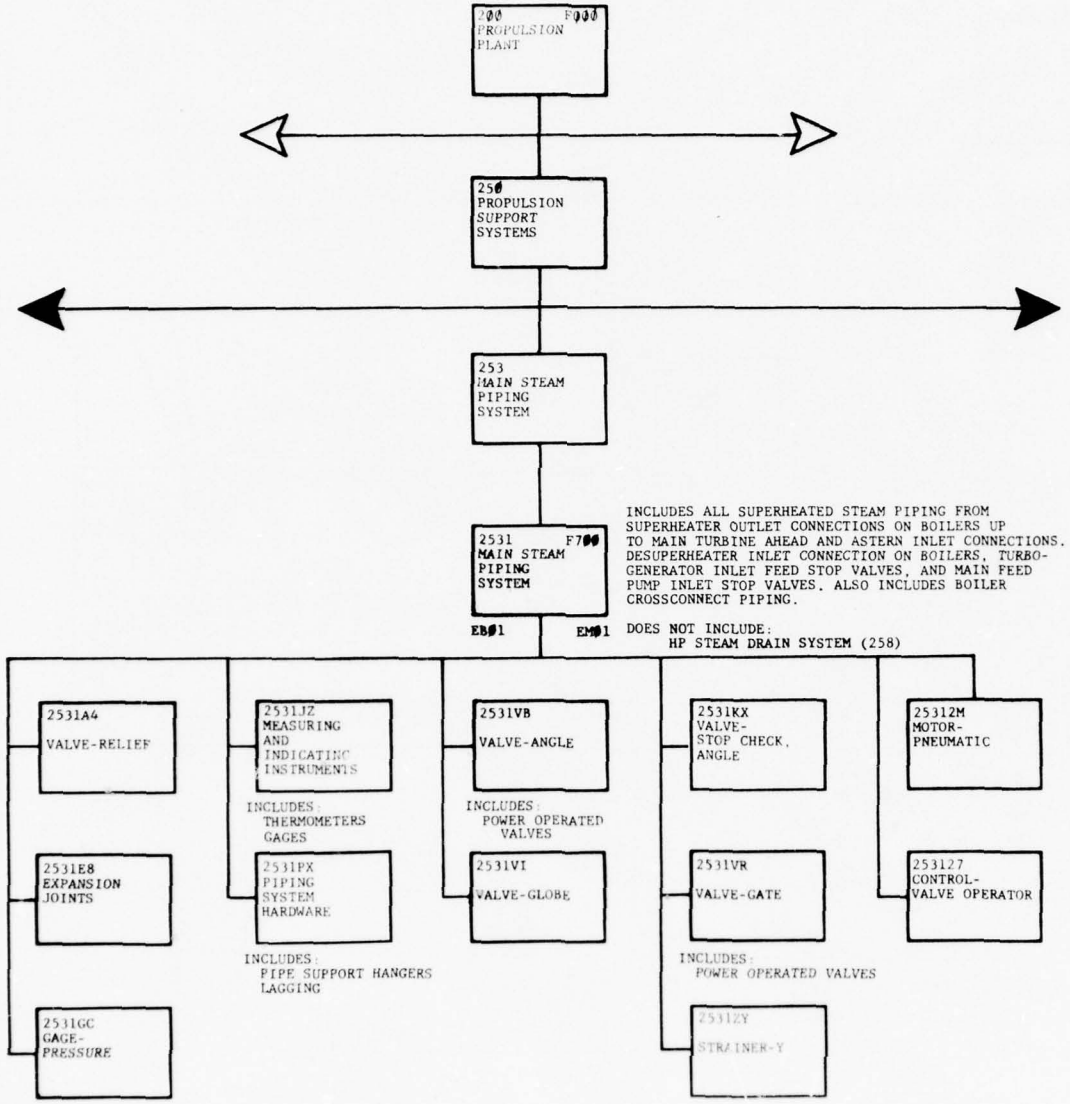
DDG-2 CLASS
PREPARED 9-28-76



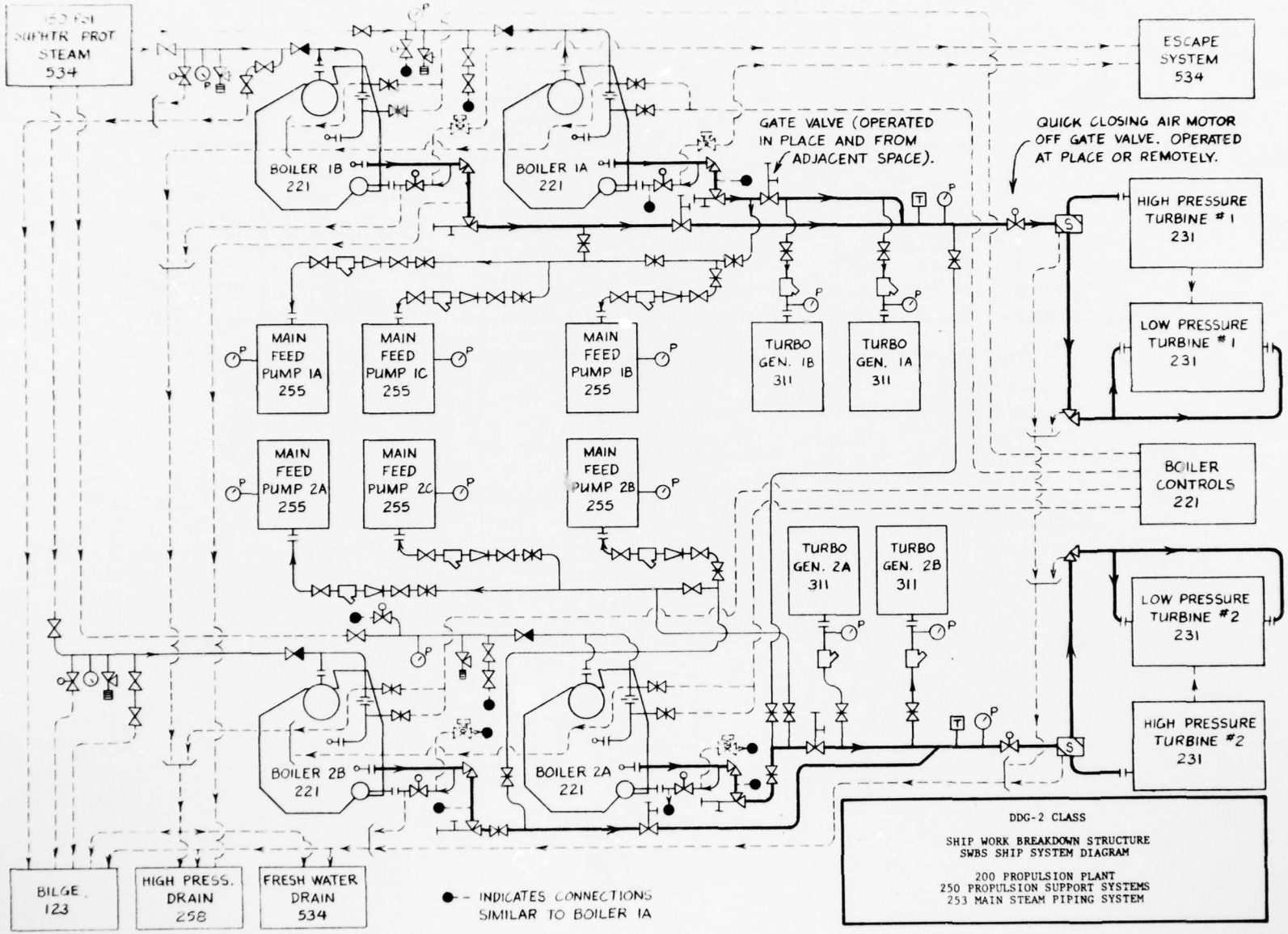
DDG-2 CLASS

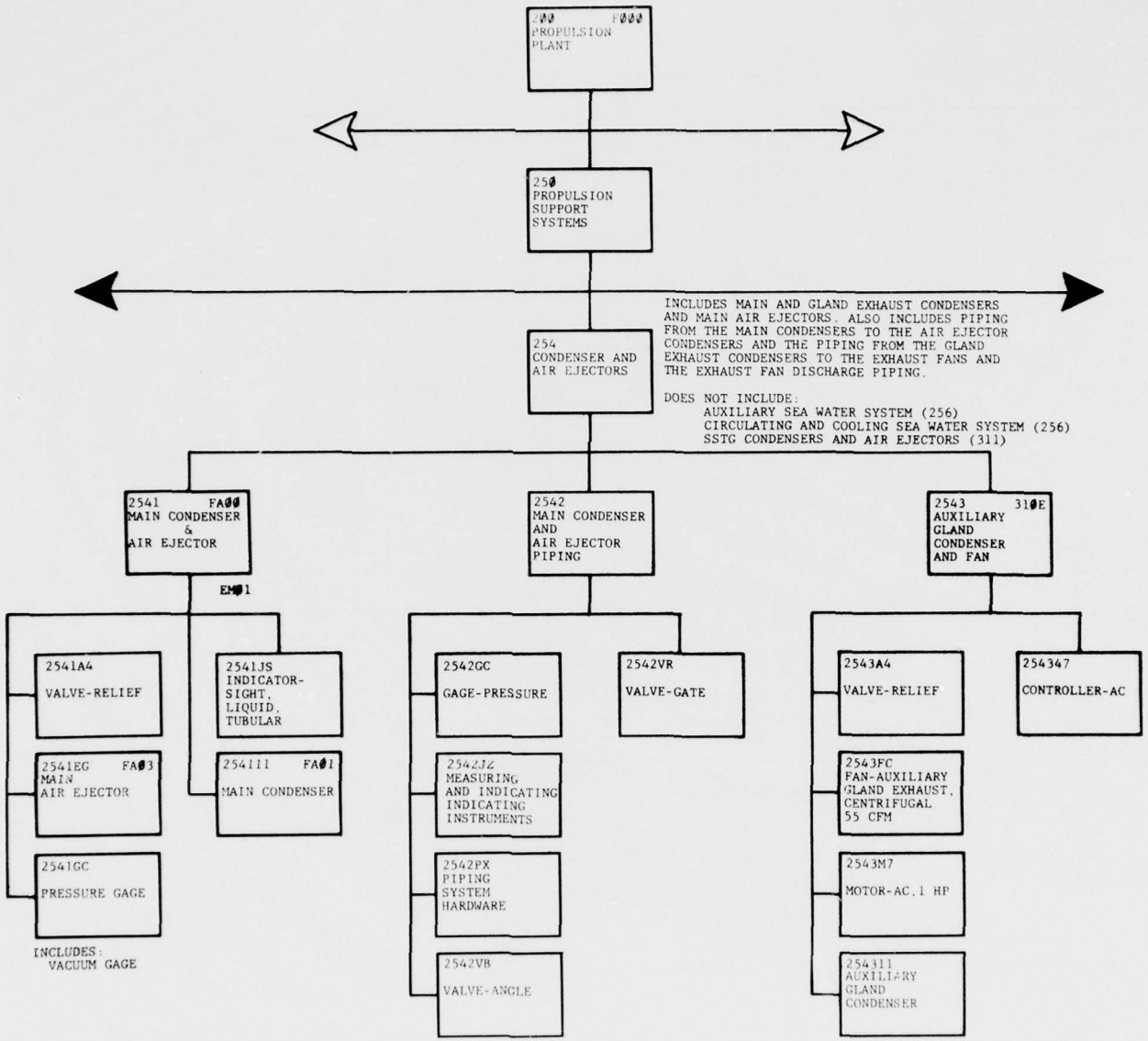
SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM

200 PROPULSION PLANT
250 PROPULSION SUPPORT SYSTEMS
252 PROPULSION CONTROL SYSTEM

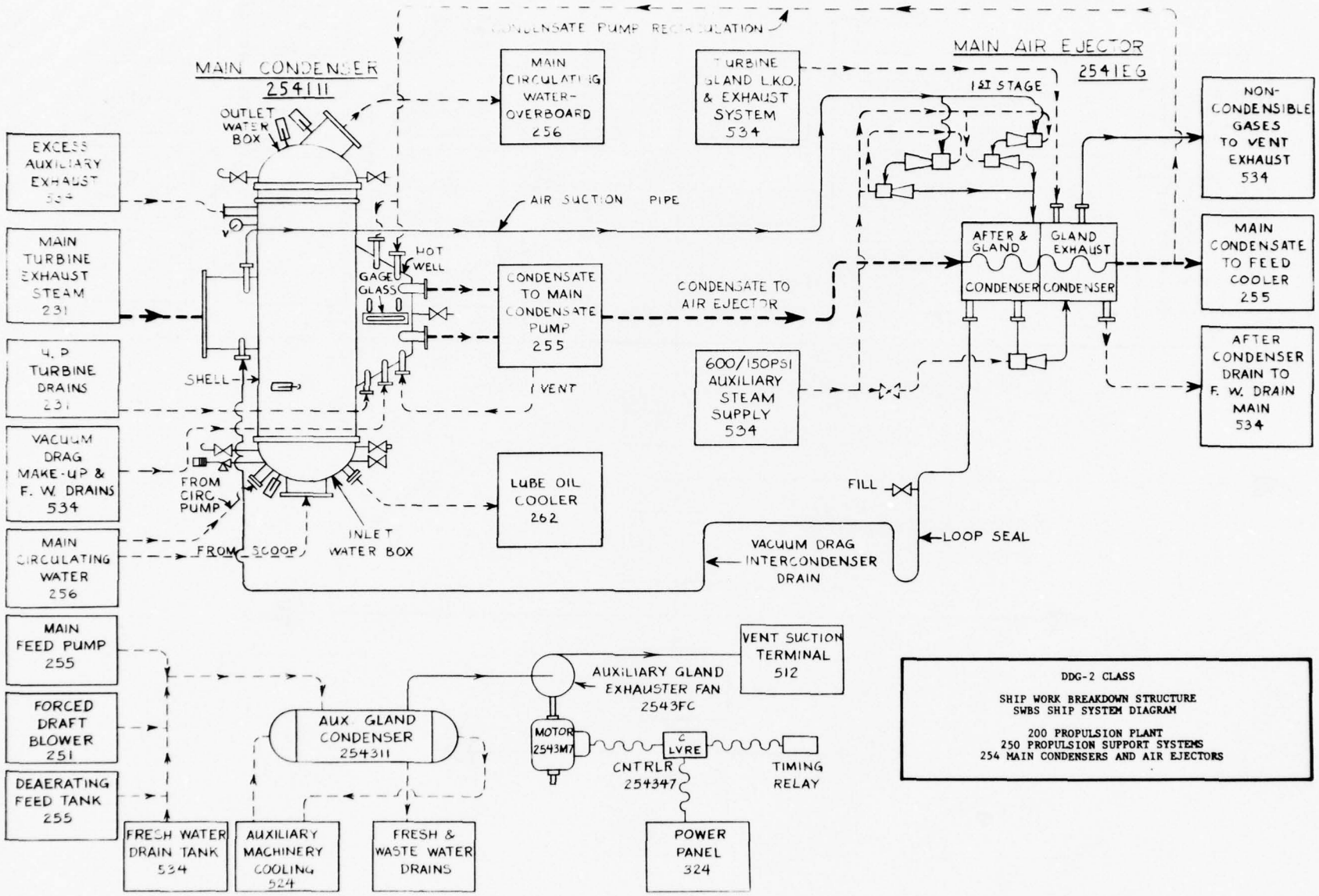


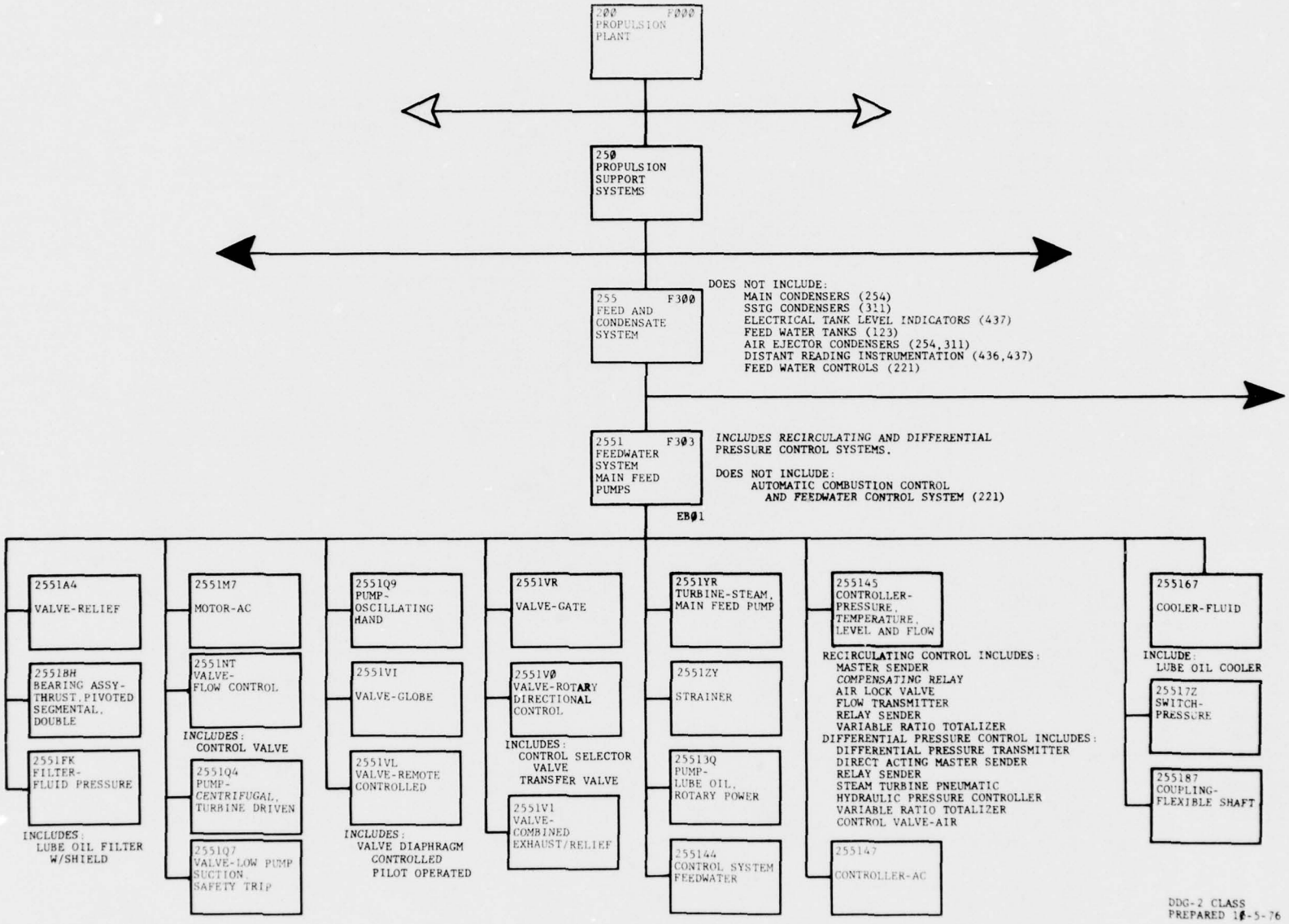
DDG-2 CLASS
PREPARED 9-28-76

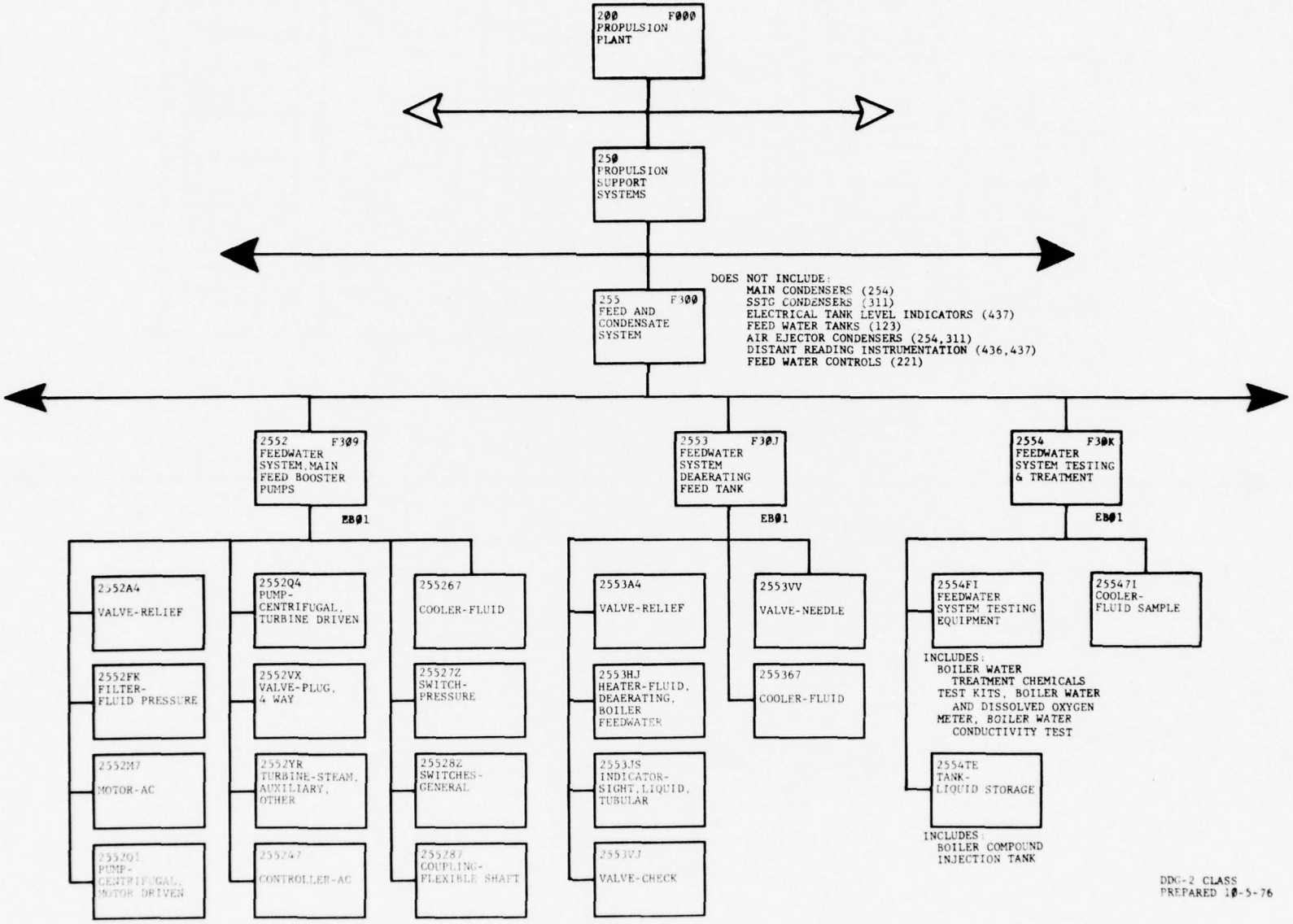

150 PSI SUPHTR PROT STEAM 534
ESCAPE SYSTEM 534
GATE VALVE (OPERATED IN PLACE AND FROM ADJACENT SPACE).
QUICK CLOSING AIR MOTOR OFF GATE VALVE. OPERATED AT PLACE OR REMOTELY.
BOILER 1B 221
BOILER 1A 221
HIGH PRESSURE TURBINE #1 231
LOW PRESSURE TURBINE #1 231
MAIN FEED PUMP 1A 255
MAIN FEED PUMP 1C 255
MAIN FEED PUMP 1B 255
TURBO GEN. 1B 311
TURBO GEN. 1A 311
MAIN FEED PUMP 2A 255
MAIN FEED PUMP 2C 255
MAIN FEED PUMP 2B 255
BOILER CONTROLS 221
TURBO GEN. 2A 311
TURBO GEN. 2B 311
LOW PRESSURE TURBINE #2 231
HIGH PRESSURE TURBINE #2 231
BOILER 2B 221
BOILER 2A 221
BILGE 123
HIGH PRESS. DRAIN 258
FRESH WATER DRAIN 534
● - INDICATES CONNECTIONS SIMILAR TO BOILER 1A
DDG-2 CLASS
SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM
200 PROPULSION PLANT
250 PROPULSION SUPPORT SYSTEMS
253 MAIN STEAM PIPING SYSTEM



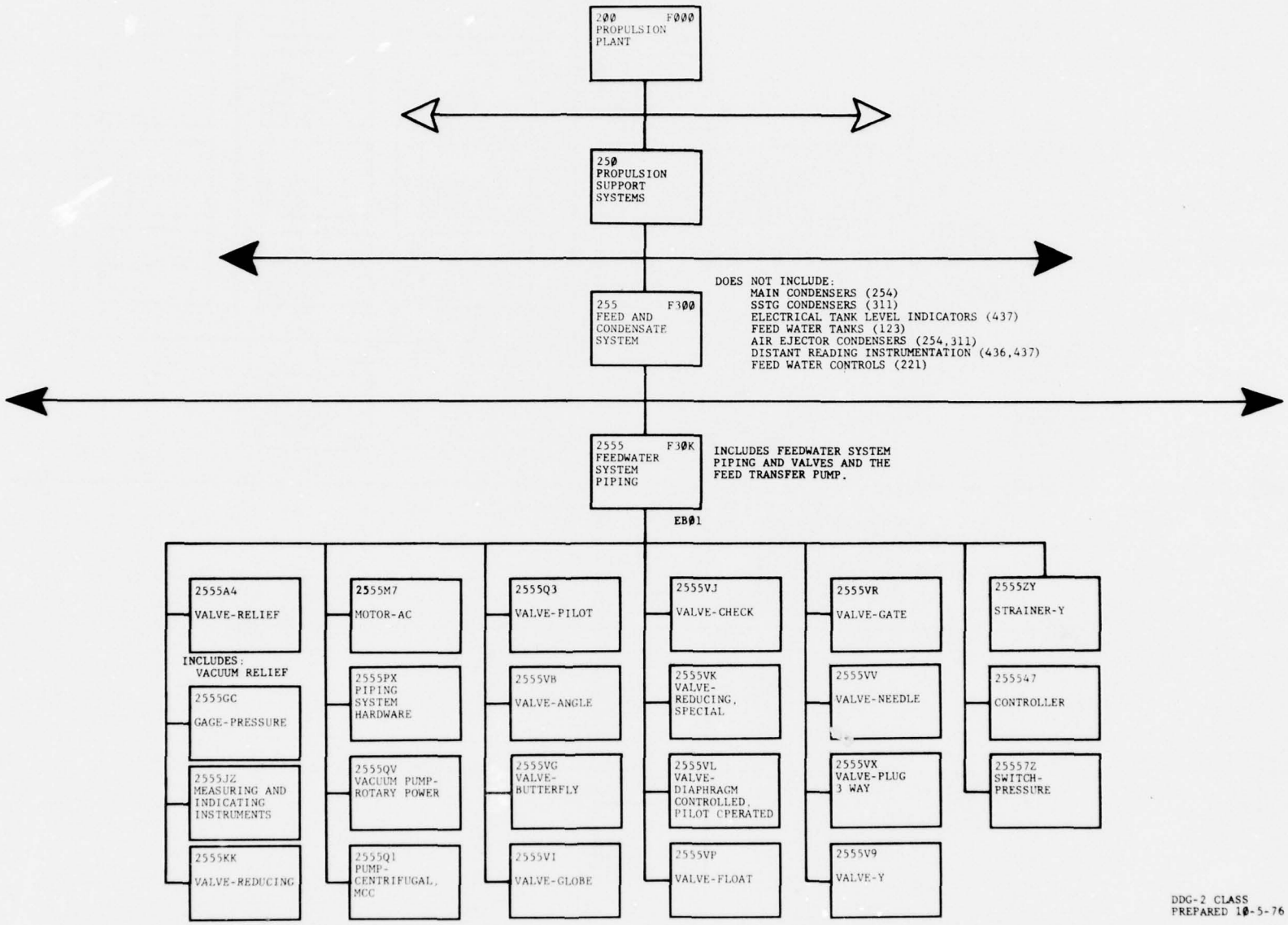
DDG-2 CLASS
PREPARED 9-28-76


CONDENSATE PUMP RECIRCULATION
MAIN CONDENSER
254111
OUTLET WATER BOX
MAIN CIRCULATING WATER-OVERBOARD 256
TURBINE GLAND L.K.O. & EXHAUST SYSTEM 534
MAIN AIR EJECTOR
2541EG
I&II STAGE
NON-CONDENSIBLE GASES TO VENT EXHAUST 534
EXCESS AUXILIARY EXHAUST 534
AIR SUCTION PIPE
MAIN TURBINE EXHAUST STEAM 231
HOT WELL
GAGE GLASS
CONDENSATE TO MAIN CONDENSATE PUMP 255
CONDENSATE TO AIR EJECTOR
AFTER & GLAND CONDENSER
GLAND EXHAUST CONDENSER
MAIN CONDENSATE TO FEED COOLER 255
4. P TURBINE DRAINS 231
SHELL
I VENT
600/150PSI AUXILIARY STEAM SUPPLY 534
AFTER CONDENSER DRAIN TO F. W. DRAIN MAIN 534
VACUUM DRAG MAKE-UP & F. W. DRAINS 534
FROM CIRC PUMP
LUBE OIL COOLER 262
FILL
LOOP SEAL
MAIN CIRCULATING WATER 256
FROM SCOOP
INLET WATER BOX
VACUUM DRAG INTERCONDENSER DRAIN
MAIN FEED PUMP 255
VENT SUCTION TERMINAL 512
AUXILIARY GLAND EXHAUSTER FAN 2543FC
FORCED DRAFT BLOWER 251
AUX GLAND CONDENSER 254311
MOTOR 2543M7
LVRE
CNTRLR 254347
TIMING RELAY
DEAERATING FEED TANK 255
FRESH WATER DRAIN TANK 534
AUXILIARY MACHINERY COOLING 524
FRESH & WASTE WATER DRAINS
POWER PANEL 324
DDG-2 CLASS
SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM
200 PROPULSION PLANT
250 PROPULSION SUPPORT SYSTEMS
254 MAIN CONDENSERS AND AIR EJECTORS

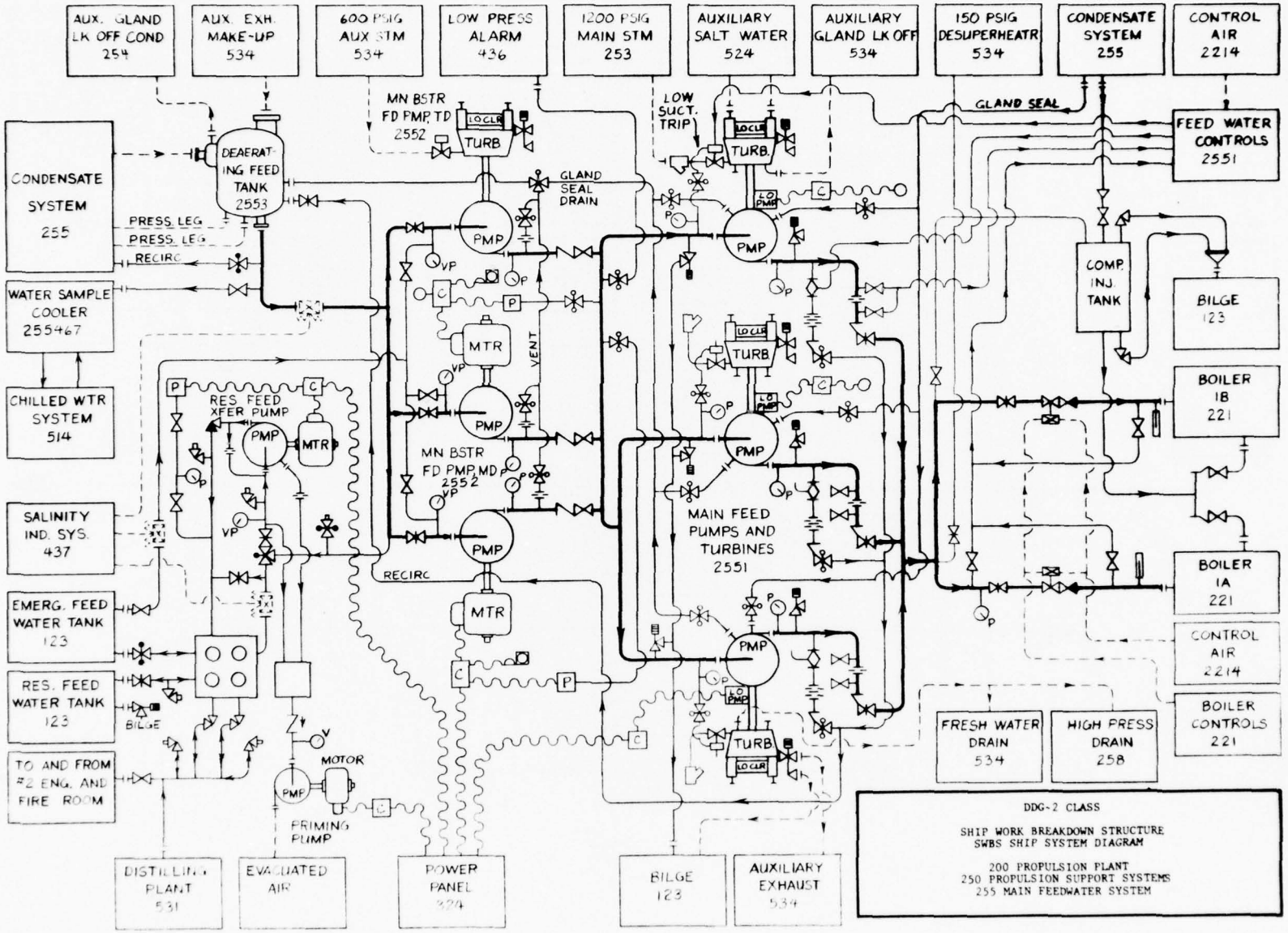

200 F000
PROPULSION PLANT
250
PROPULSION SUPPORT SYSTEMS
255 F300
FEED AND CONDENSATE SYSTEM
DOES NOT INCLUDE:
MAIN CONDENSERS (254)
SSTG CONDENSERS (311)
ELECTRICAL TANK LEVEL INDICATORS (437)
FEED WATER TANKS (123)
AIR EJECTOR CONDENSERS (254,311)
DISTANT READING INSTRUMENTATION (436,437)
FEED WATER CONTROLS (221)
2551 F303
FEEDWATER SYSTEM MAIN FEED PUMPS
EB01
INCLUDES RECIRCULATING AND DIFFERENTIAL PRESSURE CONTROL SYSTEMS.
DOES NOT INCLUDE:
AUTOMATIC COMBUSTION CONTROL AND FEEDWATER CONTROL SYSTEM (221)
2551A4
VALVE-RELIEF
2551BH
BEARING ASSY-THRUST, PIVOTED SEGMENTAL, DOUBLE
2551FK
FILTER-FLUID PRESSURE
INCLUDES:
LUBE OIL FILTER W/SHIELD
2551M7
MOTOR-AC
2551NT
VALVE-FLOW CONTROL
INCLUDES:
CONTROL VALVE
2551Q4
PUMP-CENTRIFUGAL, TURBINE DRIVEN
2551Q7
VALVE-LOW PUMP SUCTION, SAFETY TRIP
2551Q9
PUMP-OSCILLATING HAND
2551VI
VALVE-GLOBE
2551VL
VALVE-REMOTE CONTROLLED
INCLUDES:
VALVE DIAPHRAGM CONTROLLED PILOT OPERATED
2551VR
VALVE-GATE
2551VØ
VALVE-ROTARY DIRECTIONAL CONTROL
INCLUDES:
CONTROL SELECTOR VALVE
TRANSFER VALVE
2551V1
VALVE-COMBINED EXHAUST/RELIEF
2551YR
TURBINE-STEAM, MAIN FEED PUMP
2551ZY
STRAINER
25513Q
PUMP-LUBE OIL, ROTARY POWER
255144
CONTROL SYSTEM FEEDWATER
255145
CONTROLLER-PRESSURE, TEMPERATURE, LEVEL AND FLOW
RECIRCULATING CONTROL INCLUDES:
MASTER SENDER
COMPENSATING RELAY
AIR LOCK VALVE
FLOW TRANSMITTER
RELAY SENDER
VARIABLE RATIO TOTALIZER
DIFFERENTIAL PRESSURE CONTROL INCLUDES:
DIFFERENTIAL PRESSURE TRANSMITTER
DIRECT ACTING MASTER SENDER
RELAY SENDER
STEAM TURBINE PNEUMATIC
HYDRAULIC PRESSURE CONTROLLER
VARIABLE RATIO TOTALIZER
CONTROL VALVE-AIR
255147
CONTROLLER-AC
255167
COOLER-FLUID
INCLUDE:
LUBE OIL COOLER
25517Z
SWITCH-PRESSURE
255187
COUPLING-FLEXIBLE SHAFT
DDG-2 CLASS
PREPARED 10-5-76

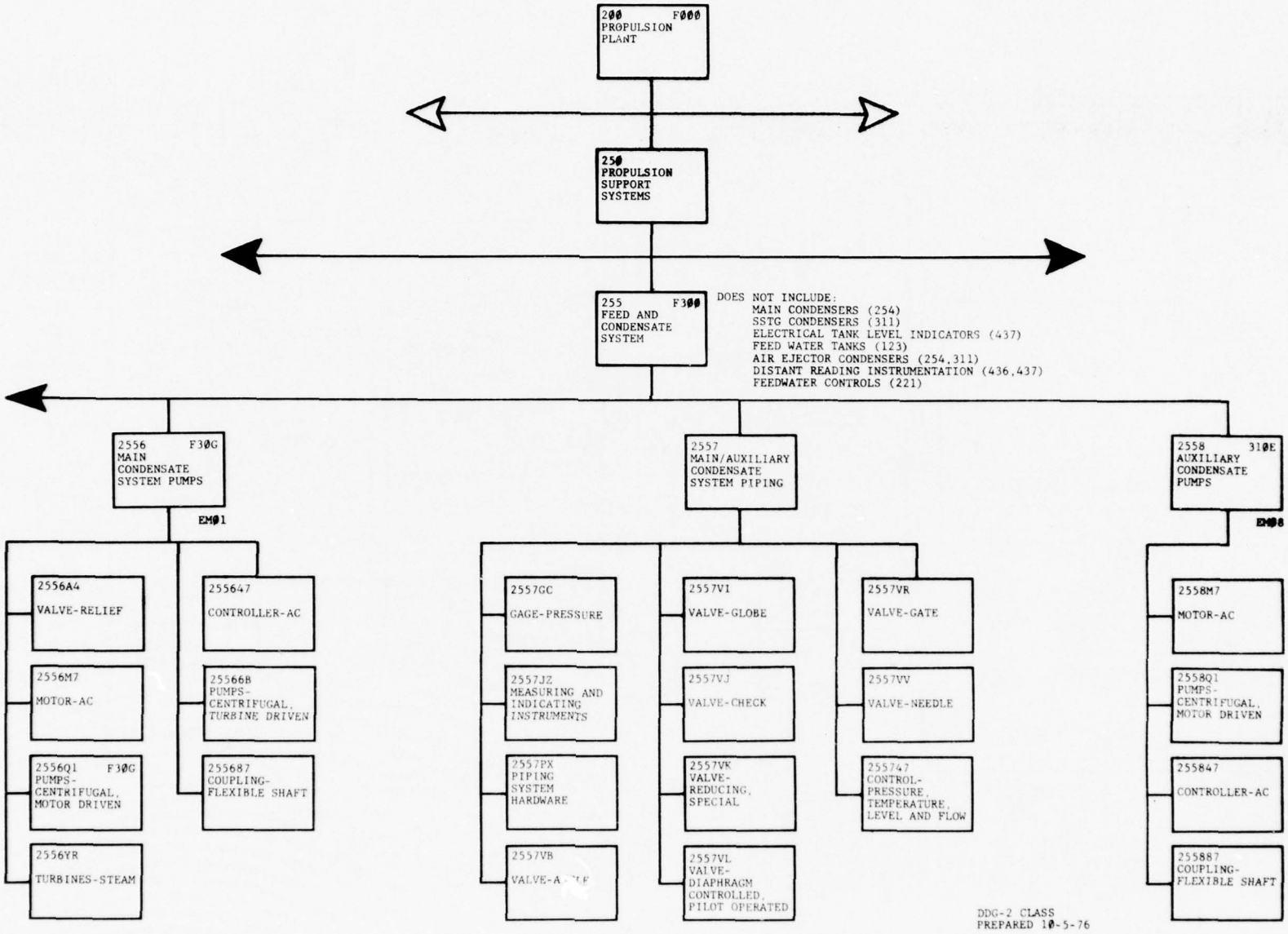


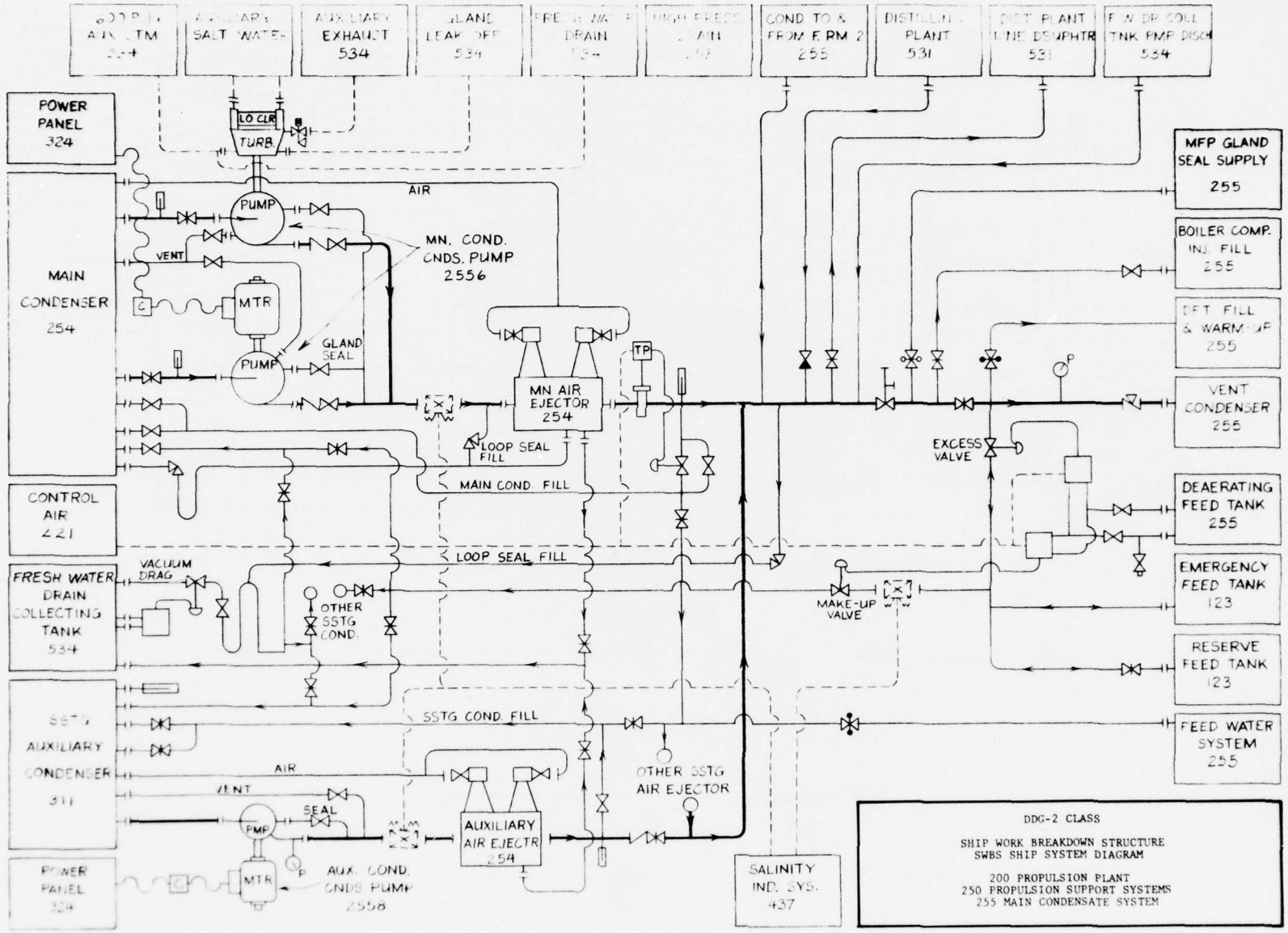
DDG-2 CLASS
PREPARED 10-5-76

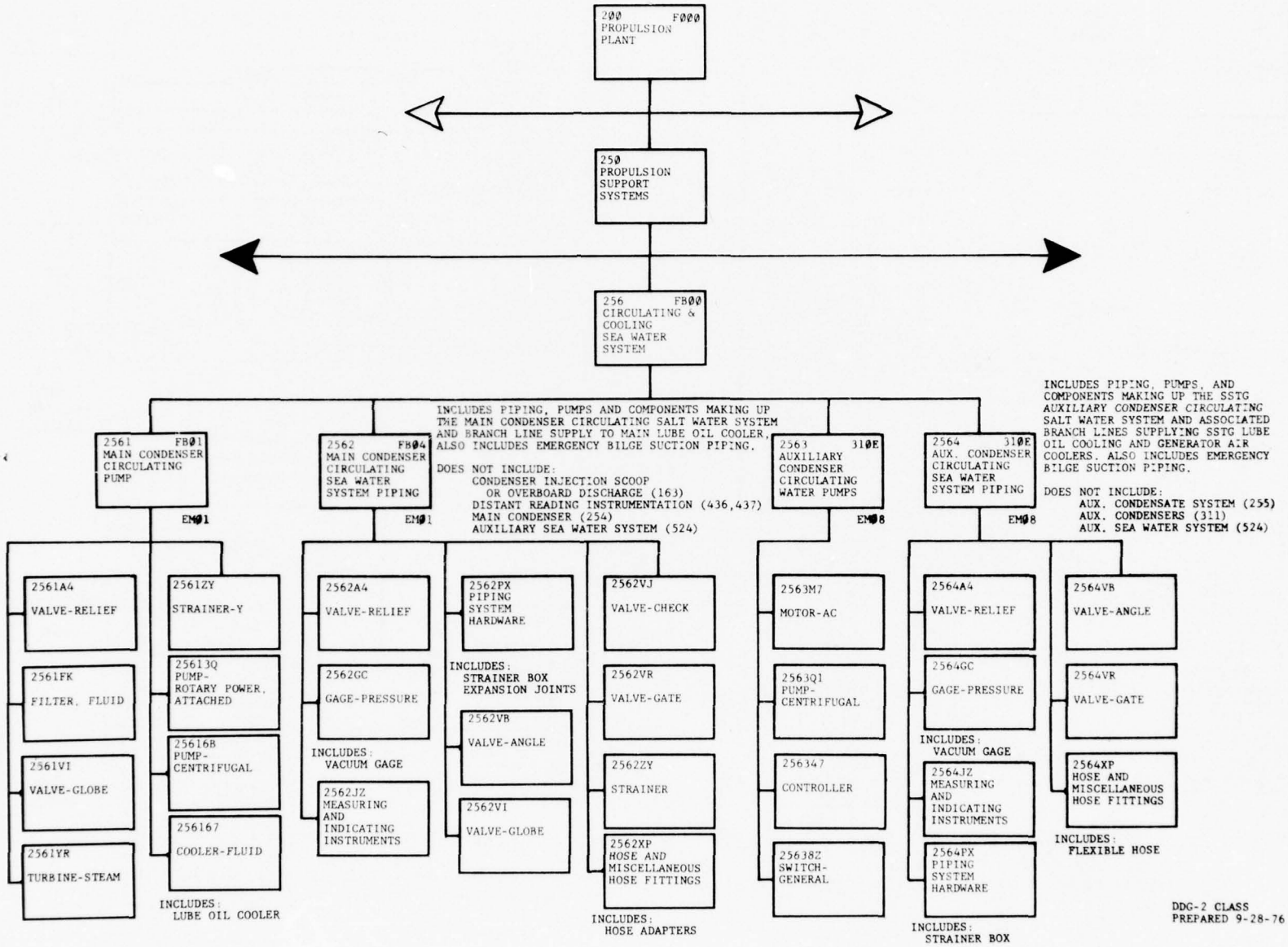


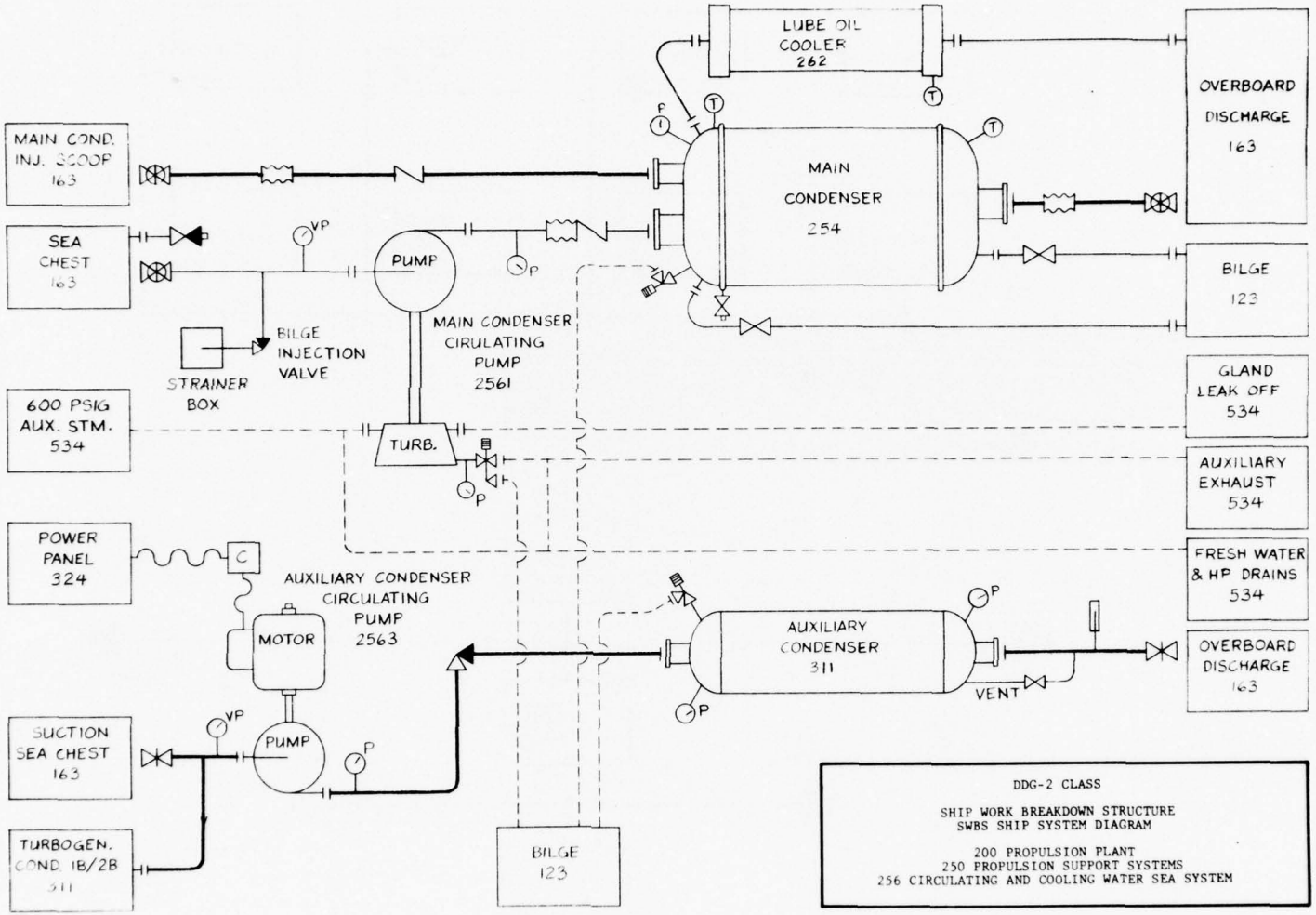
DDG-2 CLASS
PREPARED 10-5-76

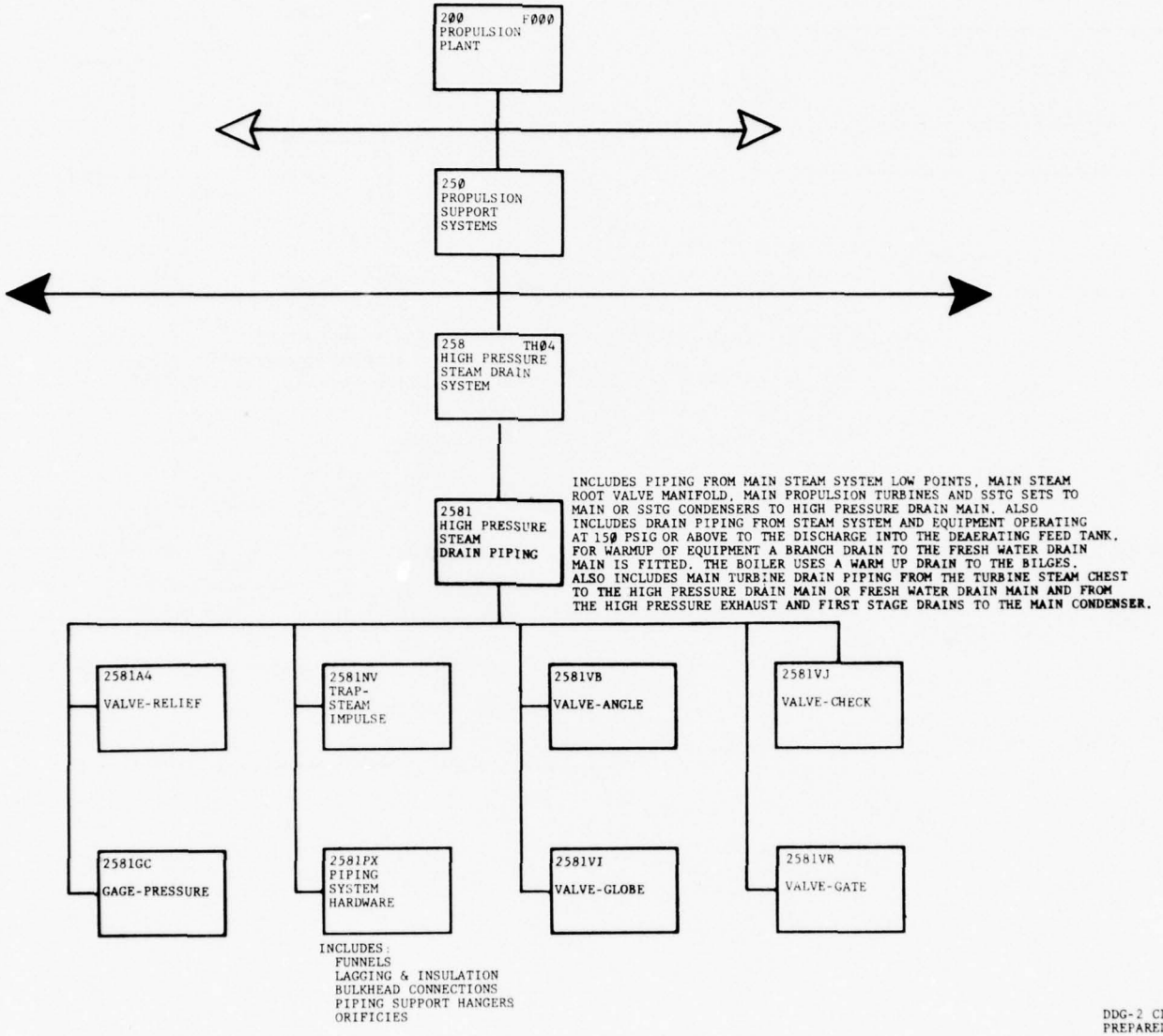

AUX. GLAND LK OFF COND 254
AUX. EXH. MAKE-UP 534
600 PSIG AUX STM 534
LOW PRESS ALARM 436
1200 PSIG MAIN STM 253
AUXILIARY SALT WATER 524
AUXILIARY GLAND LK OFF 534
150 PSIG DESUPERHEATR 534
CONDENSATE SYSTEM 255
CONTROL AIR 2214
CONDENSATE SYSTEM 255
DEAERATING FEED TANK 2553
MN BSTR FD PMP, TD 2552
TURB
LOCLR
GLAND SEAL DRAIN
LOW SUCT. TRIP
GLAND SEAL
FEED WATER CONTROLS 2551
PRESS. LEG
PRESS. LEG
RECIRC
PMP
MTR
VP
P
C
VENT
WATER SAMPLE COOLER 255467
CHILLED WTR SYSTEM 514
RES. FEED XFER PUMP
MN BSTR FD PMP, MD 2552
MAIN FEED PUMPS AND TURBINES 2551
COMP. INJ. TANK
BILGE 123
BOILER 1B 221
BOILER 1A 221
SALINITY IND. SYS. 437
EMERG. FEED WATER TANK 123
RES. FEED WATER TANK 123
BILGE
TO AND FROM #2 ENG. AND FIRE ROOM
MOTOR
PRIMING PUMP
V
CONTROL AIR 2214
BOILER CONTROLS 221
FRESH WATER DRAIN 534
HIGH PRESS DRAIN 258
DISTILLING PLANT 531
EVACUATED AIR
POWER PANEL 324
BILGE 123
AUXILIARY EXHAUST 534
DDG-2 CLASS
SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM
200 PROPULSION PLANT
250 PROPULSION SUPPORT SYSTEMS
255 MAIN FEEDWATER SYSTEM


200 F000
PROPULSION PLANT
250
PROPULSION SUPPORT SYSTEMS
255 F300
FEED AND CONDENSATE SYSTEM
DOES NOT INCLUDE:
MAIN CONDENSERS (254)
SSTG CONDENSERS (311)
ELECTRICAL TANK LEVEL INDICATORS (437)
FEED WATER TANKS (123)
AIR EJECTOR CONDENSERS (254,311)
DISTANT READING INSTRUMENTATION (436,437)
FEEDWATER CONTROLS (221)
2556 F30G
MAIN CONDENSATE SYSTEM PUMPS
EM01
2556A4
VALVE-RELIEF
2556M7
MOTOR-AC
2556Q1 F30G
PUMPS-CENTRIFUGAL, MOTOR DRIVEN
2556YR
TURBINES-STEAM
255647
CONTROLLER-AC
25566B
PUMPS-CENTRIFUGAL, TURBINE DRIVEN
255687
COUPLING-FLEXIBLE SHAFT
2557
MAIN/AUXILIARY CONDENSATE SYSTEM PIPING
2557GC
GAGE-PRESSURE
2557JZ
MEASURING AND INDICATING INSTRUMENTS
2557PX
PIPING SYSTEM HARDWARE
2557VB
2557VI
VALVE-GLOBE
2557VJ
VALVE-CHECK
2557VK
VALVE-REDUCING, SPECIAL
2557VL
VALVE-DIAPHRAGM CONTROLLED, PILOT OPERATED
2557VR
VALVE-GATE
2557VV
VALVE-NEEDLE
255747
CONTROL-PRESSURE, TEMPERATURE, LEVEL AND FLOW
2558 310E
AUXILIARY CONDENSATE PUMPS
EM08
2558M7
MOTOR-AC
2558Q1
PUMPS-CENTRIFUGAL, MOTOR DRIVEN
255847
CONTROLLER-AC
255887
COUPLING-FLEXIBLE SHAFT
DDG-2 CLASS
PREPARED 10-5-76

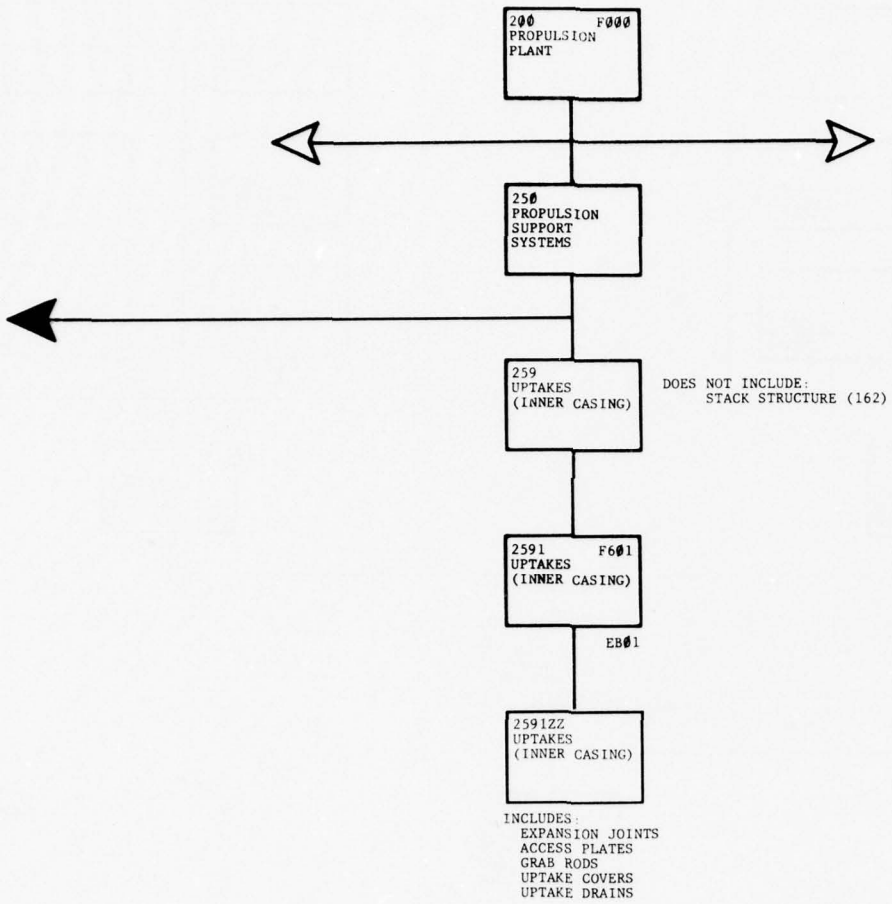

AUXILIARY EXHAUST 534
GLAND LEAK OFF 534
COND TO & FROM E RM 2 255
DISTILLING PLANT 531
DIST PLANT LINE DRAIN HTR 531
FW DR COLL TNK PMP DISCH 534
POWER PANEL 324
LO CLR
TURB.
AIR
PUMP
VENT
MTR
MAIN CONDENSER 254
MN. COND. CNDS. PUMP 2556
GLAND SEAL
PUMP
MN AIR EJECTOR 254
TP
LOOP SEAL FILL
MAIN COND. FILL
CONTROL AIR 221
LOOP SEAL FILL
VACUUM DRAG
FRESH WATER DRAIN COLLECTING TANK 534
OTHER SSTG COND.
SSTG AUXILIARY CONDENSER 311
SSTG COND. FILL
AIR
VENT
SEAL
PMP
MTR
AUX. COND. CNDS PUMP 2558
POWER PANEL 324
AUXILIARY AIR EJECTR 254
OTHER SSTG AIR EJECTOR
SALINITY IND. SYS. 437
EXCESS VALVE
MAKE-UP VALVE
MFP GLAND SEAL SUPPLY 255
BOILER COMP. INJ. FILL 255
DFT FILL & WARM-UP 255
VENT CONDENSER 255
DEAERATING FEED TANK 255
EMERGENCY FEED TANK 123
RESERVE FEED TANK 123
FEED WATER SYSTEM 255
DDG-2 CLASS
SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM
200 PROPULSION PLANT
250 PROPULSION SUPPORT SYSTEMS
255 MAIN CONDENSATE SYSTEM


200 F000
PROPULSION PLANT
250
PROPULSION SUPPORT SYSTEMS
256 FB00
CIRCULATING & COOLING SEA WATER SYSTEM
INCLUDES PIPING, PUMPS AND COMPONENTS MAKING UP THE MAIN CONDENSER CIRCULATING SALT WATER SYSTEM AND BRANCH LINE SUPPLY TO MAIN LUBE OIL COOLER, ALSO INCLUDES EMERGENCY BILGE SUCTION PIPING.
DOES NOT INCLUDE:
CONDENSER INJECTION SCOOP OR OVERBOARD DISCHARGE (163)
DISTANT READING INSTRUMENTATION (436,437)
MAIN CONDENSER (254)
AUXILIARY SEA WATER SYSTEM (524)
INCLUDES PIPING, PUMPS, AND COMPONENTS MAKING UP THE SSTG AUXILIARY CONDENSER CIRCULATING SALT WATER SYSTEM AND ASSOCIATED BRANCH LINES SUPPLYING SSTG LUBE OIL COOLING AND GENERATOR AIR COOLERS. ALSO INCLUDES EMERGENCY BILGE SUCTION PIPING.
DOES NOT INCLUDE:
AUX. CONDENSATE SYSTEM (255)
AUX. CONDENSERS (311)
AUX. SEA WATER SYSTEM (524)
2561 FB01
MAIN CONDENSER CIRCULATING PUMP
EM01
2561A4
VALVE-RELIEF
2561FK
FILTER, FLUID
2561VI
VALVE-GLOBE
2561YR
TURBINE-STEAM
2561ZY
STRAINER-Y
25613Q
PUMP-ROTARY POWER, ATTACHED
25616B
PUMP-CENTRIFUGAL
256167
COOLER-FLUID
INCLUDES: LUBE OIL COOLER
2562 FB04
MAIN CONDENSER CIRCULATING SEA WATER SYSTEM PIPING
EM01
2562A4
VALVE-RELIEF
2562GC
GAGE-PRESSURE
INCLUDES: VACUUM GAGE
2562JZ
MEASURING AND INDICATING INSTRUMENTS
2562PX
PIPING SYSTEM HARDWARE
INCLUDES: STRAINER BOX EXPANSION JOINTS
2562VB
VALVE-ANGLE
2562VI
VALVE-GLOBE
2562VJ
VALVE-CHECK
2562VR
VALVE-GATE
2562ZY
STRAINER
2562XP
HOSE AND MISCELLANEOUS HOSE FITTINGS
INCLUDES: HOSE ADAPTERS
2563 310E
AUXILIARY CONDENSER CIRCULATING WATER PUMPS
EM08
2563M7
MOTOR-AC
2563Q1
PUMP-CENTRIFUGAL
256347
CONTROLLER
25638Z
SWITCH-GENERAL
2564 310E
AUX. CONDENSER CIRCULATING SEA WATER SYSTEM PIPING
EM08
2564A4
VALVE-RELIEF
2564GC
GAGE-PRESSURE
INCLUDES: VACUUM GAGE
2564JZ
MEASURING AND INDICATING INSTRUMENTS
2564PX
PIPING SYSTEM HARDWARE
INCLUDES: STRAINER BOX
2564VB
VALVE-ANGLE
2564VR
VALVE-GATE
2564XP
HOSE AND MISCELLANEOUS HOSE FITTINGS
INCLUDES: FLEXIBLE HOSE
DDG-2 CLASS
PREPARED 9-28-76

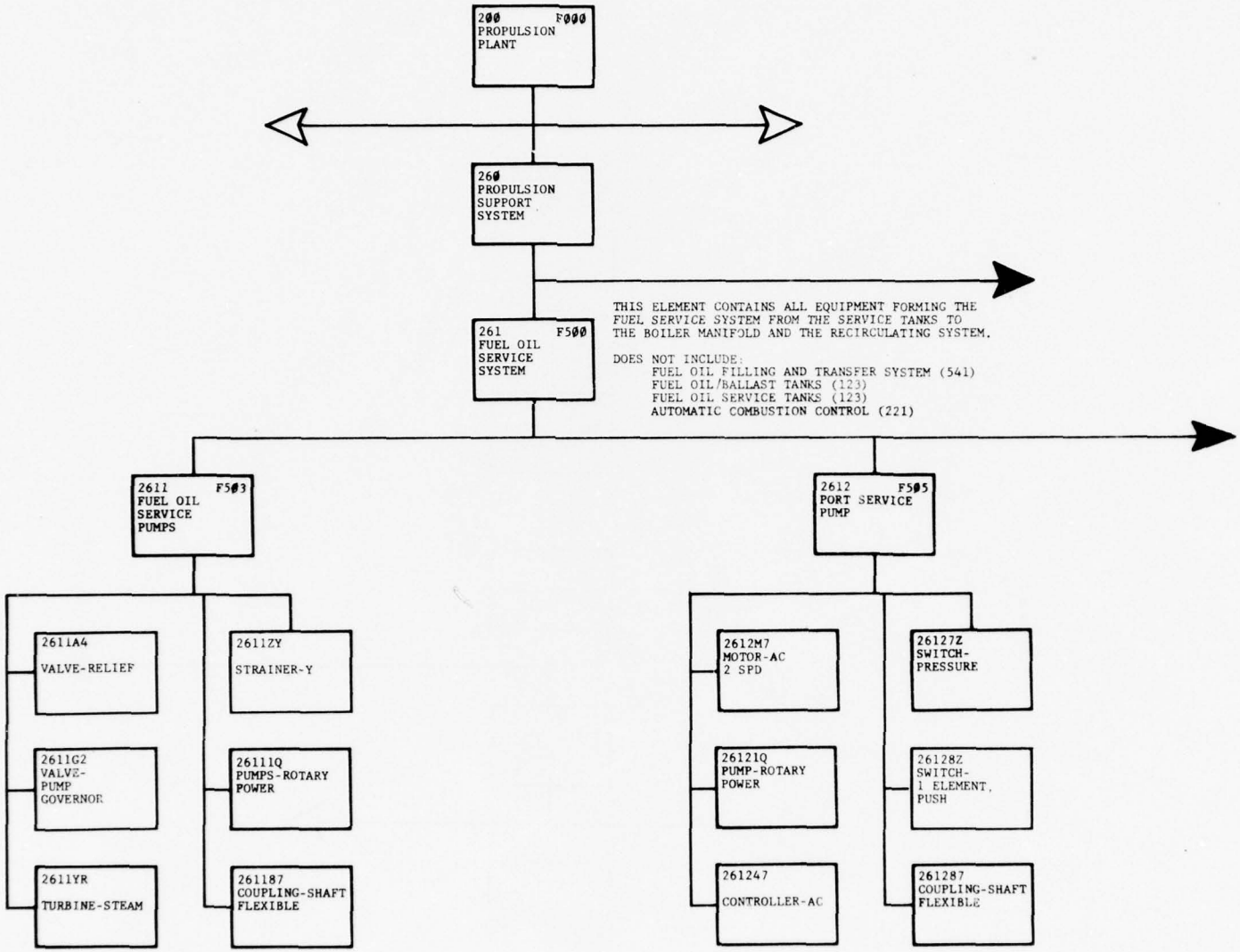

LUBE OIL COOLER 262
OVERBOARD DISCHARGE 163
MAIN COND. INJ. SCOOP 163
MAIN CONDENSER 254
SEA CHEST 163
PUMP
BILGE 123
BILGE INJECTION VALVE
STRAINER BOX
MAIN CONDENSER CIRULATING PUMP 2561
GLAND LEAK OFF 534
600 PSIG AUX. STM. 534
TURB.
AUXILIARY EXHAUST 534
POWER PANEL 324
FRESH WATER & HP DRAINS 534
AUXILIARY CONDENSER CIRCULATING PUMP 2563
MOTOR
AUXILIARY CONDENSER 311
OVERBOARD DISCHARGE 163
VENT
SUCTION SEA CHEST 163
PUMP
TURBOGEN. COND. 1B/2B 311
BILGE 123
DDG-2 CLASS
SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM
200 PROPULSION PLANT
250 PROPULSION SUPPORT SYSTEMS
256 CIRCULATING AND COOLING WATER SEA SYSTEM



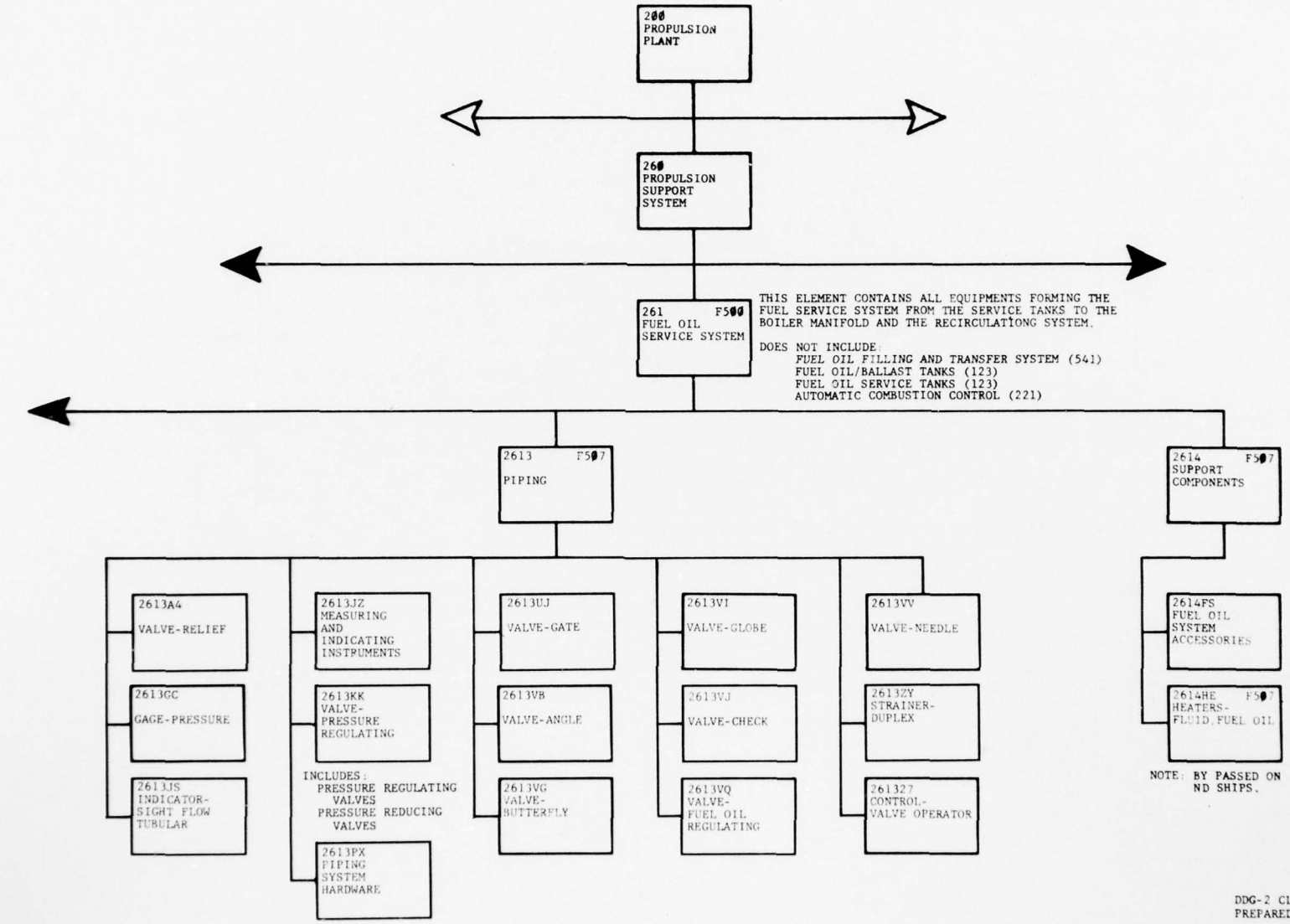
DDG-2 CLASS
PREPARED 9-28-76



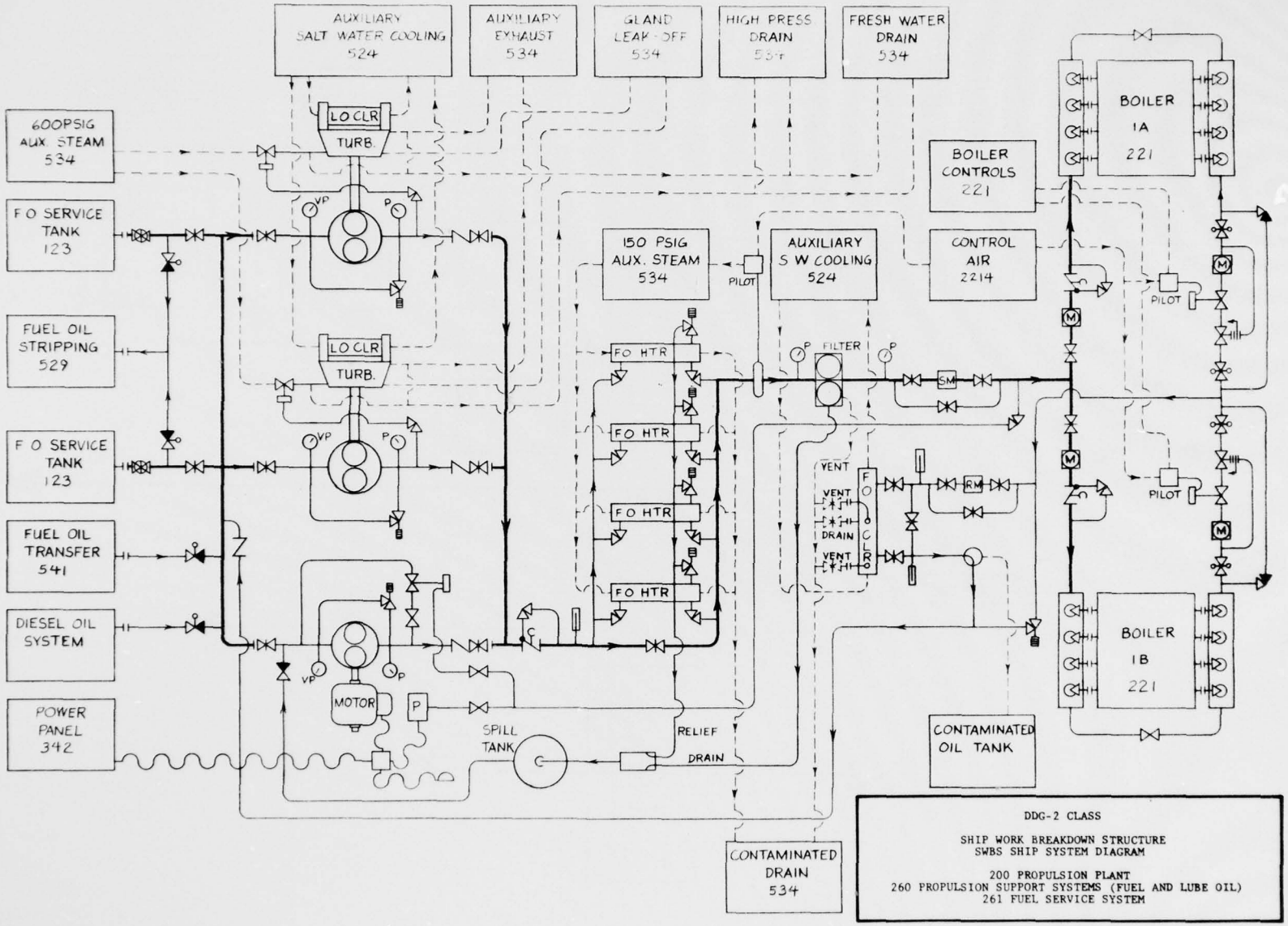
DDG-2 CLASS
PREPARED 9-28-76



DDG-2 CLASS
PREPARED 9-28-76



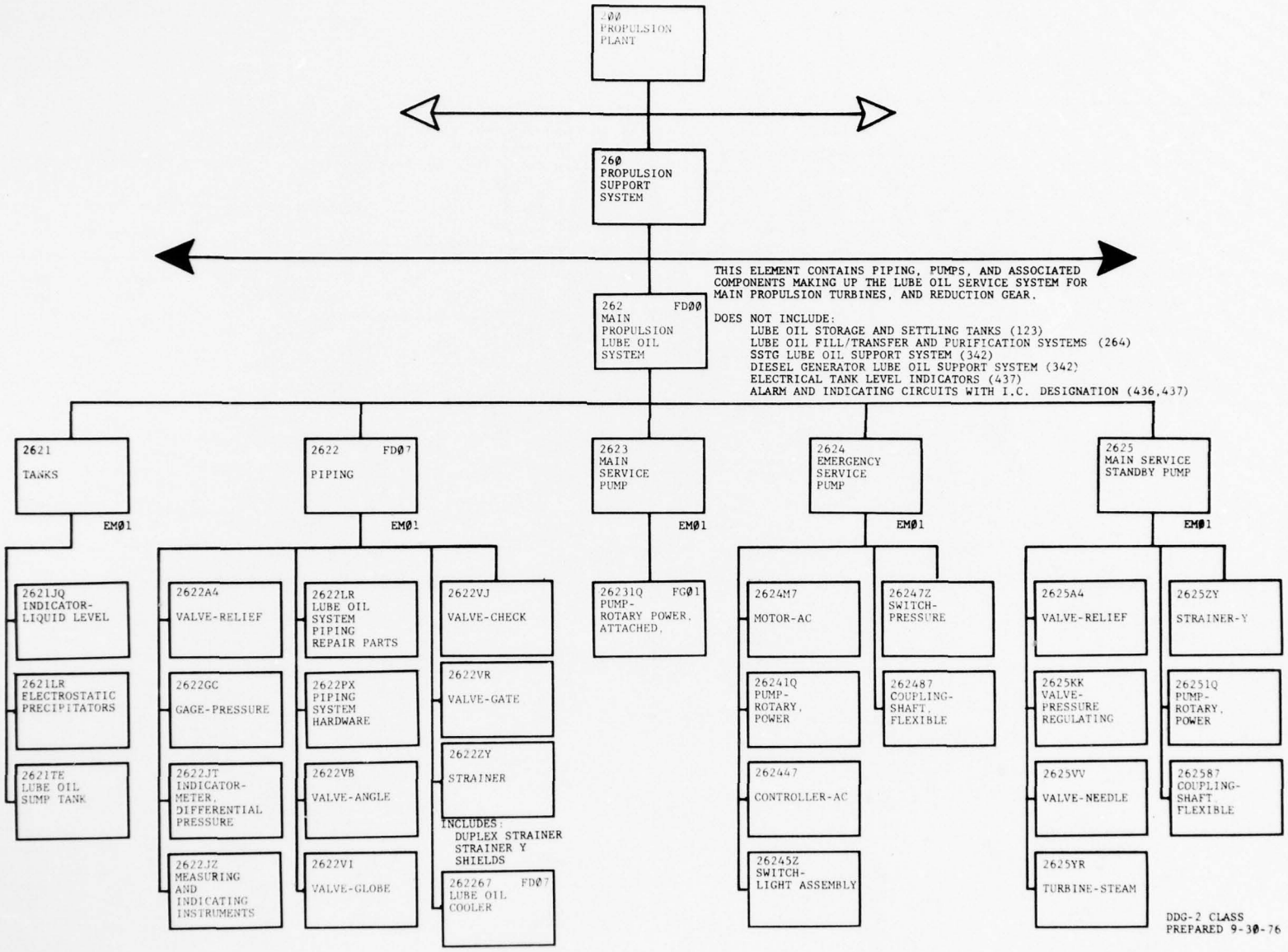
DDG-2 CLASS
PREPARED 9-28-76

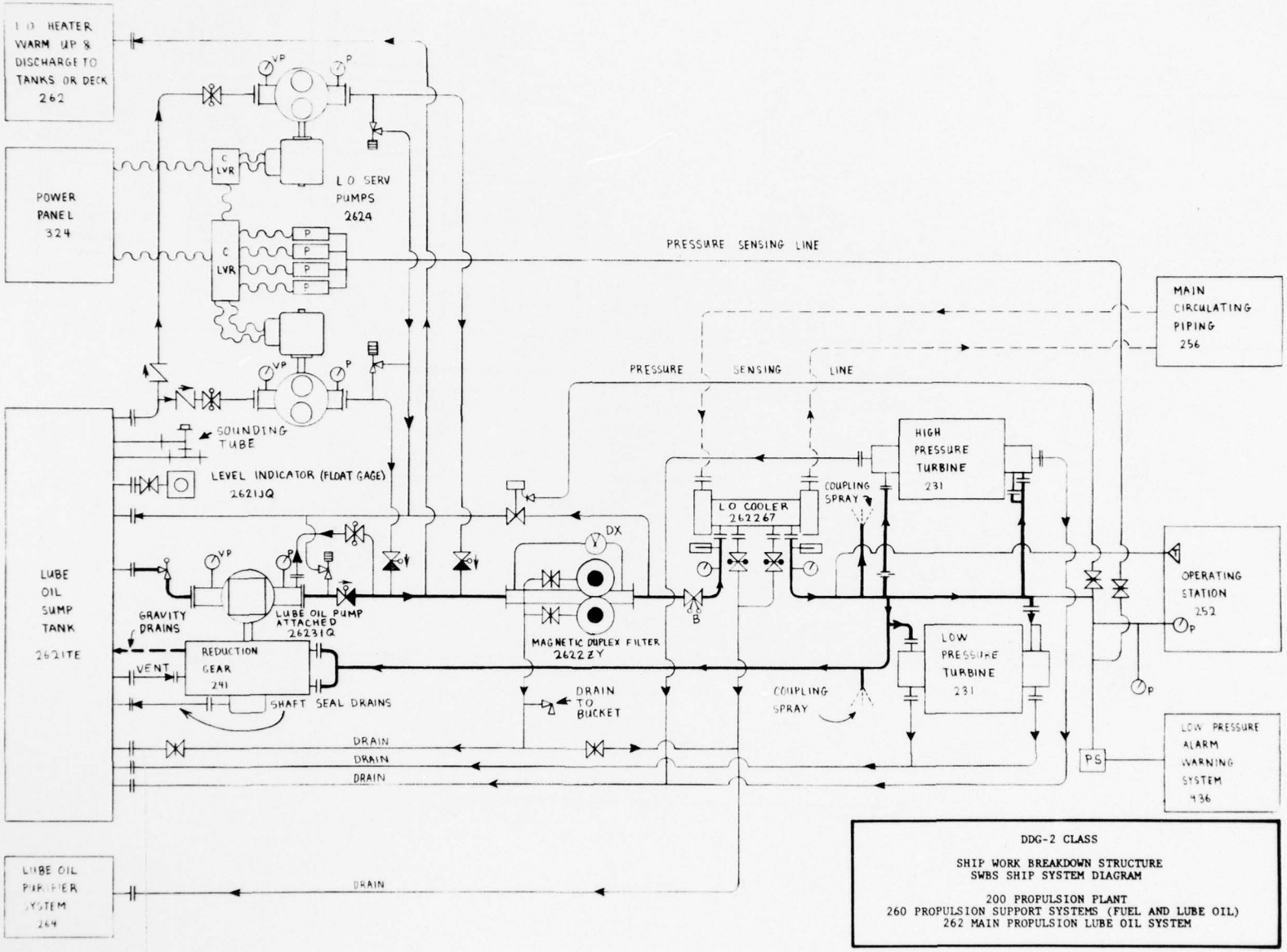


DDG-2 CLASS

SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM

200 PROPULSION PLANT
260 PROPULSION SUPPORT SYSTEMS (FUEL AND LUBE OIL)
261 FUEL SERVICE SYSTEM

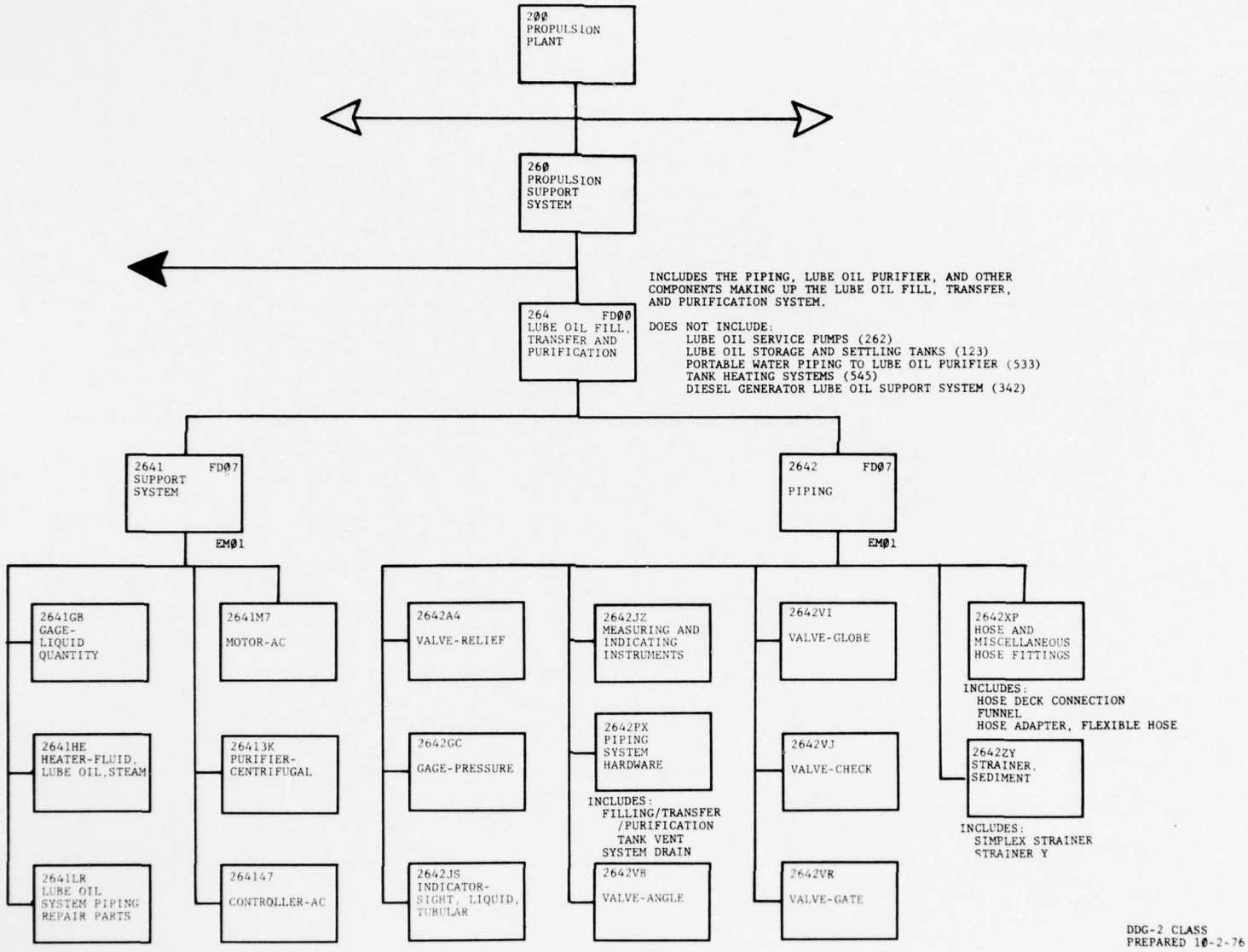

2ØØ
PROPULSION
PLANT
26Ø
PROPULSION
SUPPORT
SYSTEM
THIS ELEMENT CONTAINS PIPING, PUMPS, AND ASSOCIATED COMPONENTS MAKING UP THE LUBE OIL SERVICE SYSTEM FOR MAIN PROPULSION TURBINES, AND REDUCTION GEAR.
DOES NOT INCLUDE:
LUBE OIL STORAGE AND SETTLING TANKS (123)
LUBE OIL FILL/TRANSFER AND PURIFICATION SYSTEMS (264)
SSTG LUBE OIL SUPPORT SYSTEM (342)
DIESEL GENERATOR LUBE OIL SUPPORT SYSTEM (342)
ELECTRICAL TANK LEVEL INDICATORS (437)
ALARM AND INDICATING CIRCUITS WITH I.C. DESIGNATION (436,437)
262 FDØØ
MAIN
PROPULSION
LUBE OIL
SYSTEM
2621
TANKS
EMØ1
2621JQ
INDICATOR-
LIQUID LEVEL
2621LR
ELECTROSTATIC
PRECIPITATORS
2621TE
LUBE OIL
SUMP TANK
2622 FDØ7
PIPING
EMØ1
2622A4
VALVE-RELIEF
2622GC
GAGE-PRESSURE
2622JT
INDICATOR-
METER,
DIFFERENTIAL
PRESSURE
2622JZ
MEASURING
AND
INDICATING
INSTRUMENTS
2622LR
LUBE OIL
SYSTEM
PIPING
REPAIR PARTS
2622PX
PIPING
SYSTEM
HARDWARE
2622VB
VALVE-ANGLE
2622VI
VALVE-GLOBE
2622VJ
VALVE-CHECK
2622VR
VALVE-GATE
2622ZY
STRAINER
INCLUDES:
DUPLEX STRAINER
STRAINER Y
SHIELDS
262267 FDØ7
LUBE OIL
COOLER
2623
MAIN
SERVICE
PUMP
EMØ1
26231Q FGØ1
PUMP-
ROTARY POWER,
ATTACHED,
2624
EMERGENCY
SERVICE
PUMP
EMØ1
2624M7
MOTOR-AC
26241Q
PUMP-
ROTARY,
POWER
262447
CONTROLLER-AC
26245Z
SWITCH-
LIGHT ASSEMBLY
26247Z
SWITCH-
PRESSURE
262487
COUPLING-
SHAFT,
FLEXIBLE
2625
MAIN SERVICE
STANDBY PUMP
EMØ1
2625A4
VALVE-RELIEF
2625KK
VALVE-
PRESSURE
REGULATING
2625VV
VALVE-NEEDLE
2625YR
TURBINE-STEAM
2625ZY
STRAINER-Y
26251Q
PUMP-
ROTARY,
POWER
262587
COUPLING-
SHAFT,
FLEXIBLE
DDG-2 CLASS
PREPARED 9-3Ø-76



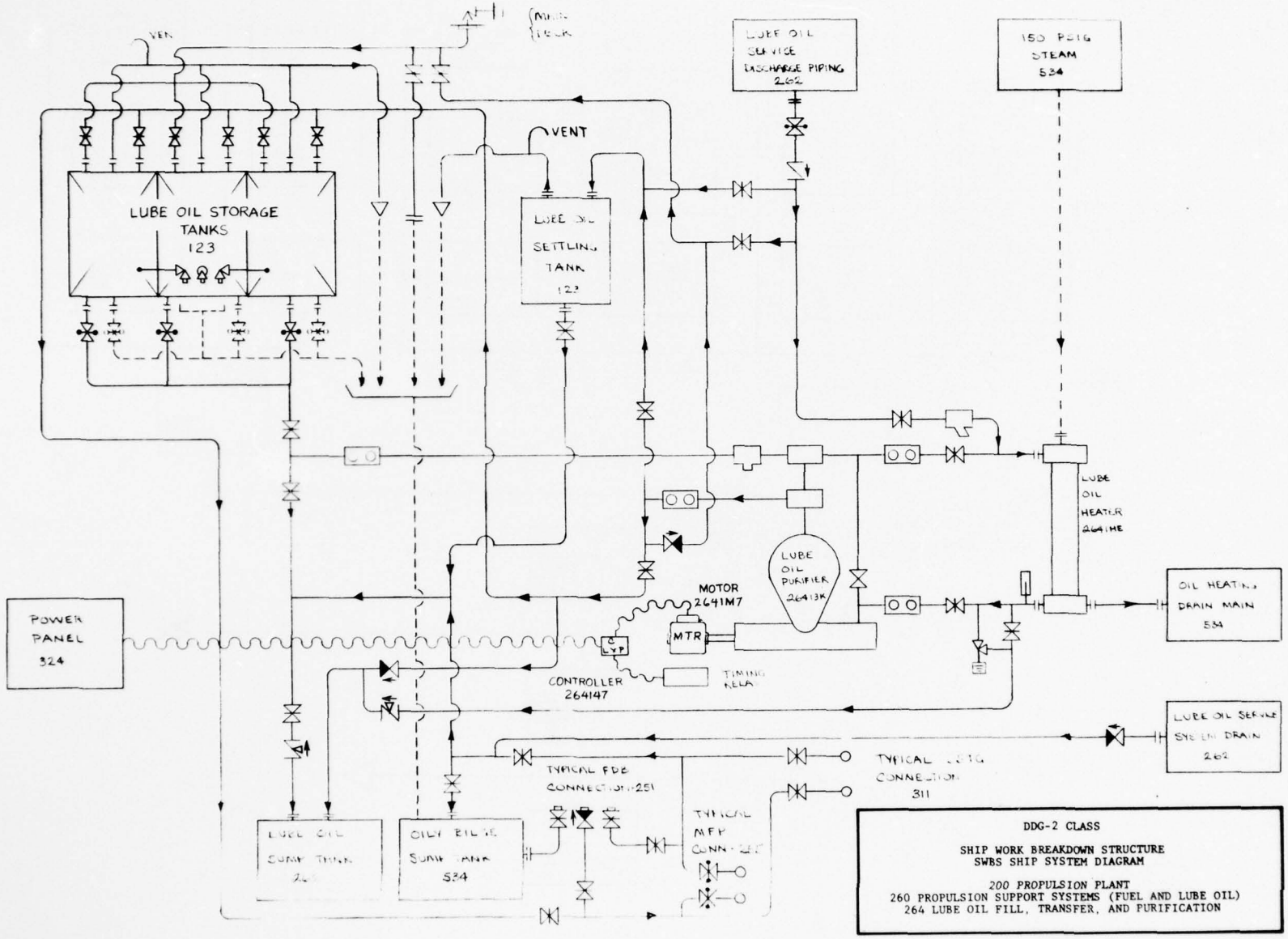
DDG-2 CLASS

SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM

200 PROPULSION PLANT
260 PROPULSION SUPPORT SYSTEMS (FUEL AND LUBE OIL)
262 MAIN PROPULSION LUBE OIL SYSTEM



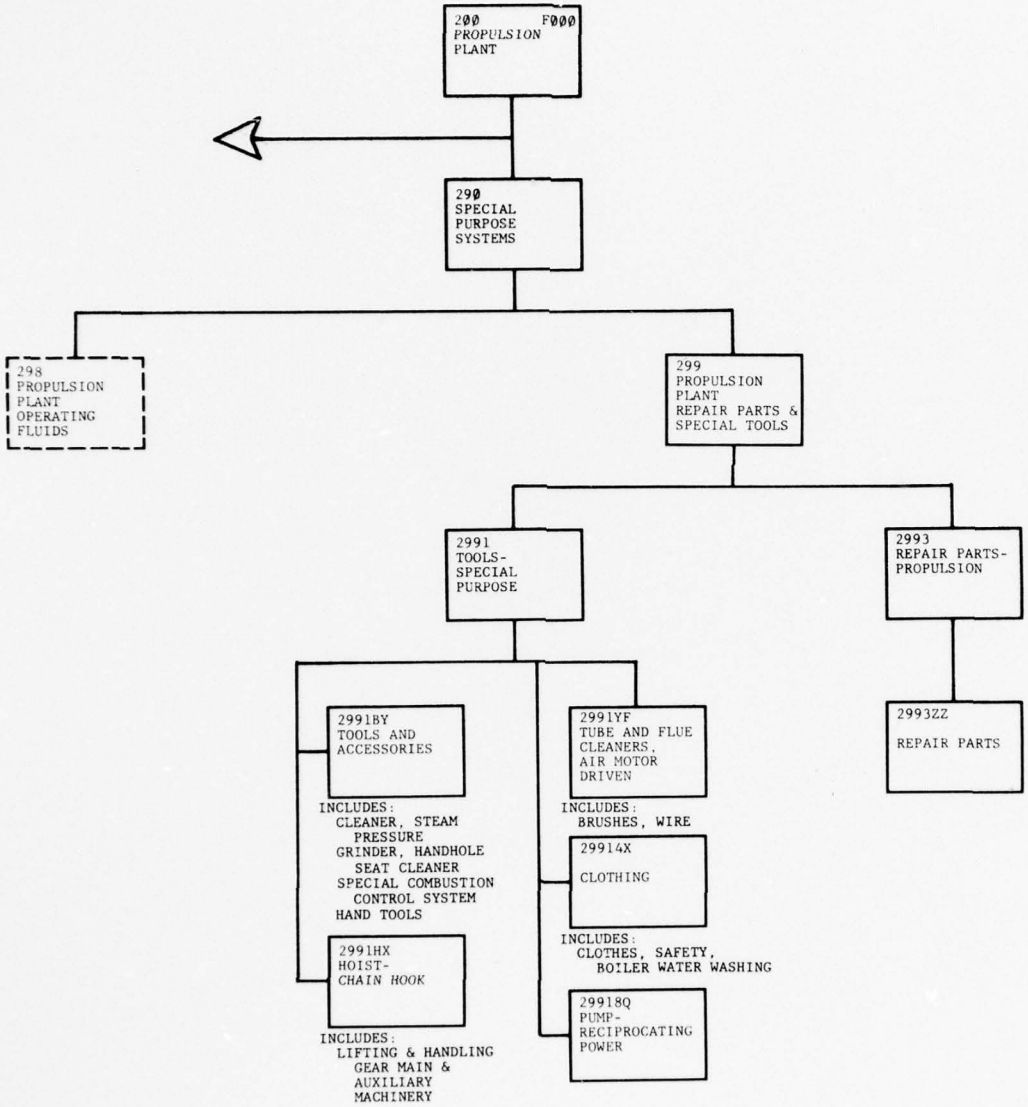
DDG-2 CLASS
PREPARED 10-2-76



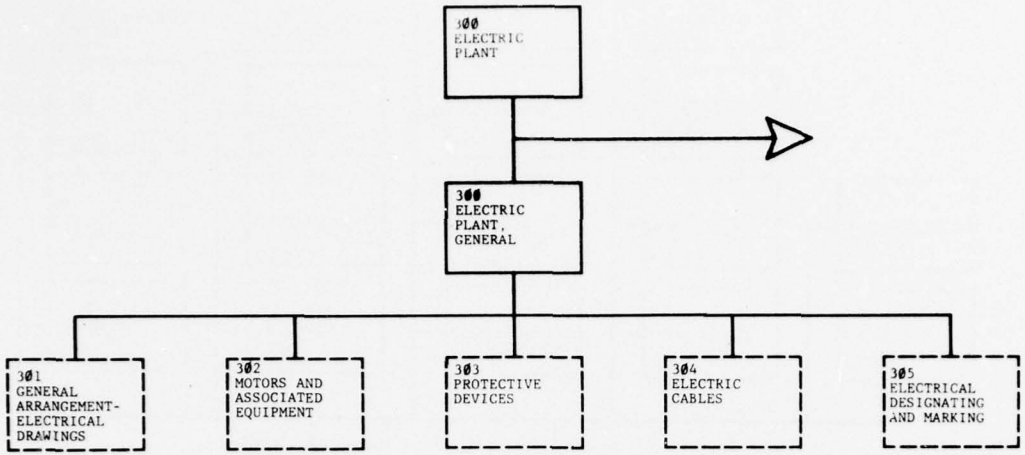
DDG-2 CLASS

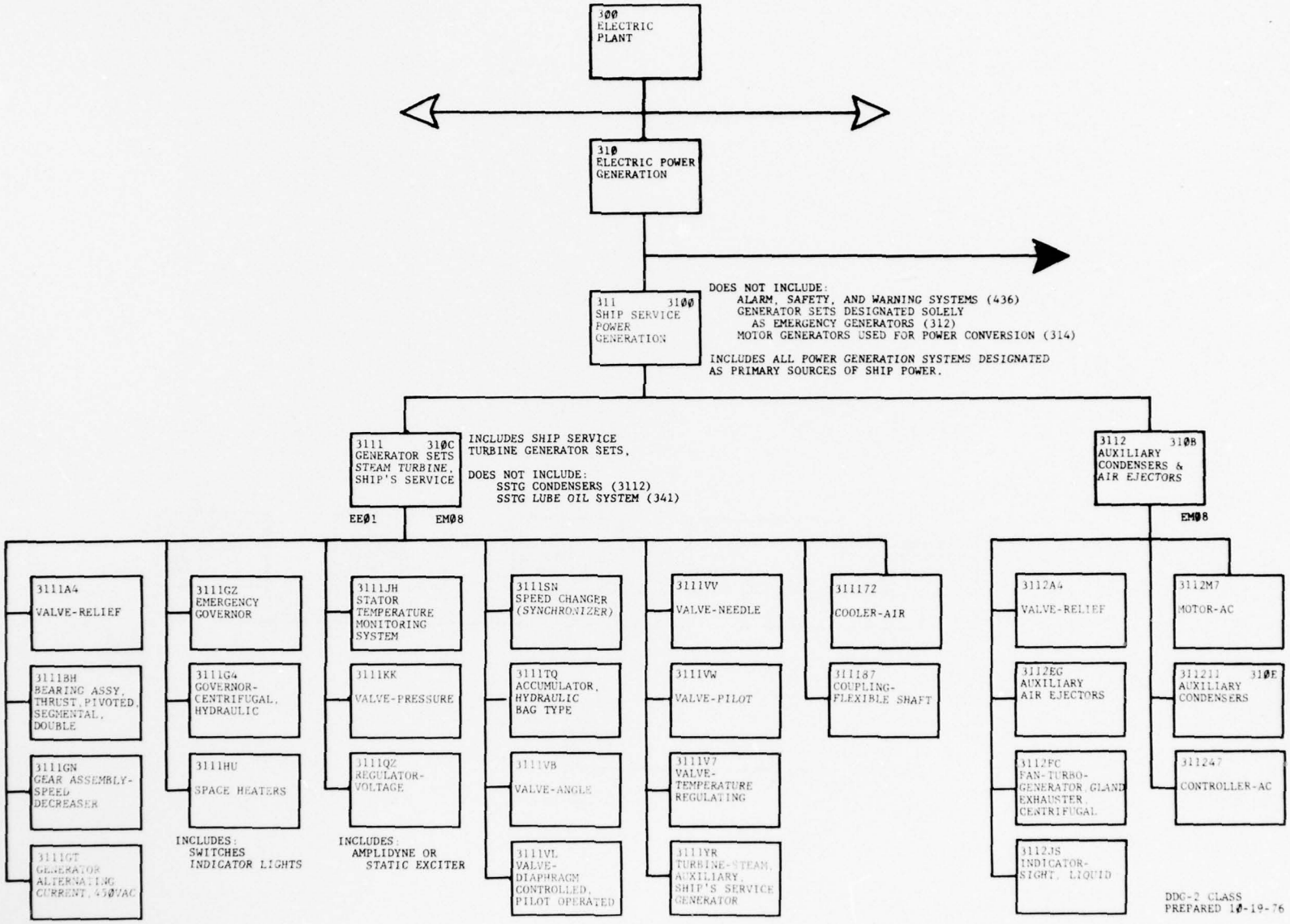
SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM

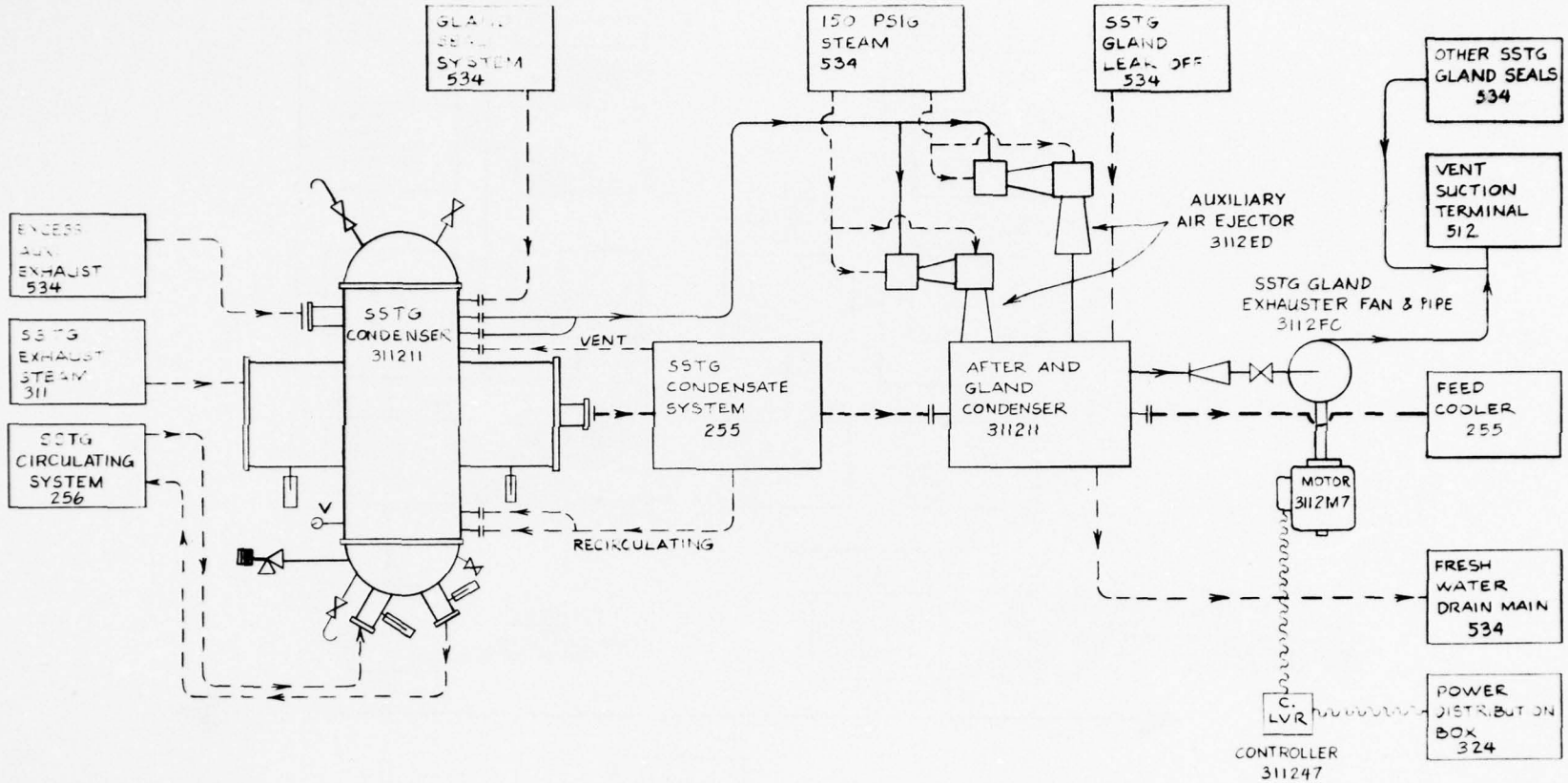
200 PROPULSION PLANT
260 PROPULSION SUPPORT SYSTEMS (FUEL AND LUBE OIL)
264 LUBE OIL FILL, TRANSFER, AND PURIFICATION



DDG-2 CLASS
PREPARED 10-5-76


300
ELECTRIC
PLANT
300
ELECTRIC
PLANT,
GENERAL
301
GENERAL
ARRANGEMENT-
ELECTRICAL
DRAWINGS
302
MOTORS AND
ASSOCIATED
EQUIPMENT
303
PROTECTIVE
DEVICES
304
ELECTRIC
CABLES
305
ELECTRICAL
DESIGNATING
AND MARKING

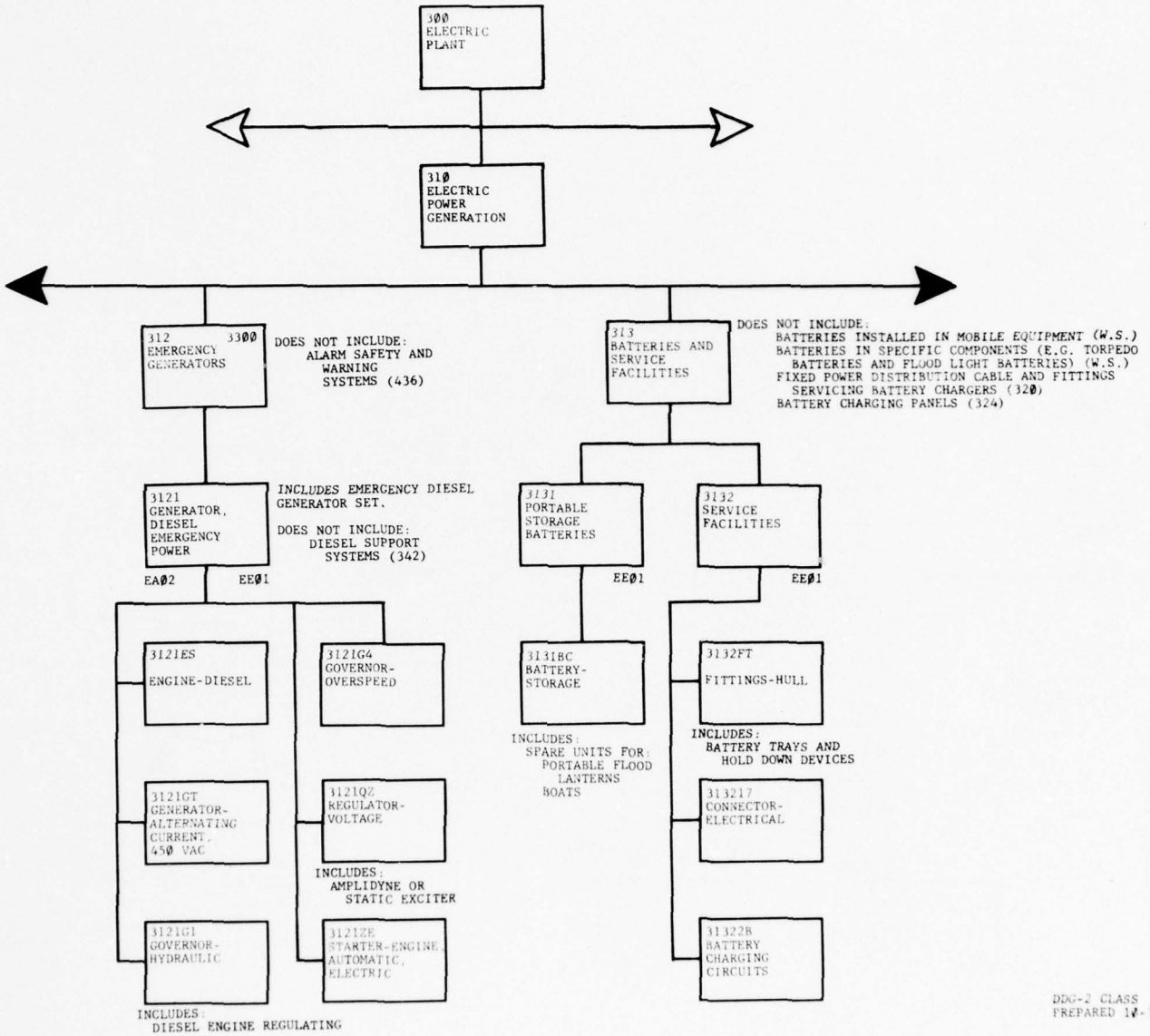

300 ELECTRIC PLANT
310 ELECTRIC POWER GENERATION
311 310Ø SHIP SERVICE POWER GENERATION
DOES NOT INCLUDE:
ALARM, SAFETY, AND WARNING SYSTEMS (436)
GENERATOR SETS DESIGNATED SOLELY AS EMERGENCY GENERATORS (312)
MOTOR GENERATORS USED FOR POWER CONVERSION (314)
INCLUDES ALL POWER GENERATION SYSTEMS DESIGNATED AS PRIMARY SOURCES OF SHIP POWER.
3111 310C GENERATOR SETS STEAM TURBINE, SHIP'S SERVICE
INCLUDES SHIP SERVICE TURBINE GENERATOR SETS.
DOES NOT INCLUDE:
SSTG CONDENSERS (3112)
SSTG LUBE OIL SYSTEM (341)
EEØ1
EMØ8
3112 310B AUXILIARY CONDENSERS & AIR EJECTORS
EMØ8
3111A4 VALVE-RELIEF
3111BH BEARING ASSY, THRUST, PIVOTED, SEGMENTAL, DOUBLE
3111GN GEAR ASSEMBLY-SPEED DECREASER
3111GT GENERATOR ALTERNATING CURRENT, 450VAC
3111GZ EMERGENCY GOVERNOR
3111G4 GOVERNOR-CENTRIFUGAL, HYDRAULIC
3111HU SPACE HEATERS
INCLUDES: SWITCHES INDICATOR LIGHTS
3111JH STATOR TEMPERATURE MONITORING SYSTEM
3111KK VALVE-PRESSURE
3111QZ REGULATOR-VOLTAGE
INCLUDES: AMPLIDYNE OR STATIC EXCITER
3111SN SPEED CHANGER (SYNCHRONIZER)
3111TQ ACCUMULATOR, HYDRAULIC BAG TYPE
3111VB VALVE-ANGLE
3111VL VALVE-DIAPHRAGM CONTROLLED, PILOT OPERATED
3111VV VALVE-NEEDLE
3111VW VALVE-PILOT
3111V7 VALVE-TEMPERATURE REGULATING
3111YR TURBINE-STEAM, AUXILIARY, SHIP'S SERVICE GENERATOR
311172 COOLER-AIR
311187 COUPLING-FLEXIBLE SHAFT
3112A4 VALVE-RELIEF
3112EG AUXILIARY AIR EJECTORS
3112FC FAN-TURBO-GENERATOR, GLAND EXHAUSTER, CENTRIFUGAL
3112JS INDICATOR-SIGHT, LIQUID
3112M7 MOTOR-AC
311211 310E AUXILIARY CONDENSERS
311247 CONTROLLER-AC
DDG-2 CLASS
PREPARED 1Ø-19-76



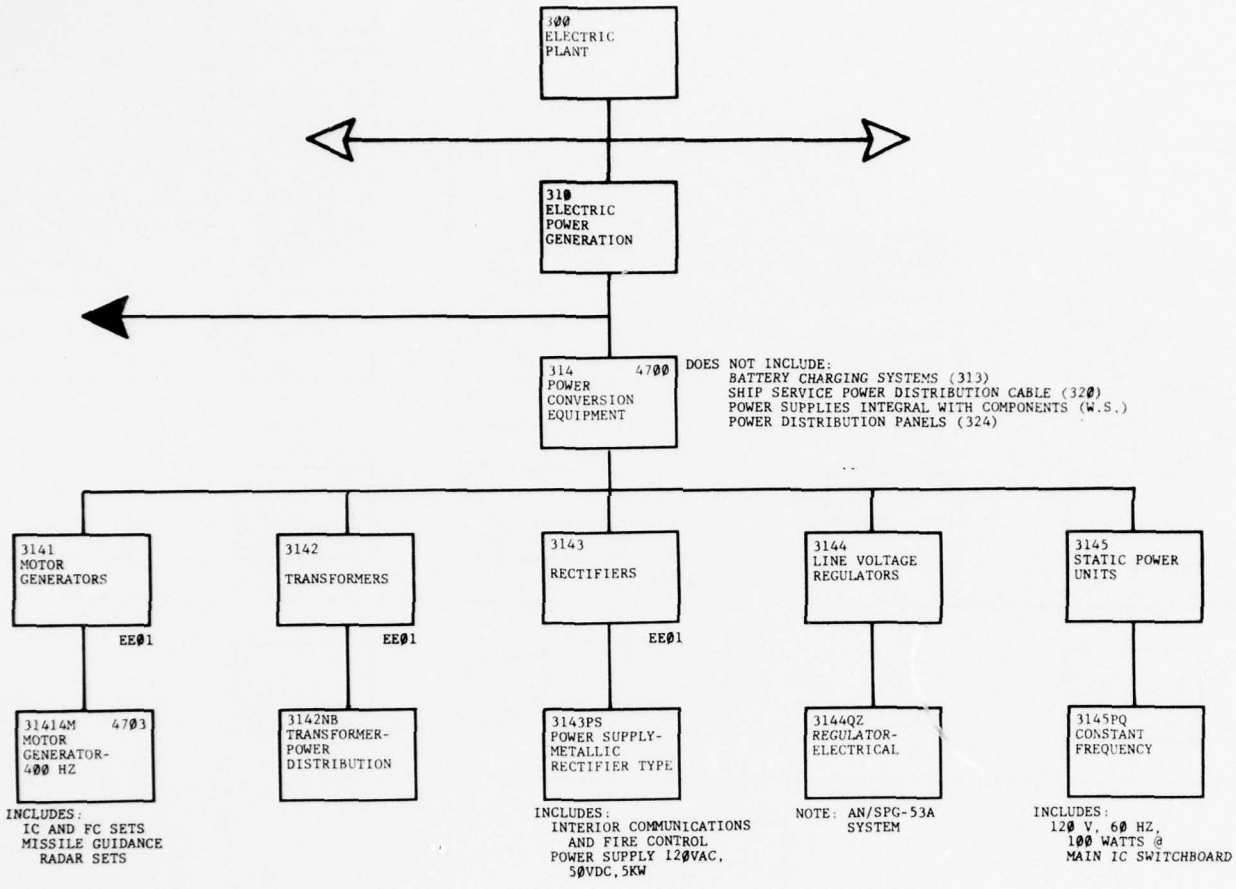
DDG-2 CLASS

SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM

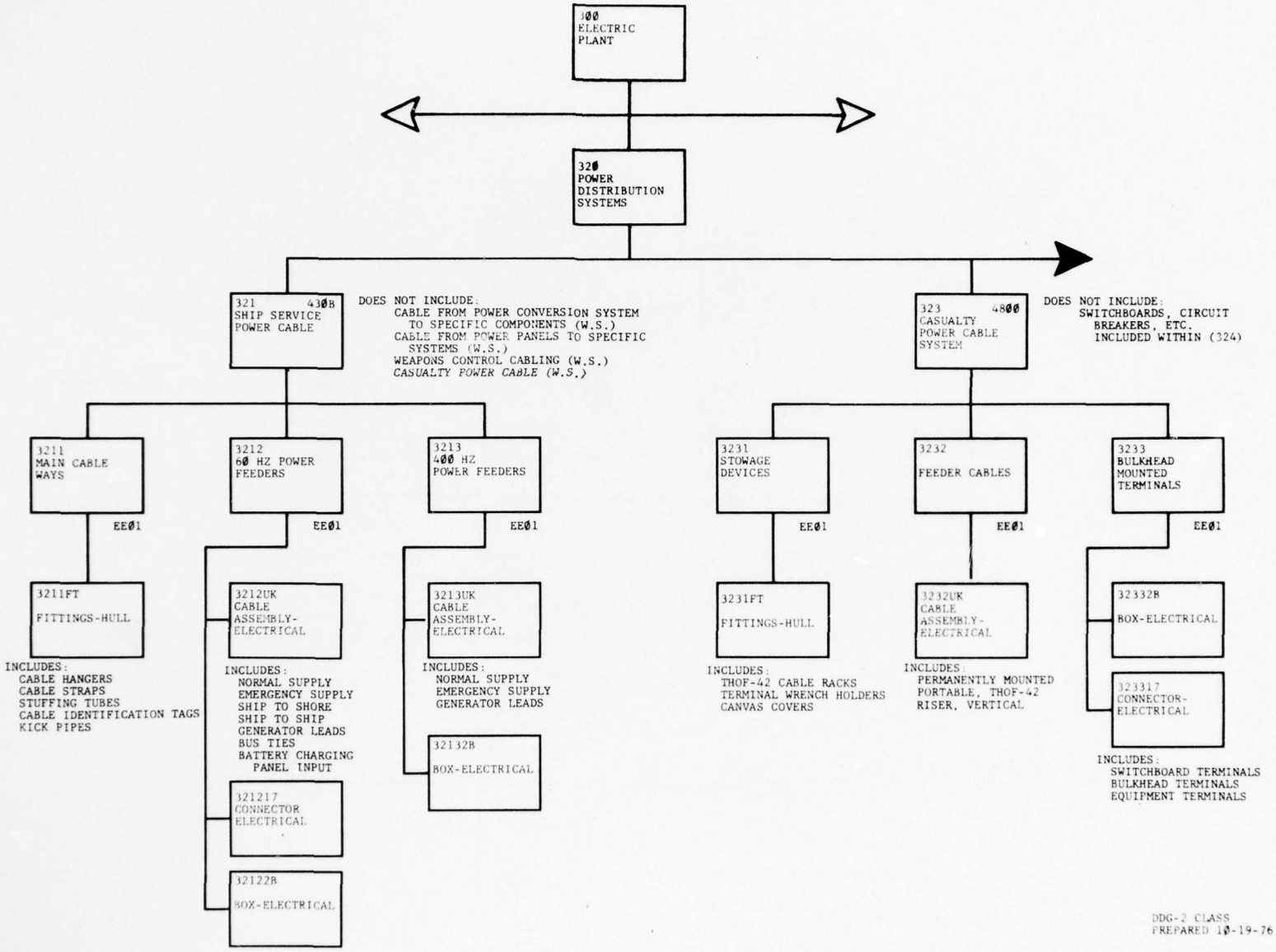
300 ELECTRIC PLANT
310 ELECTRIC POWER GENERATION
311 SHIP'S SERVICE POWER GENERATION CONDENSERS



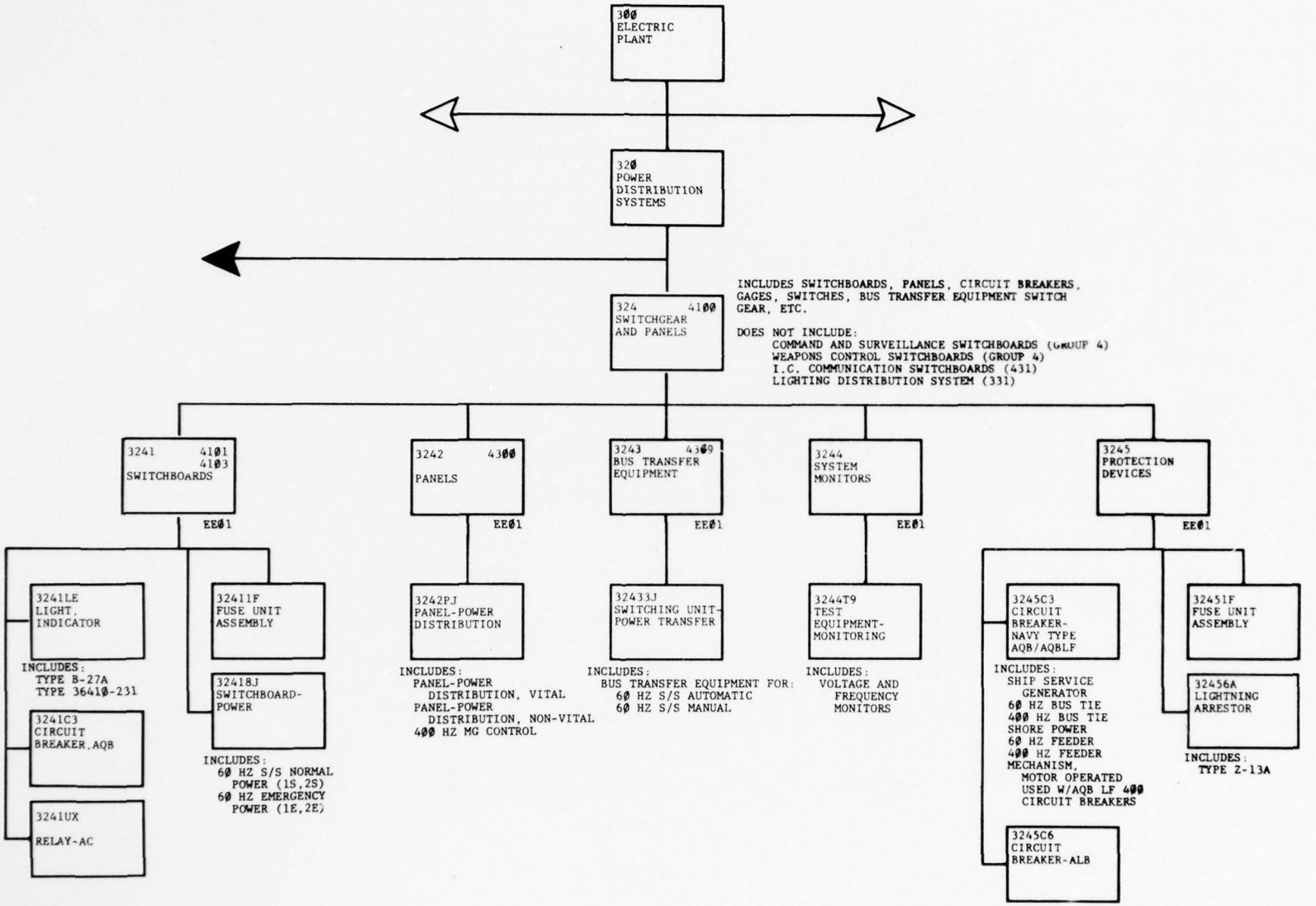
DDG-2 CLASS
PREPARED 12-19-76



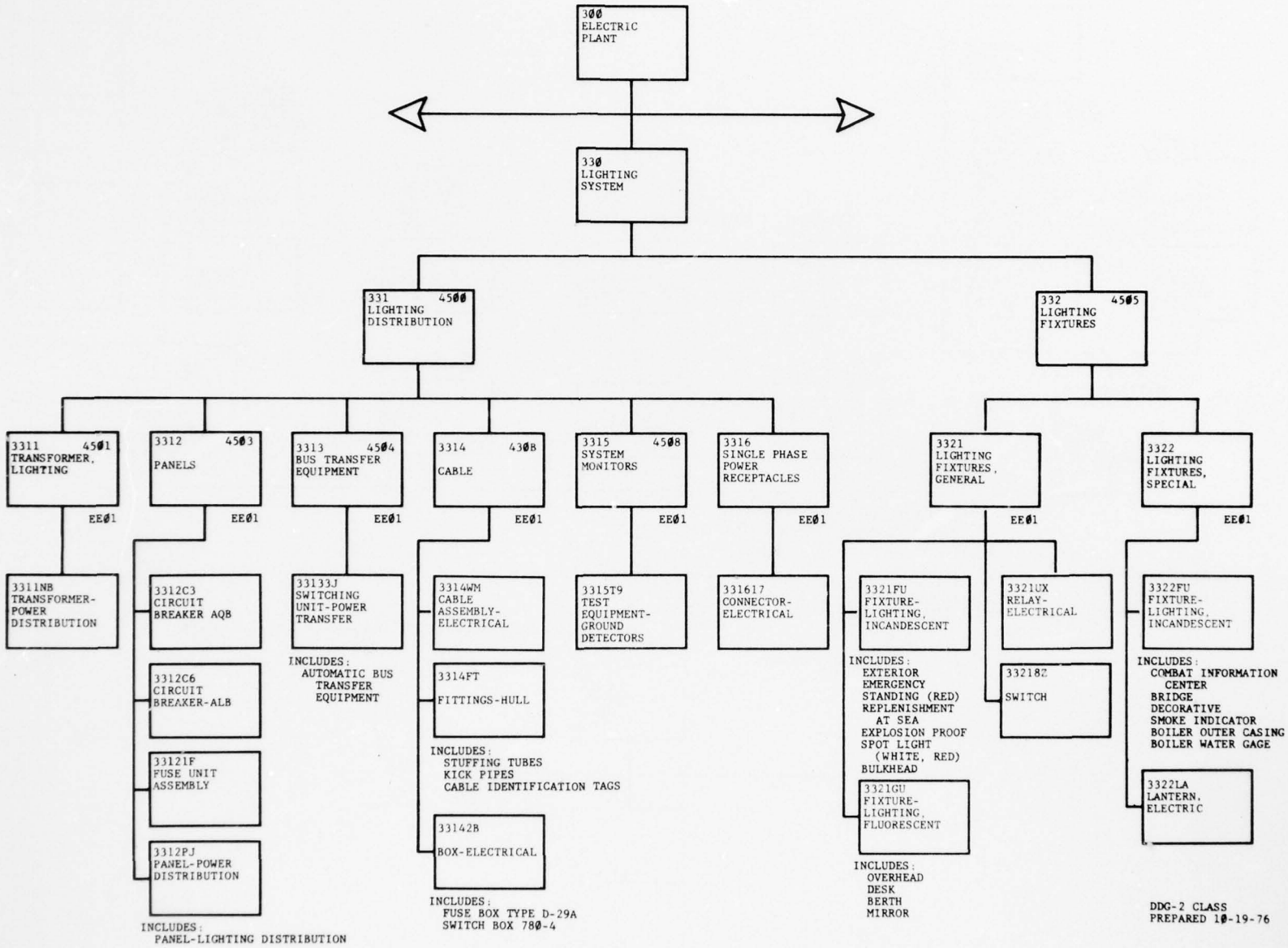
DDG-2 CLASS
PREPARED 10-19-76



DDG-2 CLASS
PREPARED 10-19-76



DDG-2 CLASS
PREPARED 10-19-76


300 ELECTRIC PLANT
330 LIGHTING SYSTEM
331 4500 LIGHTING DISTRIBUTION
332 4505 LIGHTING FIXTURES
3311 4501 TRANSFORMER, LIGHTING
3312 4503 PANELS
3313 4504 BUS TRANSFER EQUIPMENT
3314 430B CABLE
3315 4508 SYSTEM MONITORS
3316 SINGLE PHASE POWER RECEPTACLES
3321 LIGHTING FIXTURES, GENERAL
3322 LIGHTING FIXTURES, SPECIAL
EE01
3311NB TRANSFORMER-POWER DISTRIBUTION
3312C3 CIRCUIT BREAKER AQB
3312C6 CIRCUIT BREAKER-ALB
33121F FUSE UNIT ASSEMBLY
3312PJ PANEL-POWER DISTRIBUTION
INCLUDES: PANEL-LIGHTING DISTRIBUTION
33133J SWITCHING UNIT-POWER TRANSFER
INCLUDES: AUTOMATIC BUS TRANSFER EQUIPMENT
3314WM CABLE ASSEMBLY-ELECTRICAL
3314FT FITTINGS-HULL
INCLUDES: STUFFING TUBES KICK PIPES CABLE IDENTIFICATION TAGS
33142B BOX-ELECTRICAL
INCLUDES: FUSE BOX TYPE D-29A SWITCH BOX 780-4
3315T9 TEST EQUIPMENT-GROUND DETECTORS
331617 CONNECTOR-ELECTRICAL
3321FU FIXTURE-LIGHTING, INCANDESCENT
INCLUDES: EXTERIOR EMERGENCY STANDING (RED) REPLENISHMENT AT SEA EXPLOSION PROOF SPOT LIGHT (WHITE, RED) BULKHEAD
3321GU FIXTURE-LIGHTING, FLUORESCENT
INCLUDES: OVERHEAD DESK BERTH MIRROR
3321UX RELAY-ELECTRICAL
33218Z SWITCH
3322FU FIXTURE-LIGHTING, INCANDESCENT
INCLUDES: COMBAT INFORMATION CENTER BRIDGE DECORATIVE SMOKE INDICATOR BOILER OUTER CASING BOILER WATER GAGE
3322LA LANTERN, ELECTRIC
DDG-2 CLASS
PREPARED 10-19-76

AD-A051 777 ARINC RESEARCH CORP ANNAPOLIS MD F/G 13/10

SHIP SYSTEMS DEFINITION AND INDEX (SWBS STAGING DIAGRAMS) FOR D--ETC(U)

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2 OF 3

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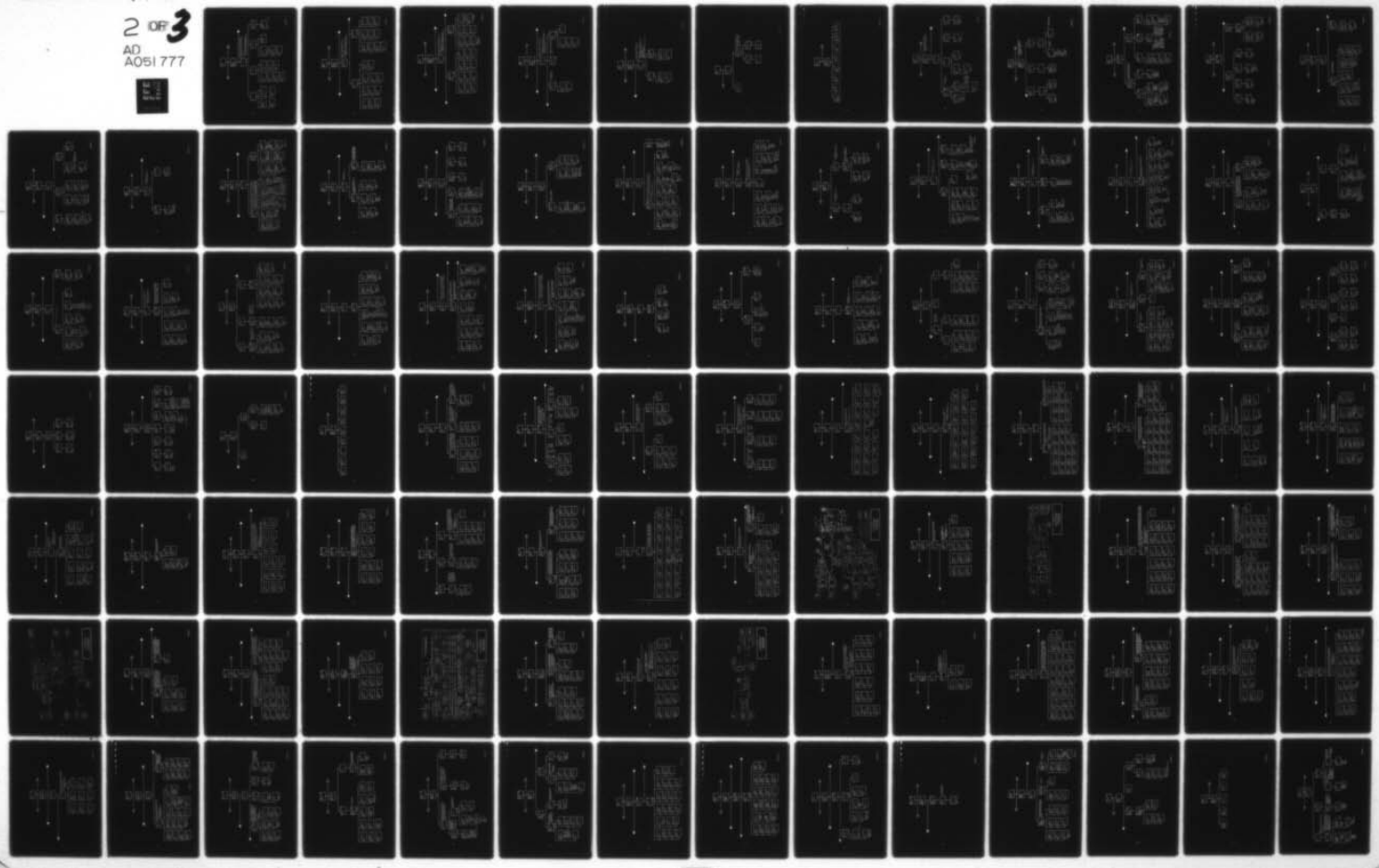

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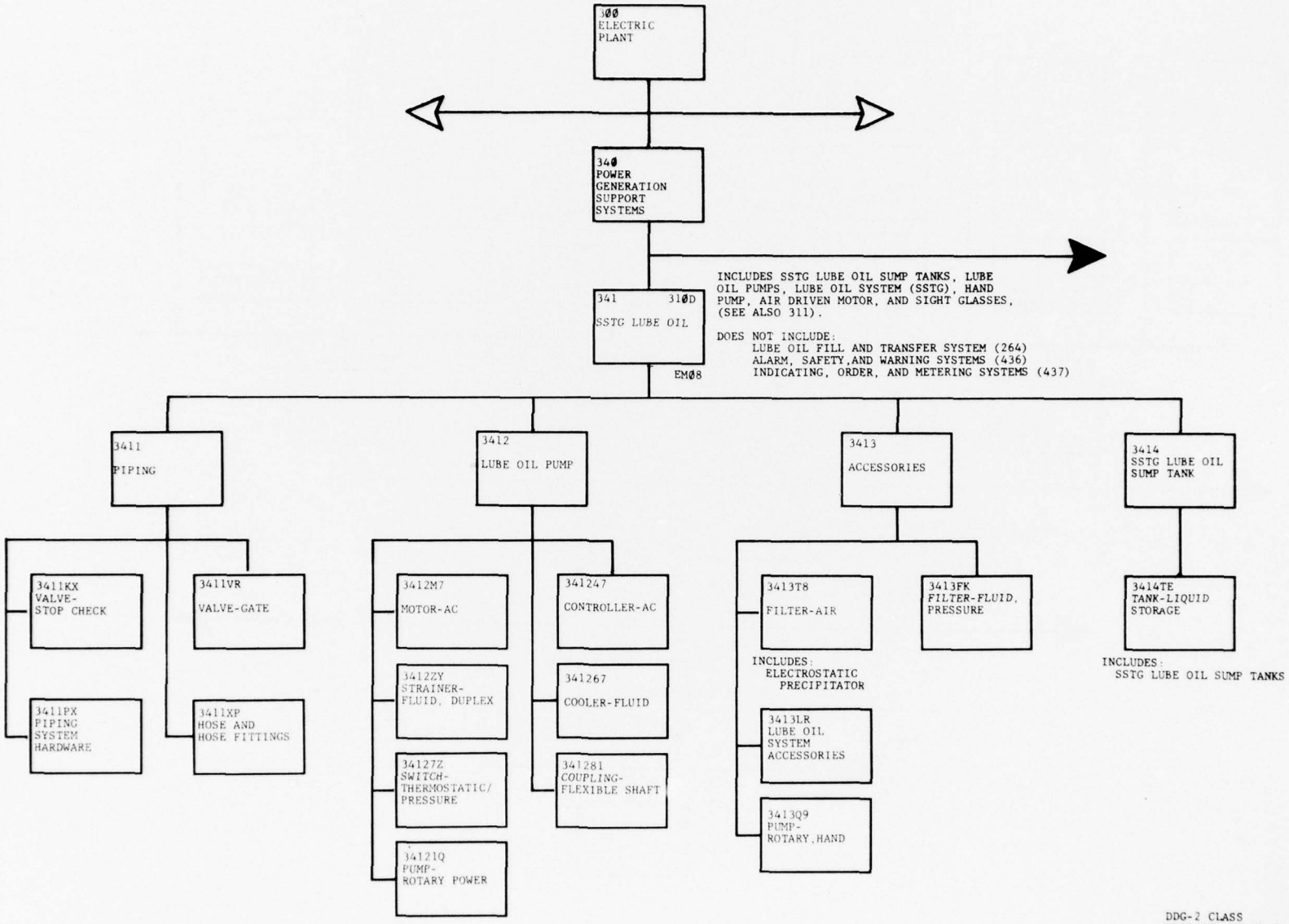
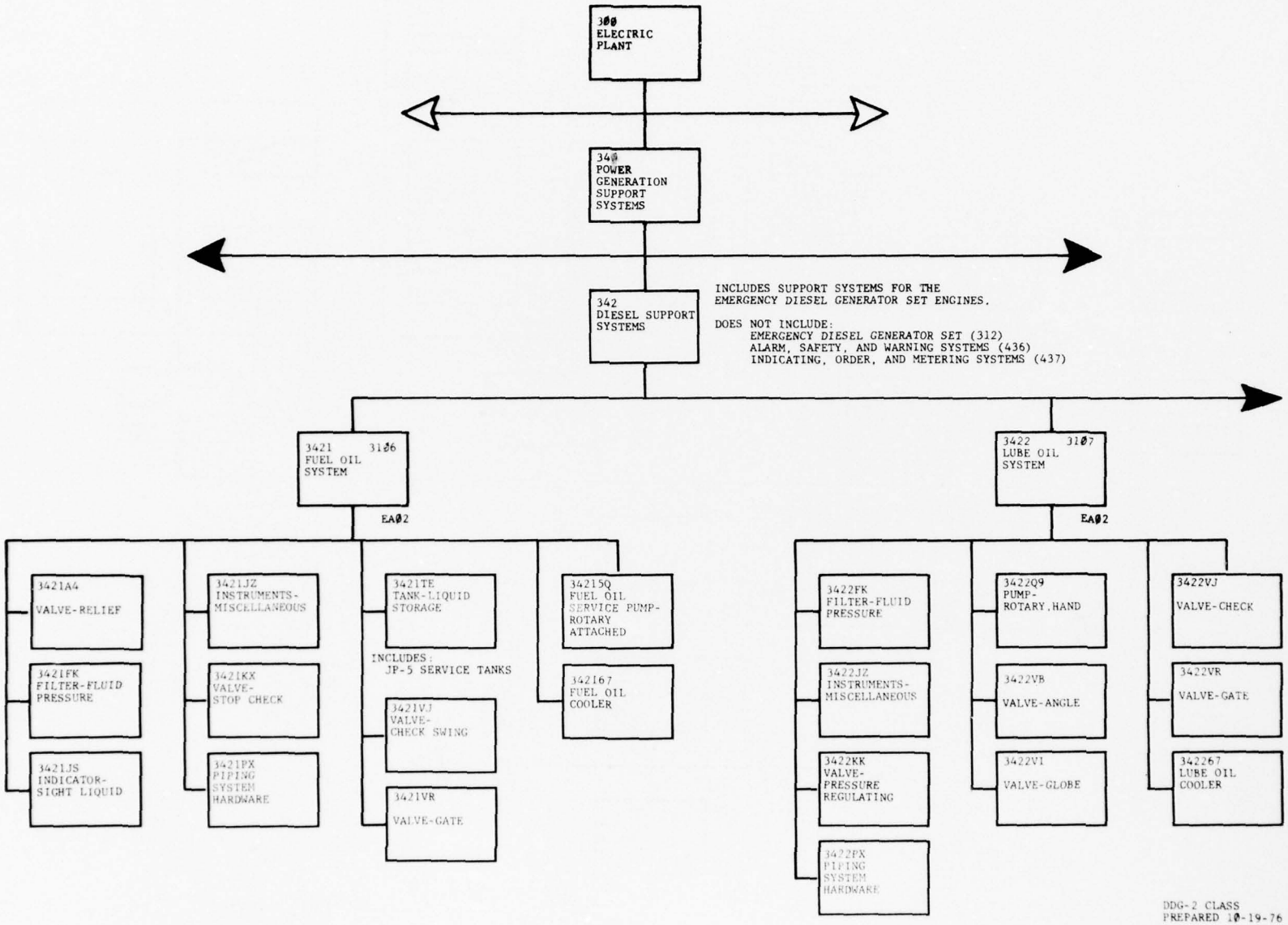
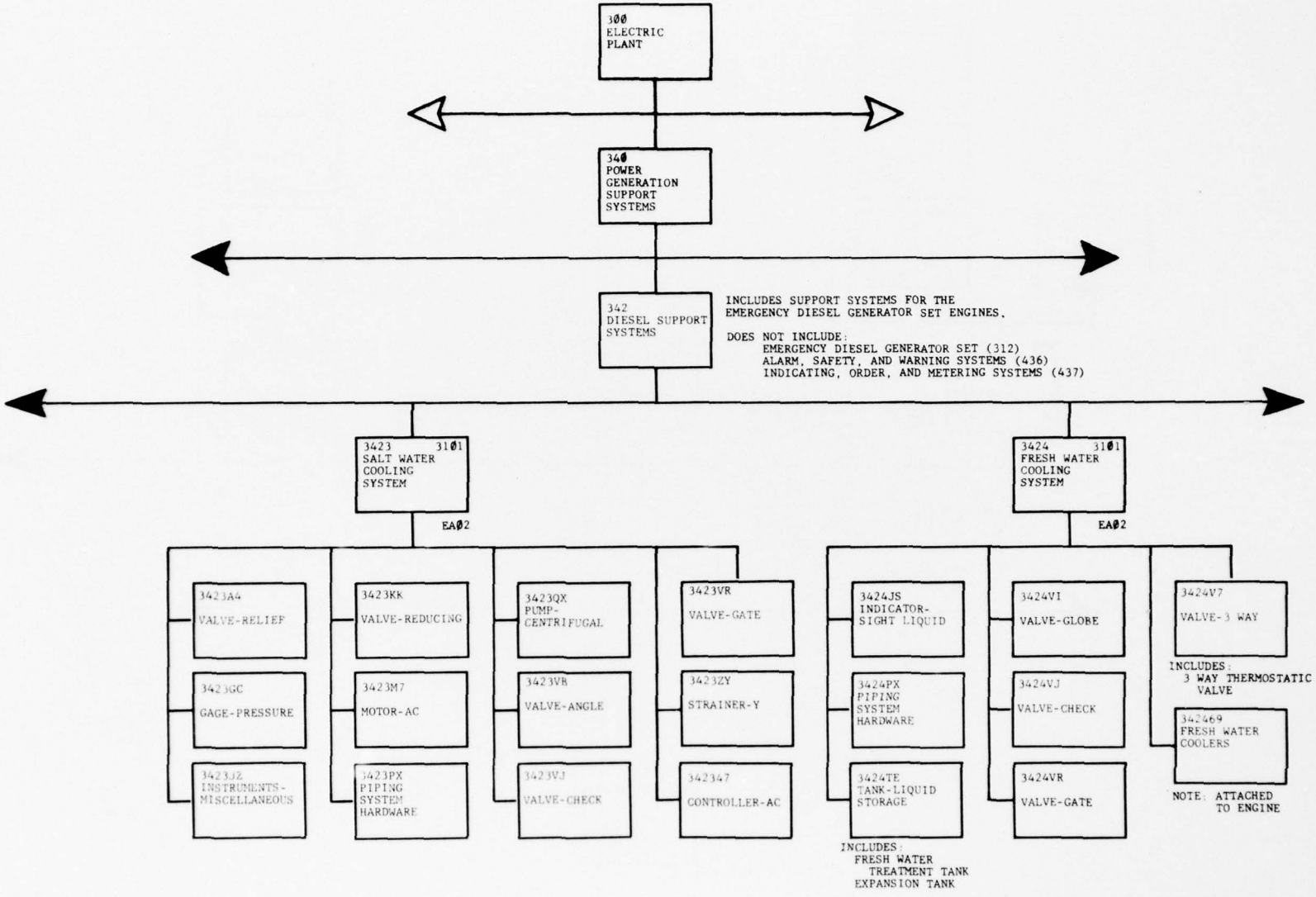
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A



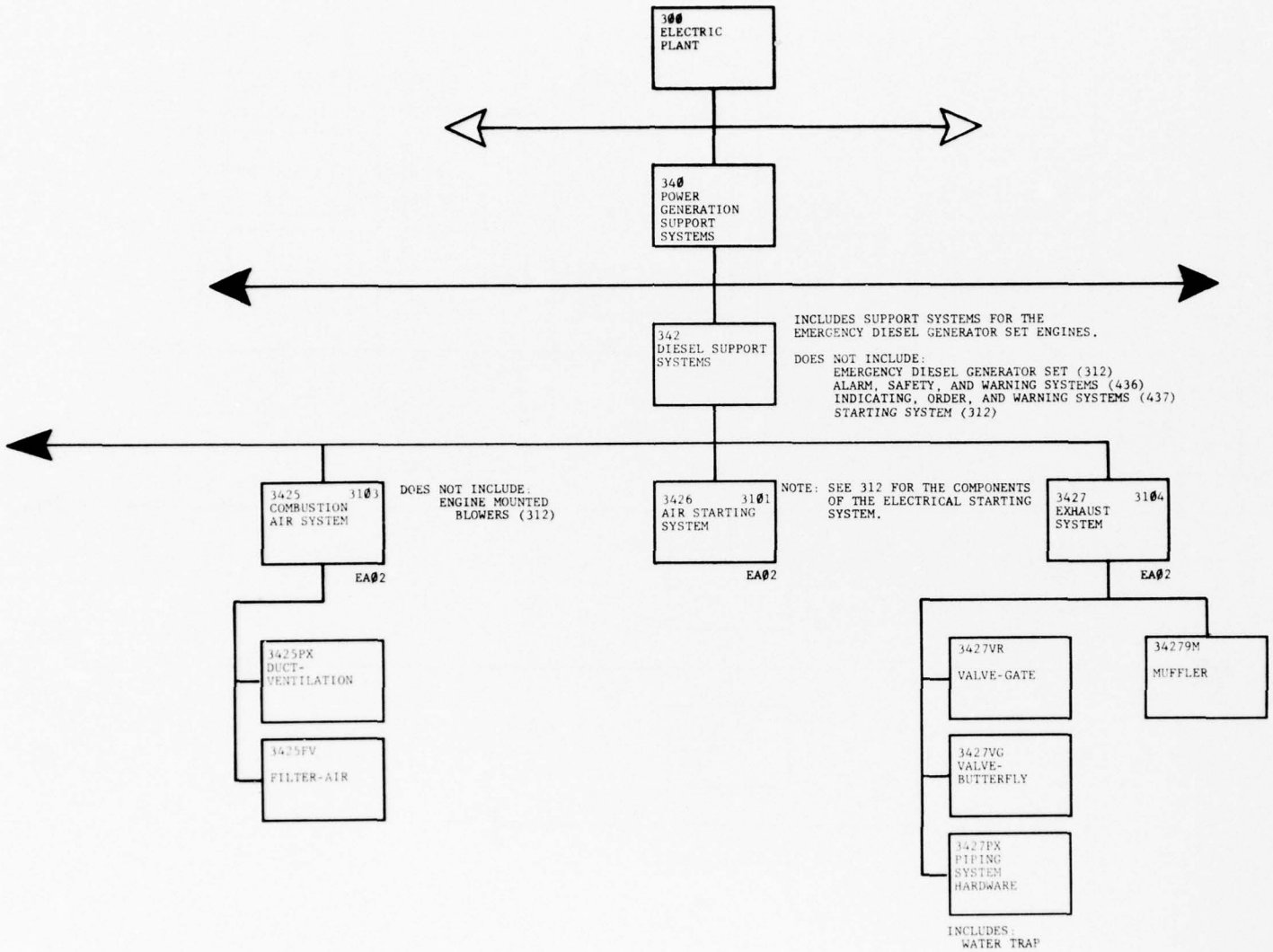
DDG-2 CLASS
PREPARED 10-19-76



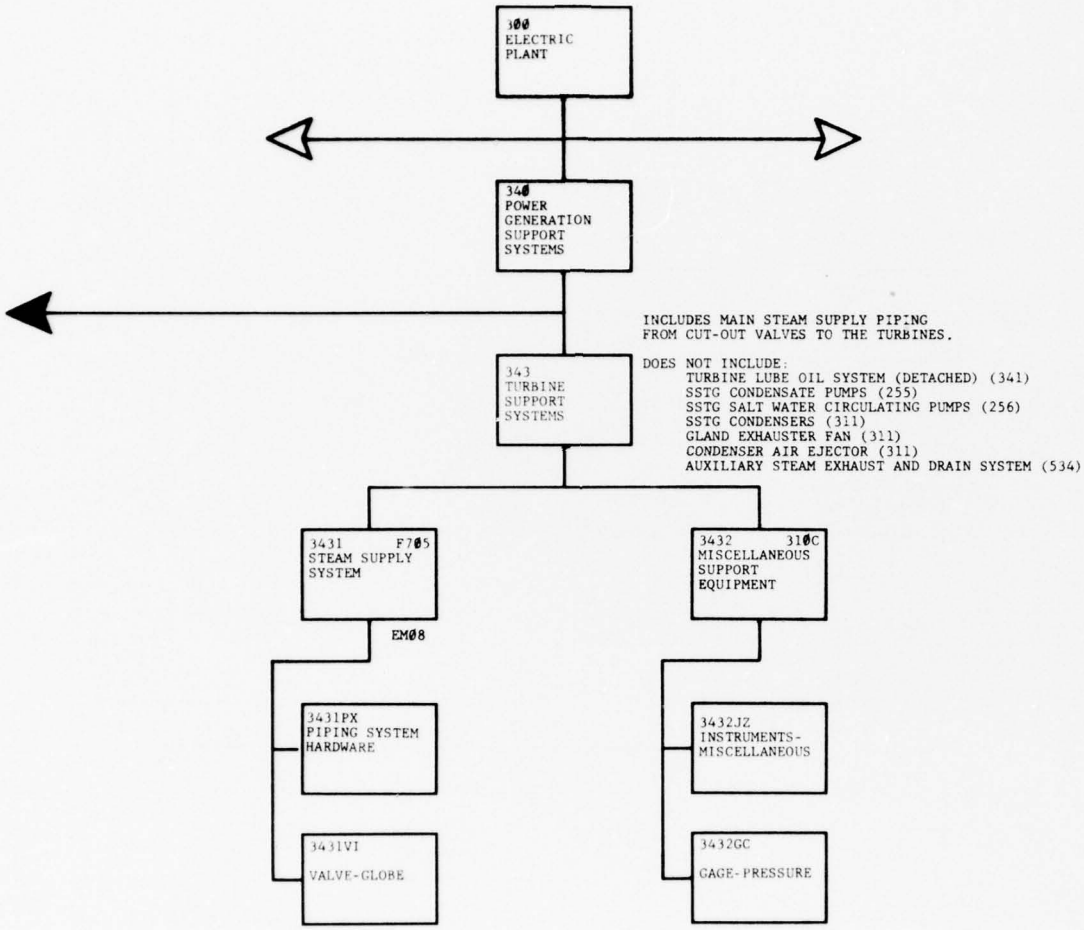
DDG-2 CLASS
PREPARED 10-19-76



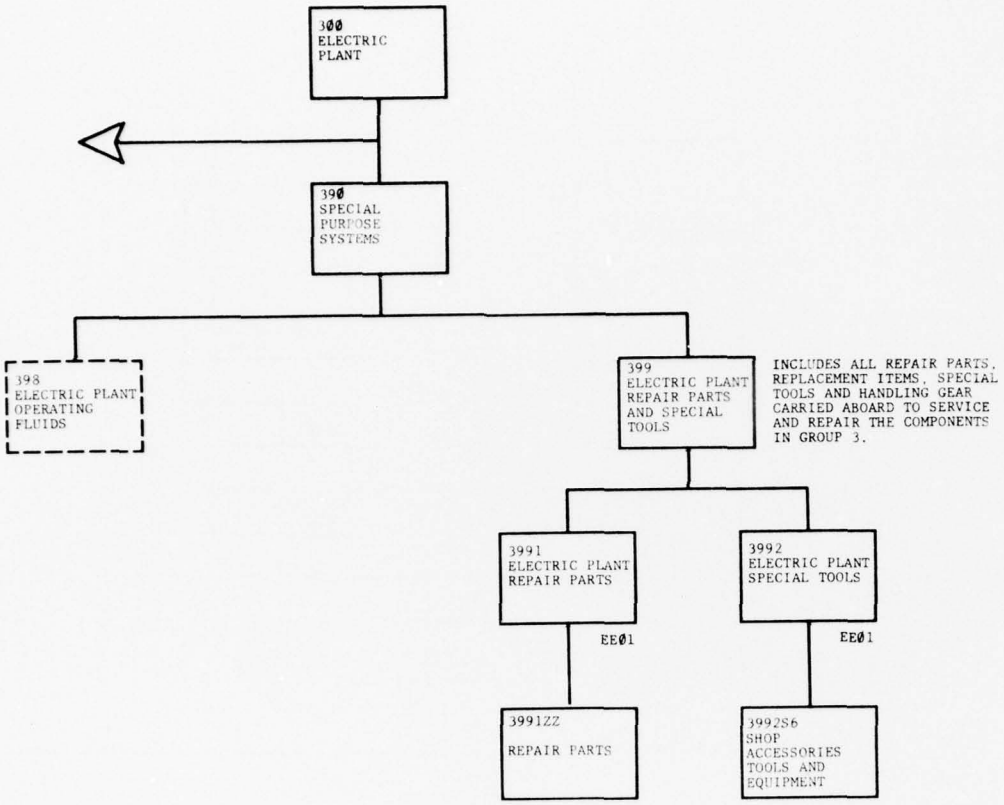
DDG-2 CLASS
PREPARED 10-19-76



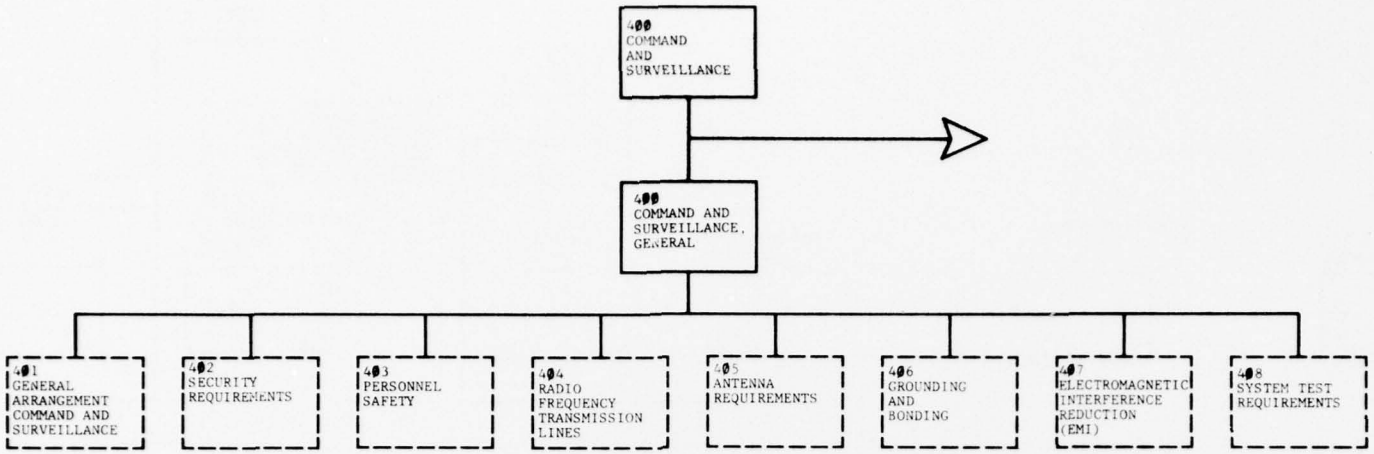
DDG-2 CLASS
PREPARED 10-19-76



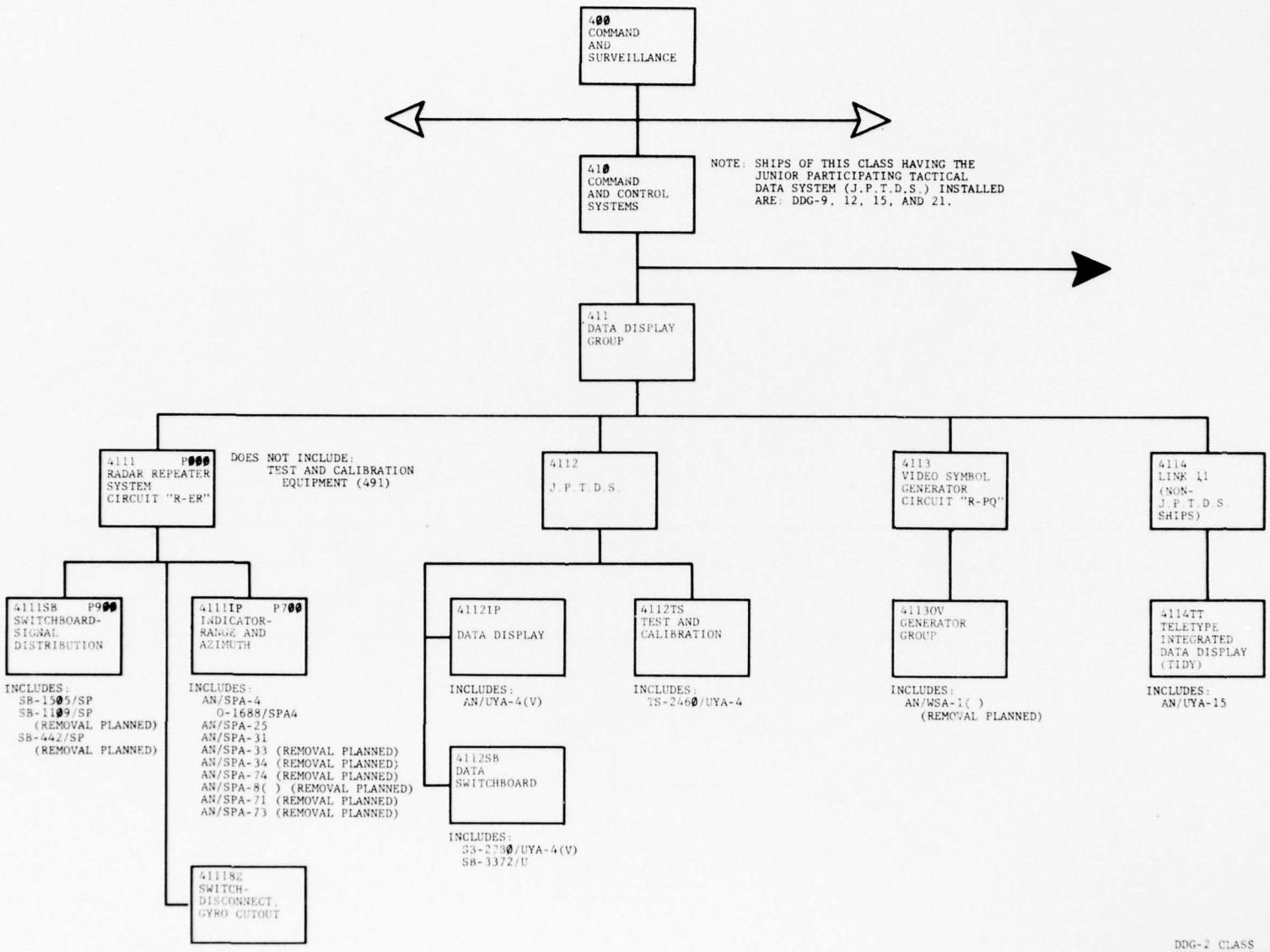
DDG-2 CLASS
PREPARED 10-19-76



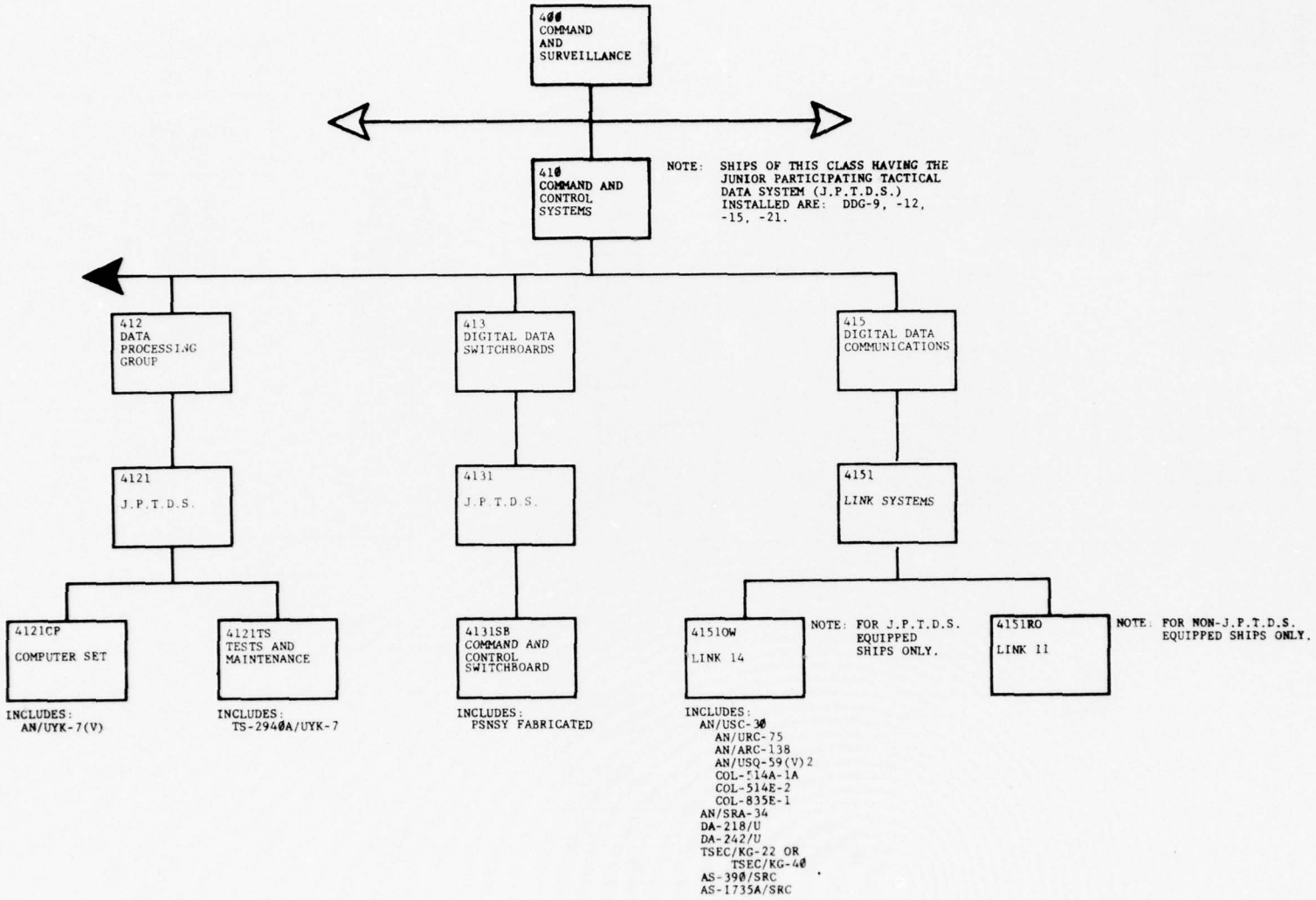
DDG-2 CLASS
PREPARED 10-19-76



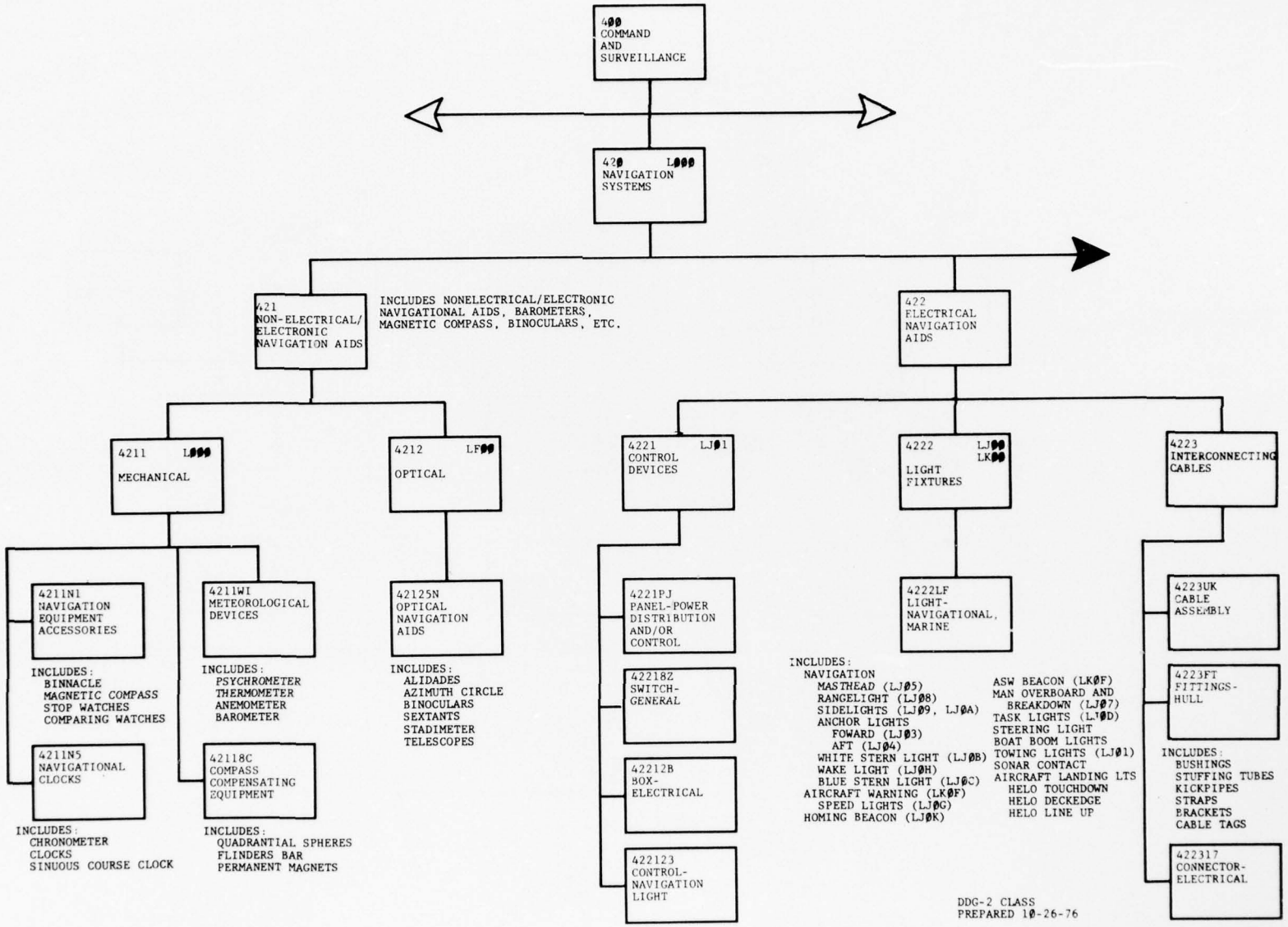
DDG-2 CLASS
PREPARED 10-26-76

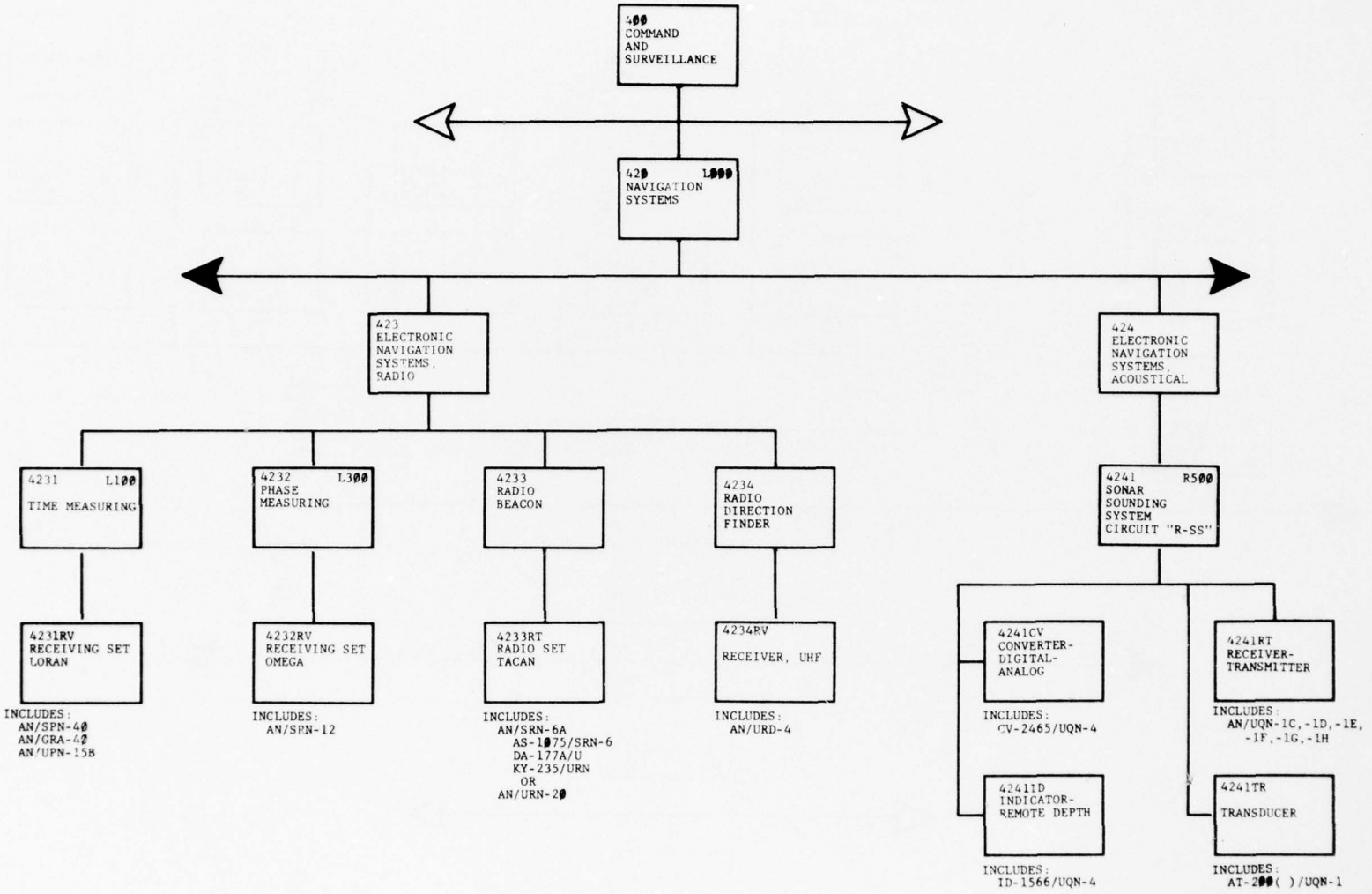


DDG-2 CLASS
PREPARED 10-26-76

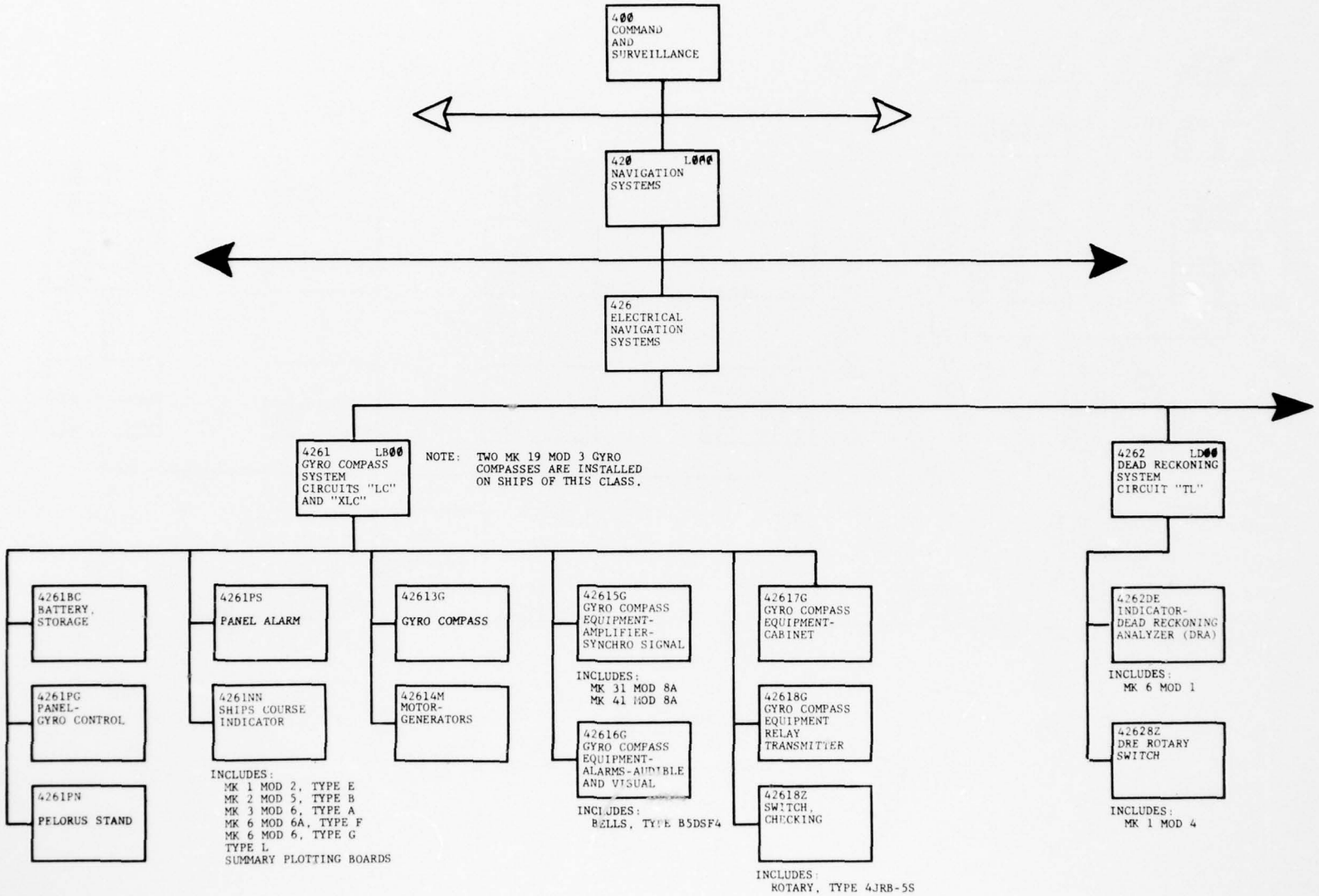


DDG-2 CLASS
PREPARED 10-26-76

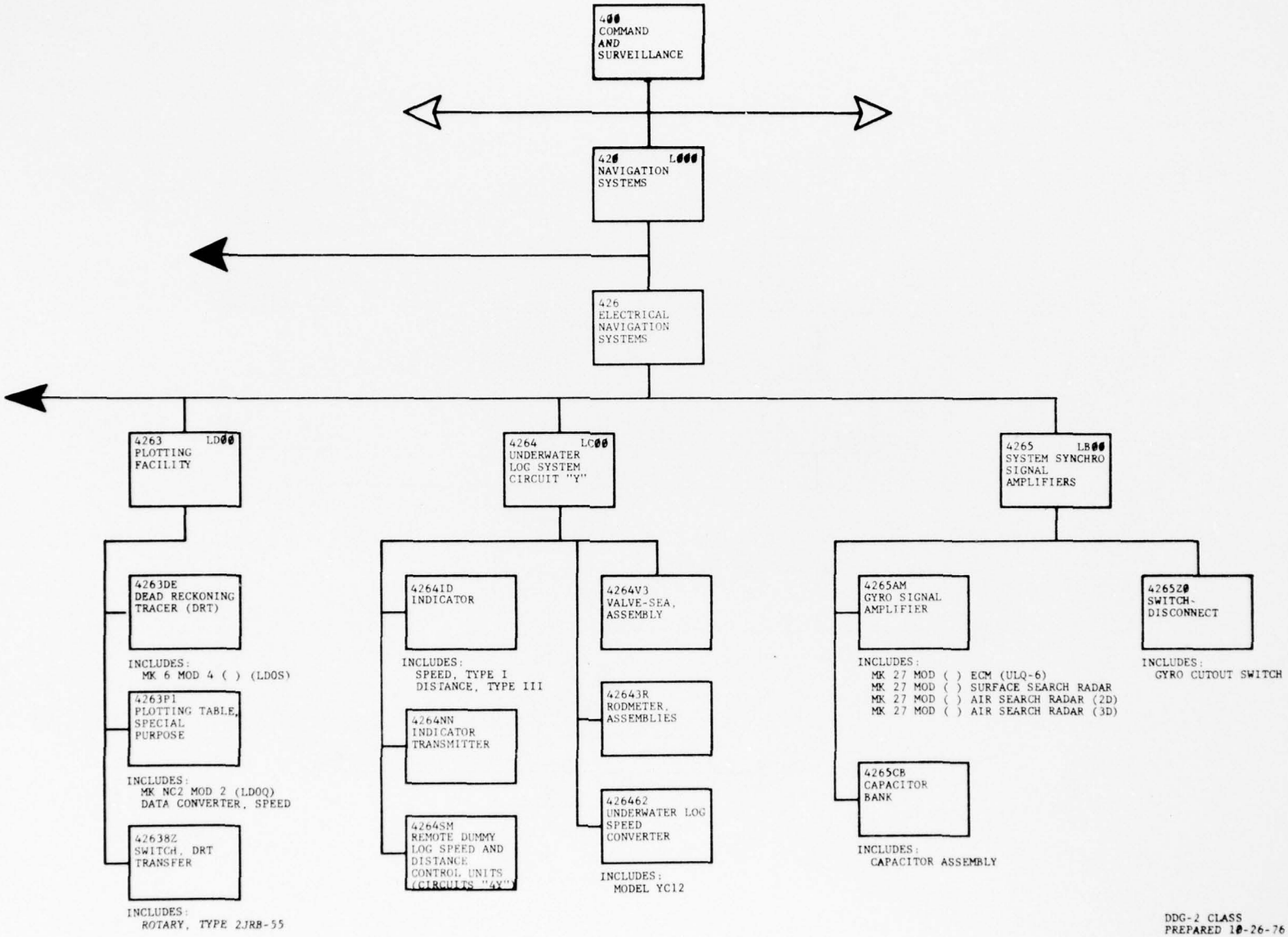

4ØØ
COMMAND
AND
SURVEILLANCE
42Ø LØØØ
NAVIGATION
SYSTEMS
421
NON-ELECTRICAL/
ELECTRONIC
NAVIGATION AIDS
INCLUDES NONELECTRICAL/ELECTRONIC
NAVIGATIONAL AIDS, BAROMETERS,
MAGNETIC COMPASS, BINOCULARS, ETC.
422
ELECTRICAL
NAVIGATION
AIDS
4211 LØØØ
MECHANICAL
4212 LFØØ
OPTICAL
4211N1
NAVIGATION
EQUIPMENT
ACCESSORIES
INCLUDES:
BINNACLE
MAGNETIC COMPASS
STOP WATCHES
COMPARING WATCHES
4211N5
NAVIGATIONAL
CLOCKS
INCLUDES:
CHRONOMETER
CLOCKS
SINUOUS COURSE CLOCK
4211WI
METEOROLOGICAL
DEVICES
INCLUDES:
PSYCHROMETER
THERMOMETER
ANEMOMETER
BAROMETER
42118C
COMPASS
COMPENSATING
EQUIPMENT
INCLUDES:
QUADRANTIAL SPHERES
FLINDERS BAR
PERMANENT MAGNETS
42125N
OPTICAL
NAVIGATION
AIDS
INCLUDES:
ALIDADES
AZIMUTH CIRCLE
BINOCULARS
SEXTANTS
STADIMETER
TELESCOPES
4221 LJØ1
CONTROL
DEVICES
4221PJ
PANEL-POWER
DISTRIBUTION
AND/OR
CONTROL
42218Z
SWITCH-
GENERAL
42212B
BOX-
ELECTRICAL
422123
CONTROL-
NAVIGATION
LIGHT
4222 LJØØ LKØØ
LIGHT
FIXTURES
4222LF
LIGHT-
NAVIGATIONAL,
MARINE
INCLUDES:
NAVIGATION
MASTHEAD (LJØ5)
RANGELIGHT (LJØ8)
SIDELIGHTS (LJØ9, LJØA)
ANCHOR LIGHTS
FOWARD (LJØ3)
AFT (LJØ4)
WHITE STERN LIGHT (LJØB)
WAKE LIGHT (LJØH)
BLUE STERN LIGHT (LJØC)
AIRCRAFT WARNING (LKØF)
SPEED LIGHTS (LJØG)
HOMING BEACON (LJØK)
ASW BEACON (LKØF)
MAN OVERBOARD AND
BREAKDOWN (LJØ7)
TASK LIGHTS (LJØD)
STEERING LIGHT
BOAT BOOM LIGHTS
TOWING LIGHTS (LJØ1)
SONAR CONTACT
AIRCRAFT LANDING LTS
HELO TOUCHDOWN
HELO DECKEDGE
HELO LINE UP
4223
INTERCONNECTING
CABLES
4223UK
CABLE
ASSEMBLY
4223FT
FITTINGS-
HULL
INCLUDES:
BUSHINGS
STUFFING TUBES
KICKPIPES
STRAPS
BRACKETS
CABLE TAGS
422317
CONNECTOR-
ELECTRICAL
DDG-2 CLASS
PREPARED 1Ø-26-76



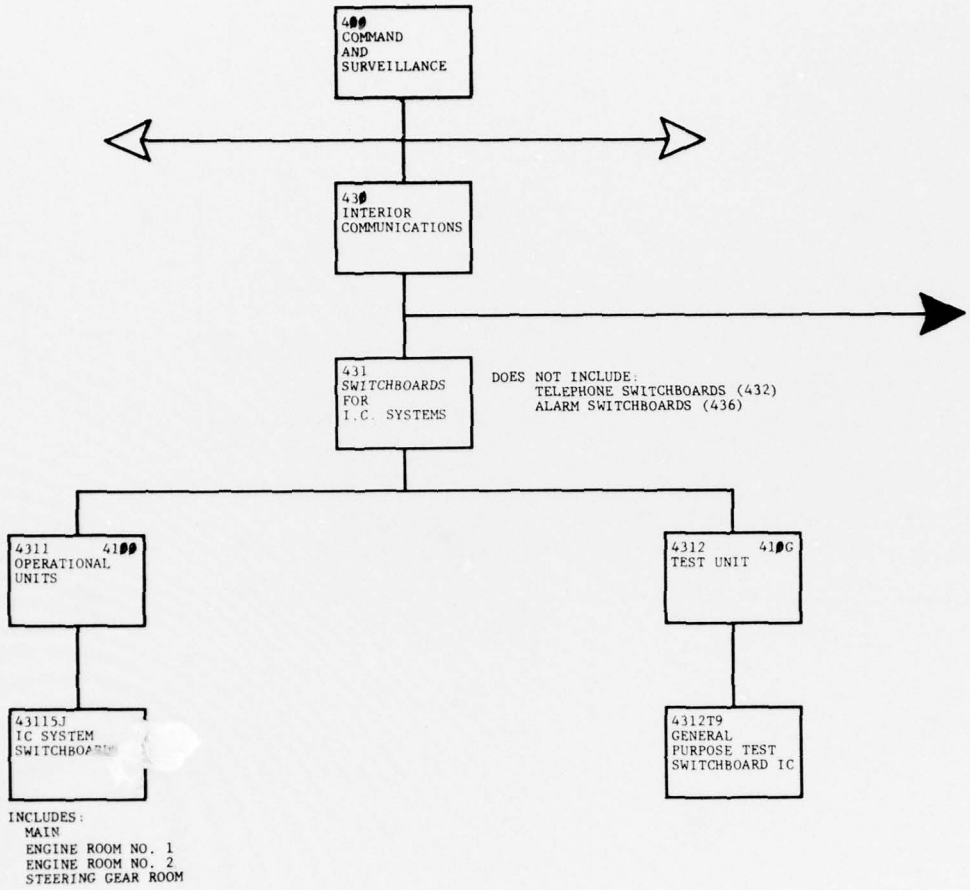
DDG-2 CLASS
PREPARED 10-26-76



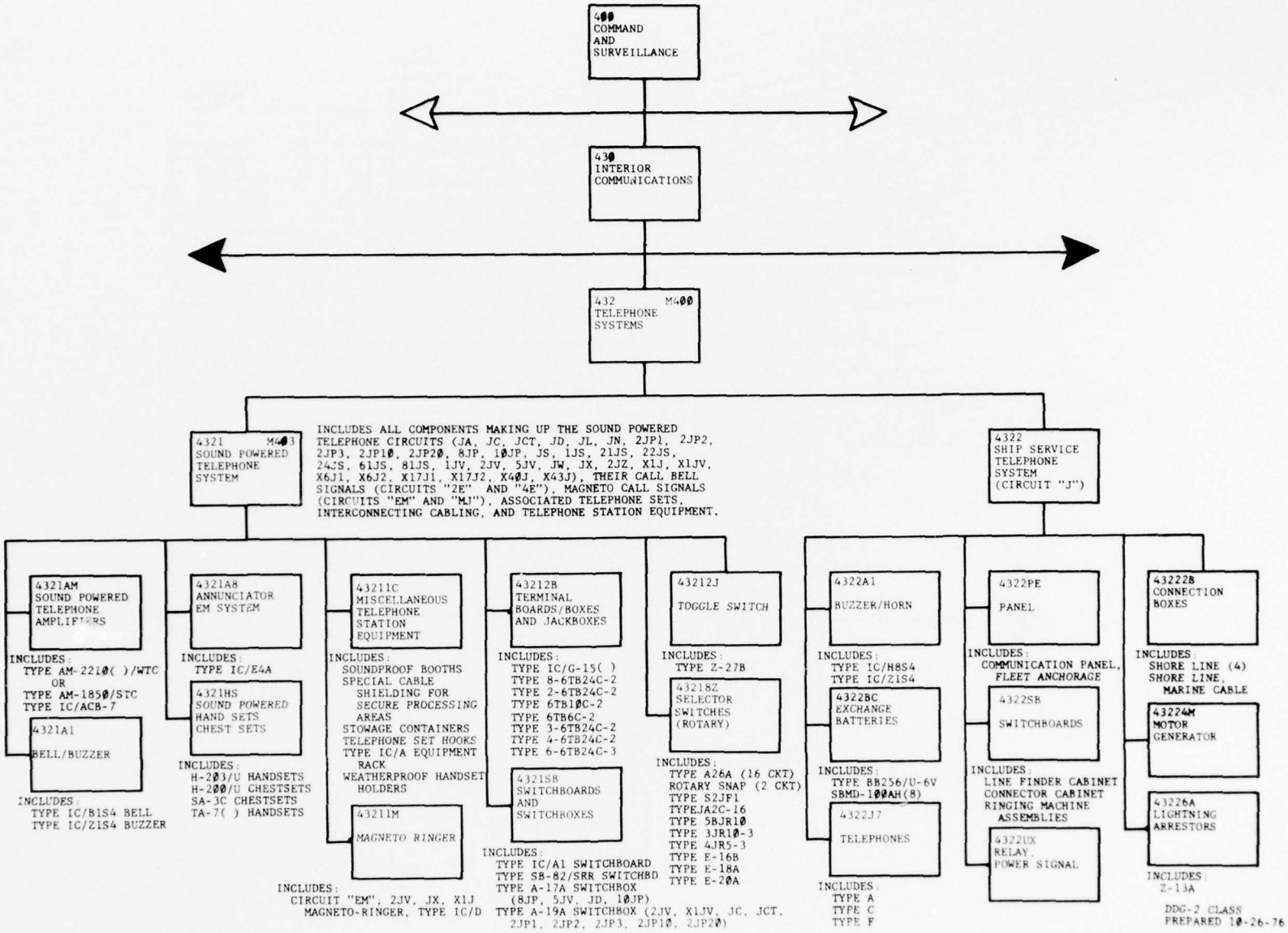
DDG-2 CLASS
PREPARED 10-26-76

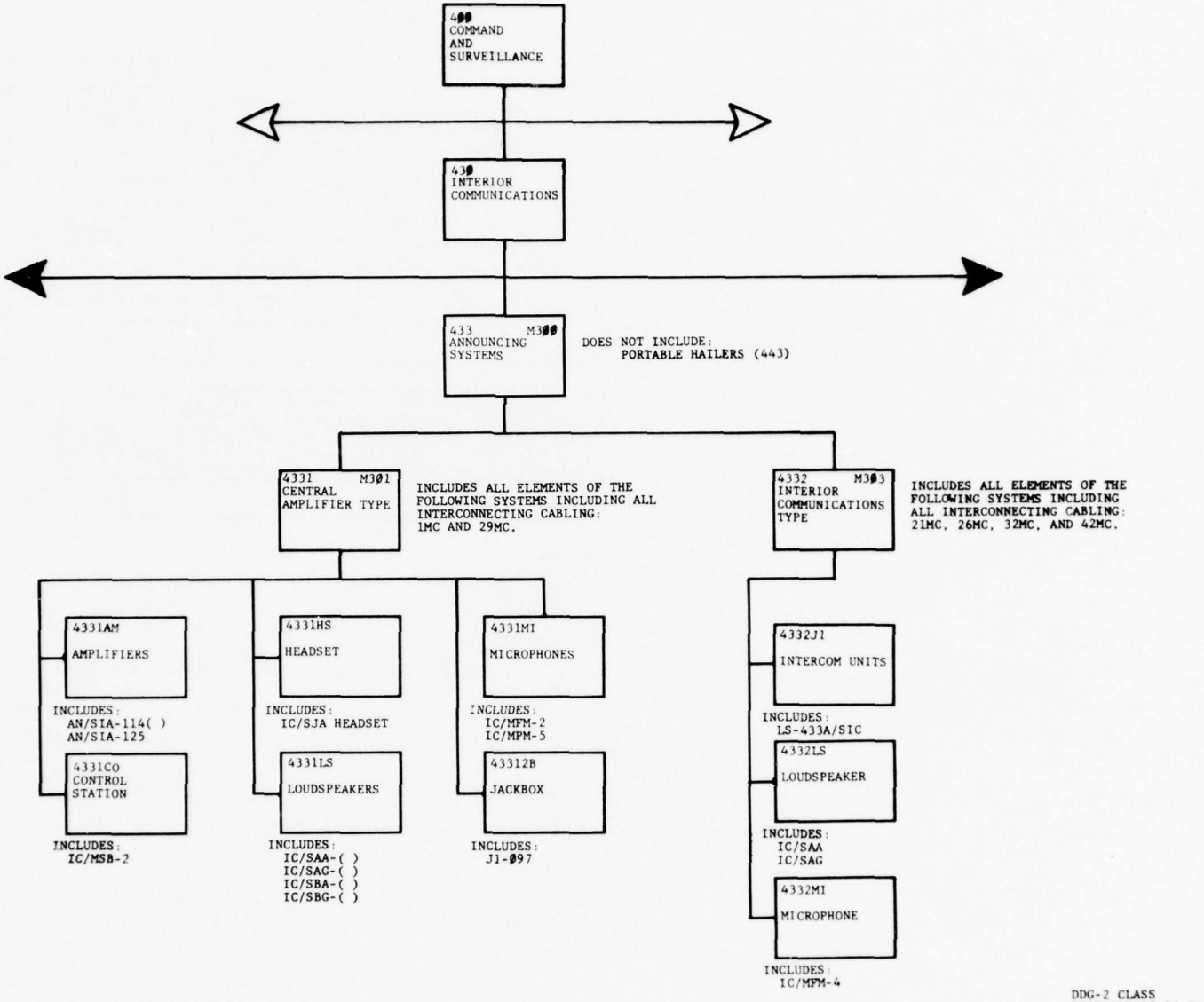


DDG-2 CLASS
PREPARED 10-26-76

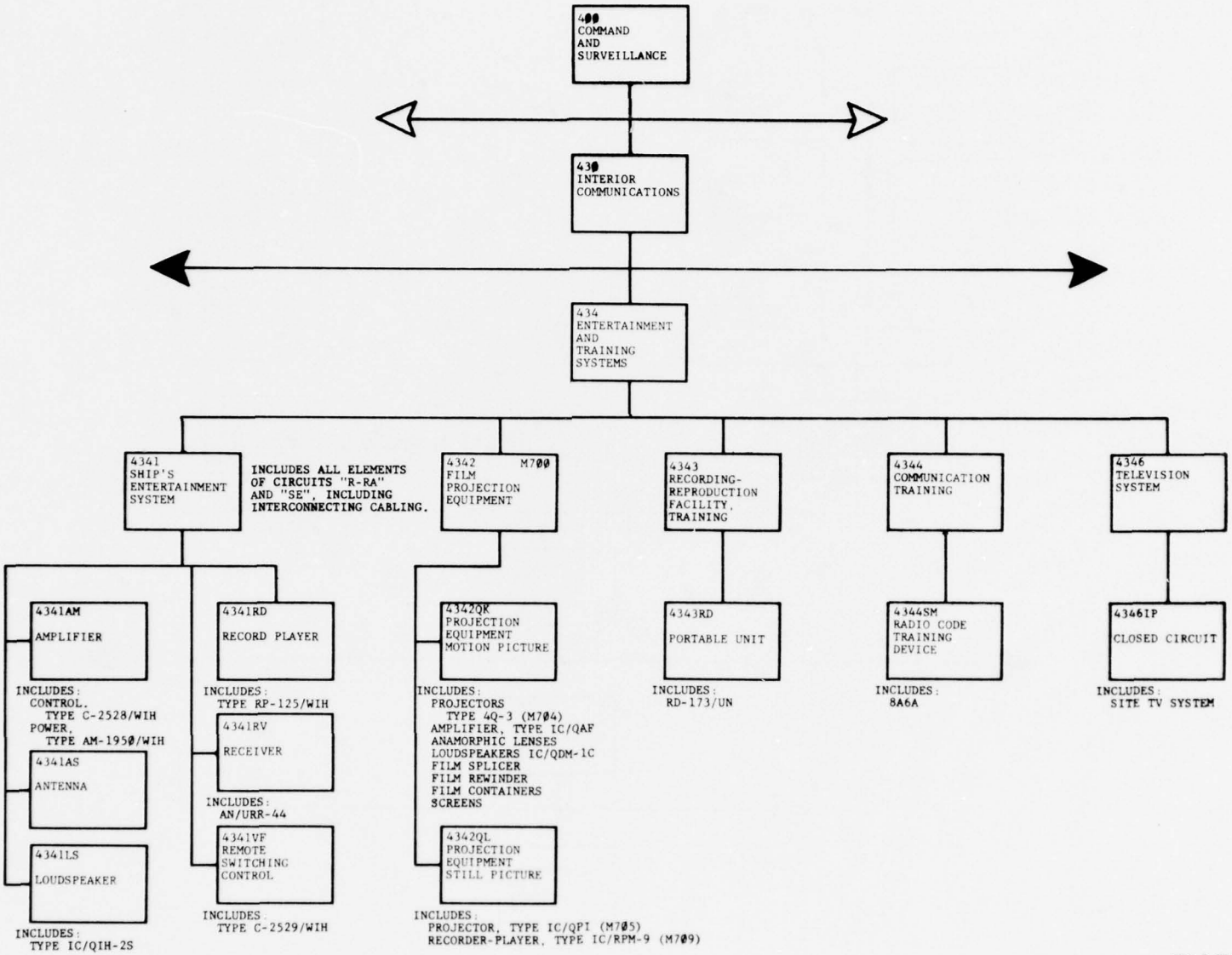


DDG-2 CLASS
PREPARED 10-26-76

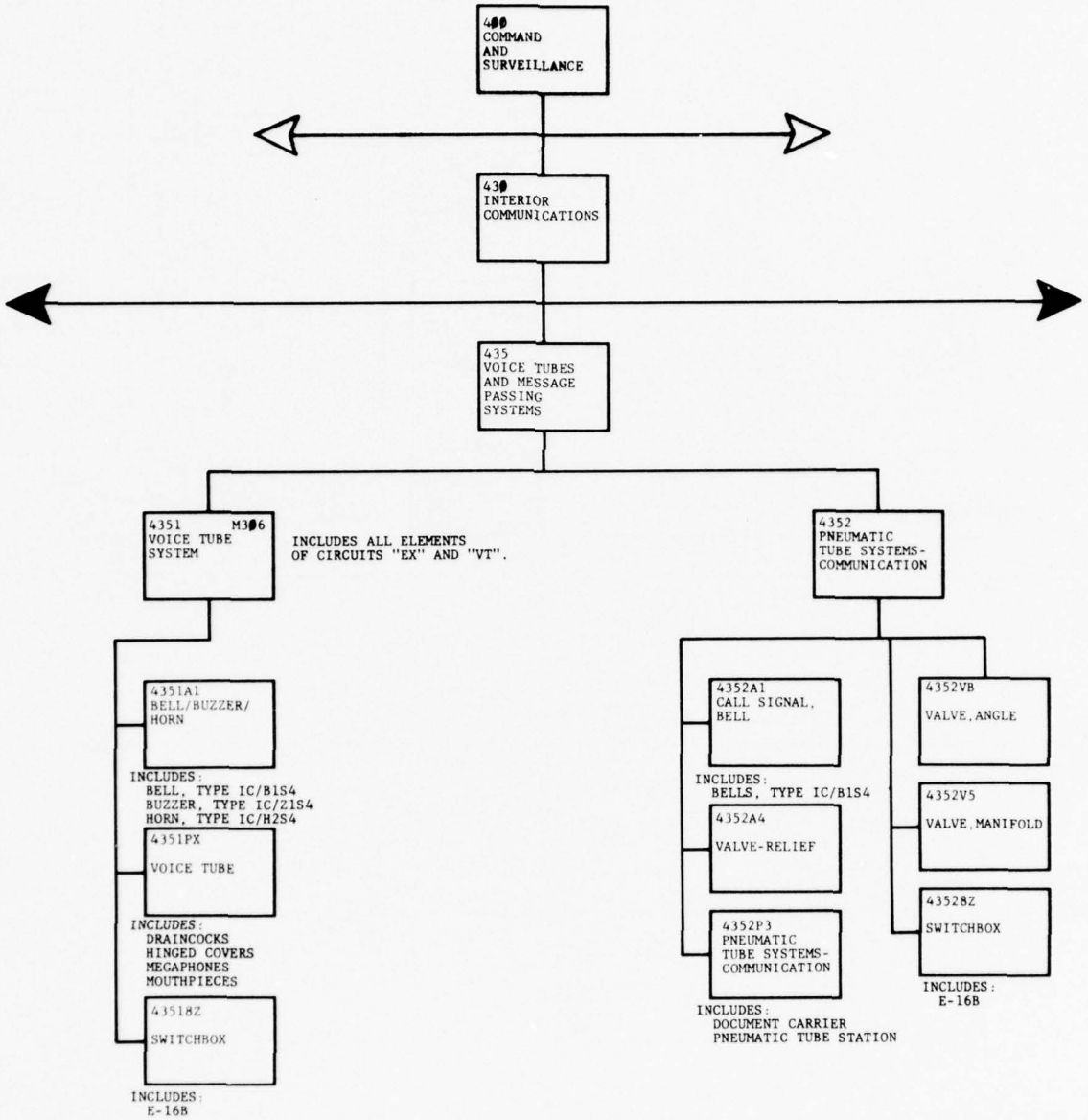

400
COMMAND
AND
SURVEILLANCE
430
INTERIOR
COMMUNICATIONS
432 M400
TELEPHONE
SYSTEMS
4321 M403
SOUND POWERED
TELEPHONE
SYSTEM
INCLUDES ALL COMPONENTS MAKING UP THE SOUND POWERED TELEPHONE CIRCUITS (JA, JC, JCT, JD, JL, JN, 2JP1, 2JP2, 2JP3, 2JP10, 2JP20, 8JP, 10JP, JS, 1JS, 21JS, 22JS, 24JS, 61JS, 81JS, 1JV, 2JV, 5JV, JW, JX, 2JZ, X1J, X1JV, X6J1, X6J2, X17J1, X17J2, X40J, X43J), THEIR CALL BELL SIGNALS (CIRCUITS "2E" AND "4E"), MAGNETO CALL SIGNALS (CIRCUITS "EM" AND "MJ"), ASSOCIATED TELEPHONE SETS, INTERCONNECTING CABLING, AND TELEPHONE STATION EQUIPMENT.
4322
SHIP SERVICE
TELEPHONE
SYSTEM
(CIRCUIT "J")
4321AM
SOUND POWERED
TELEPHONE
AMPLIFIERS
INCLUDES:
TYPE AM-2210( )/WTC
OR
TYPE AM-1850/STC
TYPE IC/ACB-7
4321A1
BELL/BUZZER
INCLUDES:
TYPE IC/B1S4 BELL
TYPE IC/Z1S4 BUZZER
4321A8
ANNUNCIATOR
EM SYSTEM
INCLUDES:
TYPE IC/E4A
4321HS
SOUND POWERED
HAND SETS
CHEST SETS
INCLUDES:
H-203/U HANDSETS
H-200/U CHESTSETS
SA-3C CHESTSETS
TA-7( ) HANDSETS
43211C
MISCELLANEOUS
TELEPHONE
STATION
EQUIPMENT
INCLUDES:
SOUNDPROOF BOOTHS
SPECIAL CABLE
SHIELDING FOR
SECURE PROCESSING
AREAS
STOWAGE CONTAINERS
TELEPHONE SET HOOKS
TYPE IC/A EQUIPMENT
RACK
WEATHERPROOF HANDSET
HOLDERS
43211M
MAGNETO RINGER
INCLUDES:
CIRCUIT "EM", 2JV, JX, X1J
MAGNETO-RINGER, TYPE IC/D
43212B
TERMINAL
BOARDS/BOXES
AND JACKBOXES
INCLUDES:
TYPE IC/G-15( )
TYPE 8-6TB24C-2
TYPE 2-6TB24C-2
TYPE 6TB10C-2
TYPE 6TB6C-2
TYPE 3-6TB24C-2
TYPE 4-6TB24C-2
TYPE 6-6TB24C-3
4321SB
SWITCHBOARDS
AND
SWITCHBOXES
INCLUDES:
TYPE IC/A1 SWITCHBOARD
TYPE SB-82/SRR SWITCHBD
TYPE A-17A SWITCHBOX
(8JP, 5JV, JD, 10JP)
TYPE A-19A SWITCHBOX (2JV, X1JV, JC, JCT,
2JP1, 2JP2, 2JP3, 2JP10, 2JP20)
43212J
TOGGLE SWITCH
INCLUDES:
TYPE Z-27B
43218Z
SELECTOR
SWITCHES
(ROTARY)
INCLUDES:
TYPE A26A (16 CKT)
ROTARY SNAP (2 CKT)
TYPE S2JF1
TYPEJA2C-16
TYPE 5BJR10
TYPE 3JR10-3
TYPE 4JR5-3
TYPE E-16B
TYPE E-18A
TYPE E-20A
4322A1
BUZZER/HORN
INCLUDES:
TYPE IC/H8S4
TYPE IC/Z1S4
4322BC
EXCHANGE
BATTERIES
INCLUDES:
TYPE BB256/U-6V
SBMD-100AH(8)
4322J7
TELEPHONES
INCLUDES:
TYPE A
TYPE C
TYPE F
4322PE
PANEL
INCLUDES:
COMMUNICATION PANEL,
FLEET ANCHORAGE
4322SB
SWITCHBOARDS
INCLUDES:
LINE FINDER CABINET
CONNECTOR CABINET
RINGING MACHINE
ASSEMBLIES
4322UX
RELAY,
POWER SIGNAL
43222B
CONNECTION
BOXES
INCLUDES:
SHORE LINE (4)
SHORE LINE,
MARINE CABLE
43224M
MOTOR
GENERATOR
43226A
LIGHTNING
ARRESTORS
INCLUDES:
Z-13A
DDG-2 CLASS
PREPARED 10-26-76



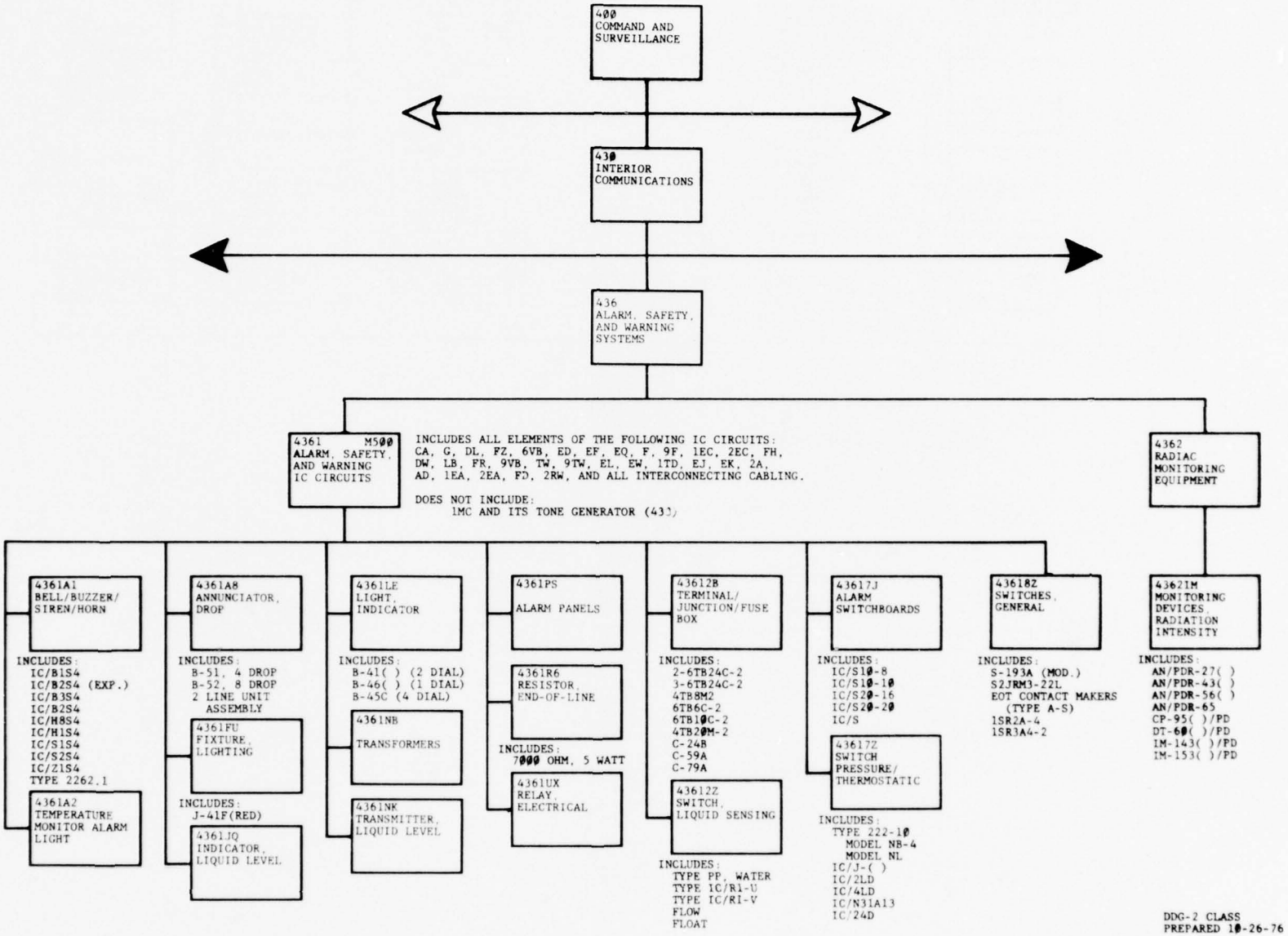
DDG-2 CLASS
PREPARED 1Ø-26-76

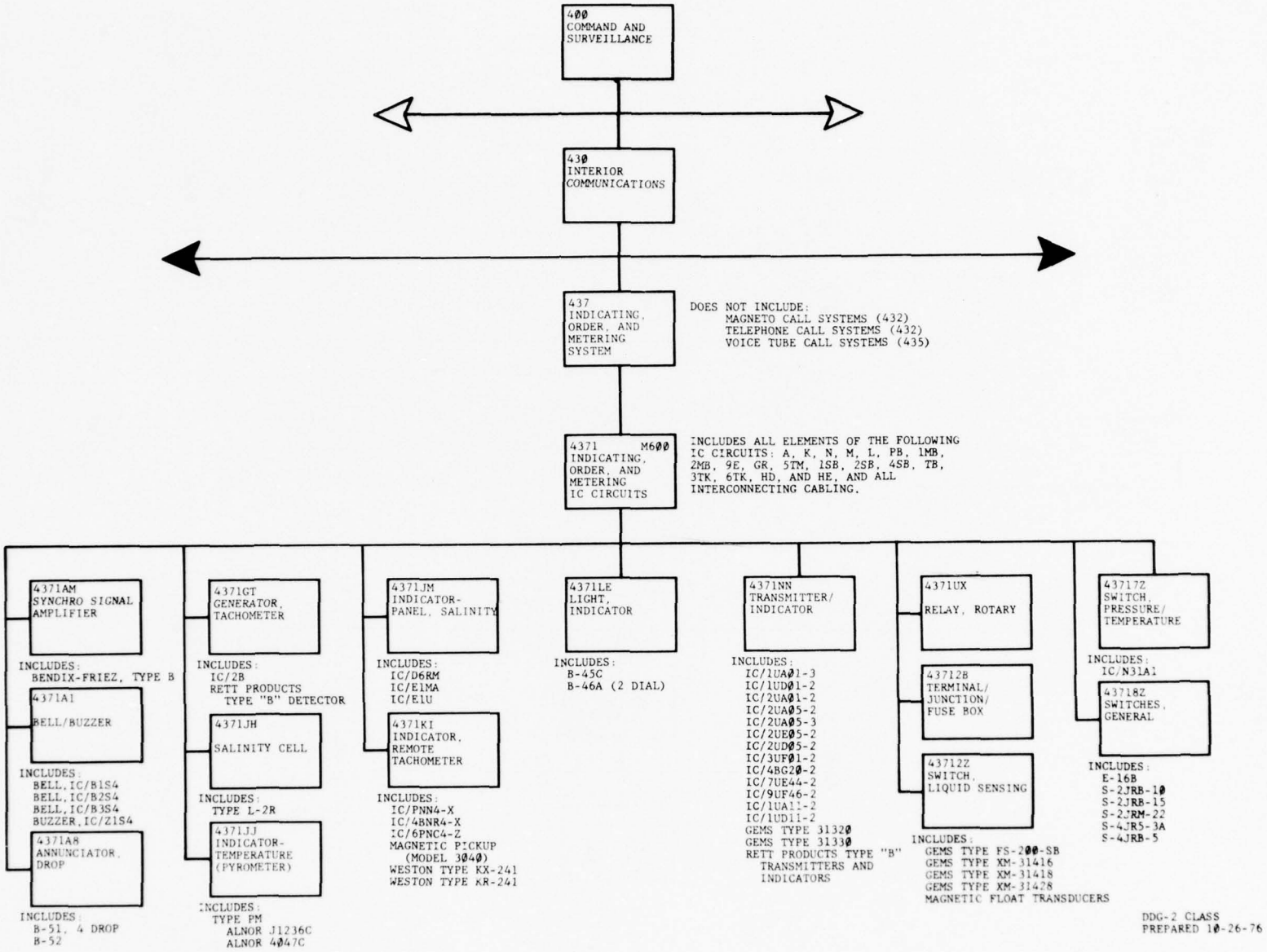


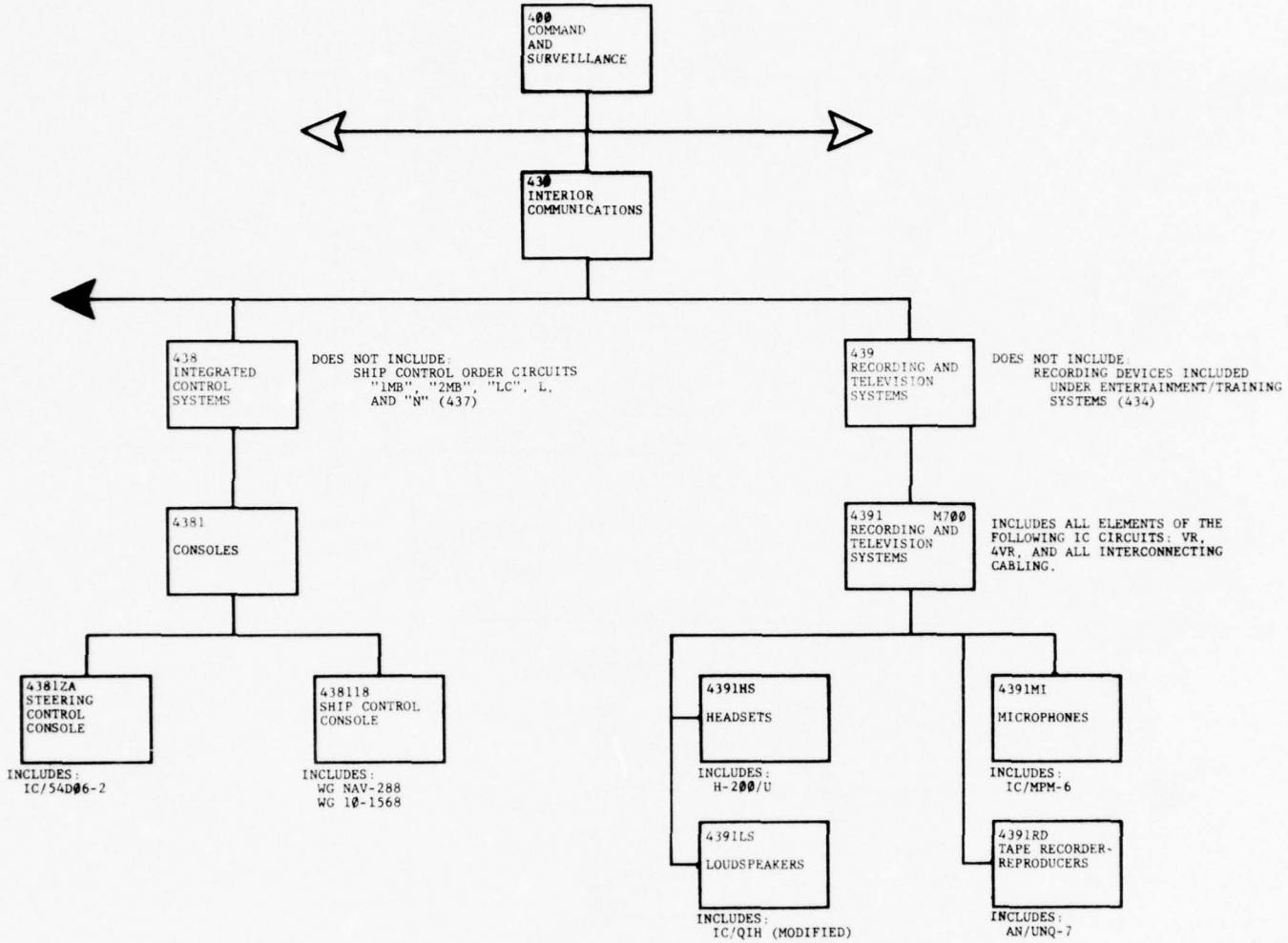
DDG-2 CLASS
PREPARED 10-26-76



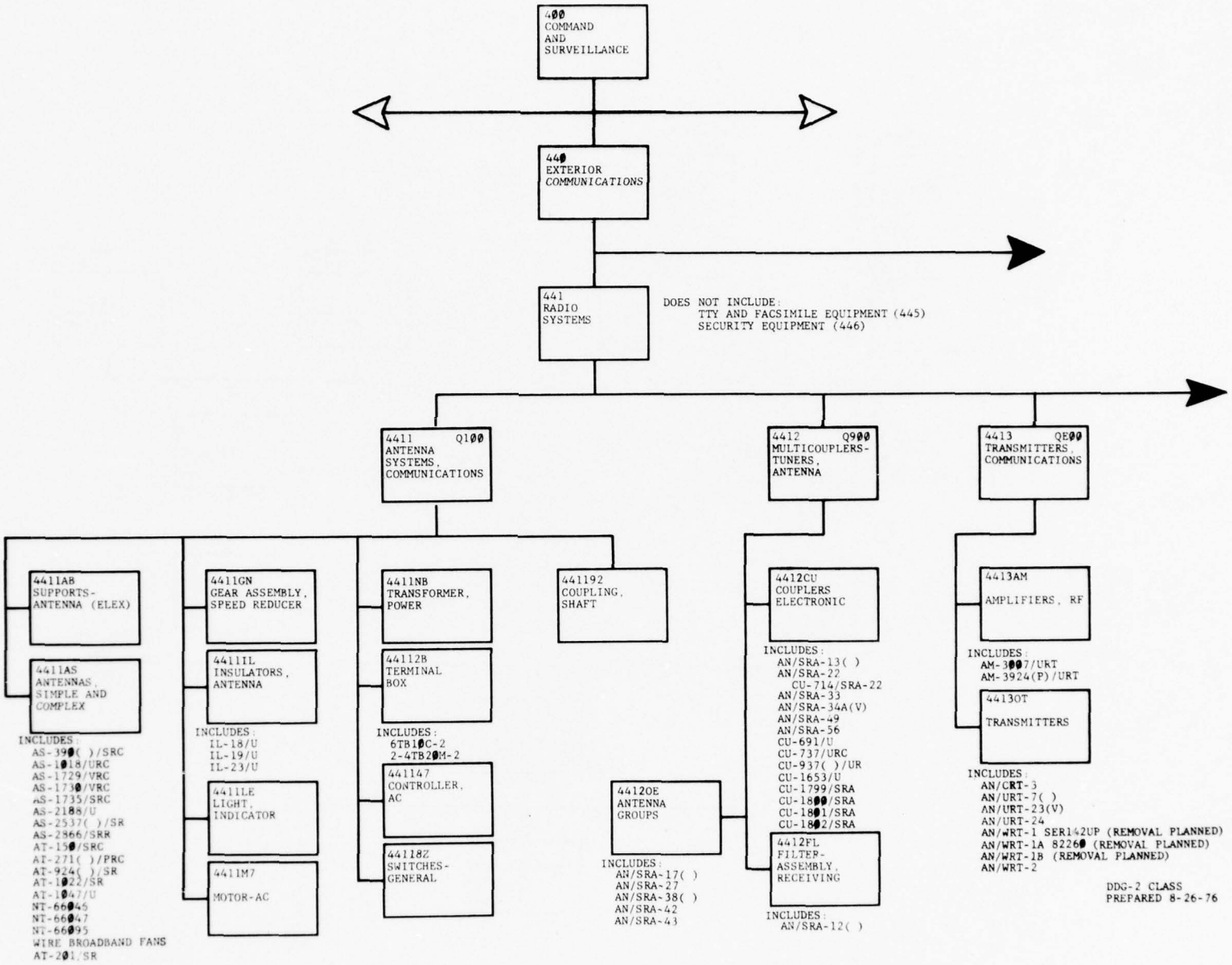
DDG-2 CLASS
PREPARED 10-26-76

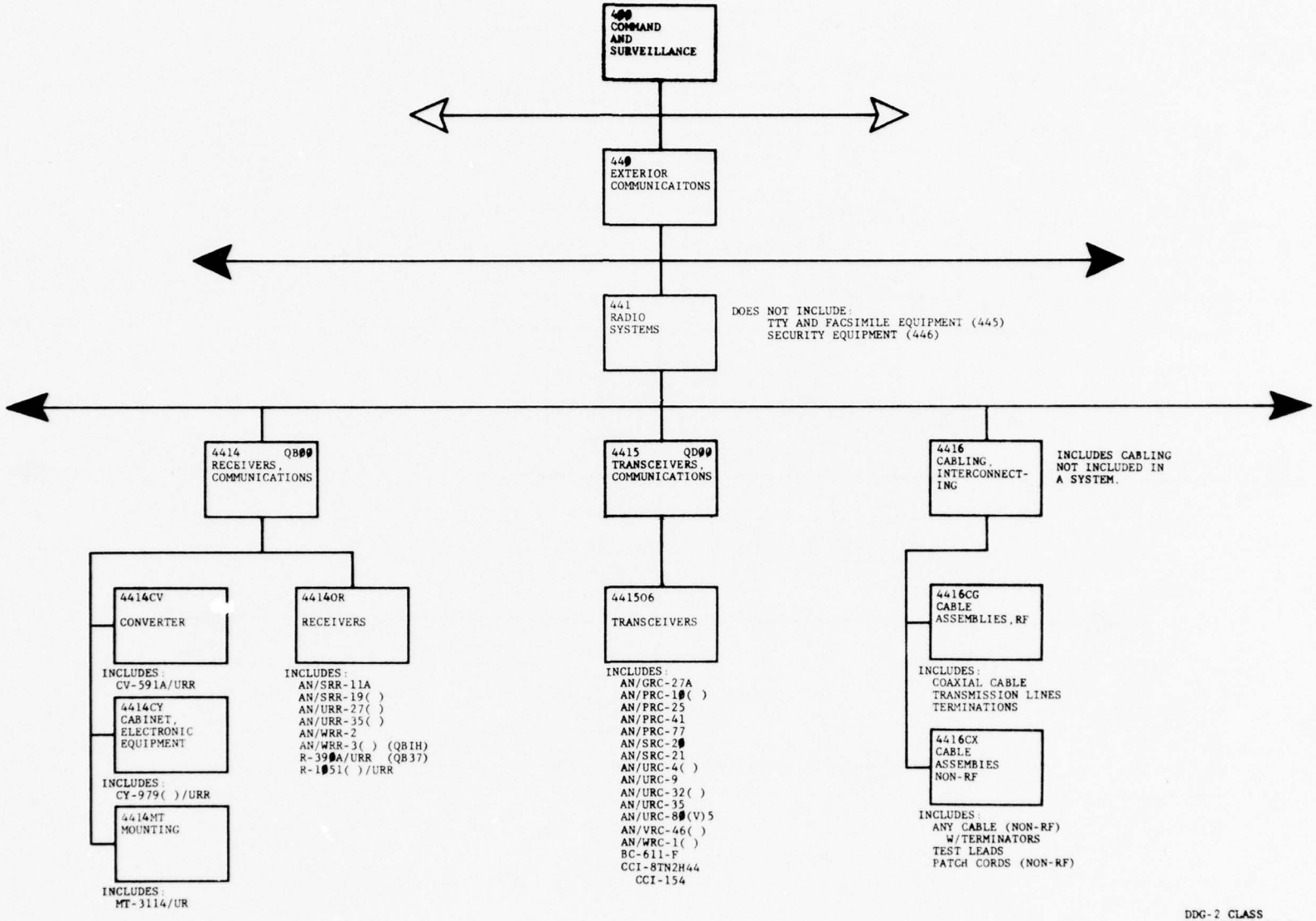

400
COMMAND AND SURVEILLANCE
430
INTERIOR COMMUNICATIONS
436
ALARM, SAFETY, AND WARNING SYSTEMS
4361 M500
ALARM, SAFETY, AND WARNING IC CIRCUITS
INCLUDES ALL ELEMENTS OF THE FOLLOWING IC CIRCUITS:
CA, G, DL, FZ, 6VB, ED, EF, EQ, F, 9F, 1EC, 2EC, FH, DW, LB, FR, 9VB, TW, 9TW, EL, EW, 1TD, EJ, EK, 2A, AD, 1EA, 2EA, FD, 2RW, AND ALL INTERCONNECTING CABLING.
DOES NOT INCLUDE:
1MC AND ITS TONE GENERATOR (433)
4362
RADIAC MONITORING EQUIPMENT
4361A1
BELL/BUZZER/ SIREN/HORN
INCLUDES:
IC/B1S4
IC/B2S4 (EXP.)
IC/B3S4
IC/B2S4
IC/H8S4
IC/H1S4
IC/S1S4
IC/S2S4
IC/Z1S4
TYPE 2262.1
4361A2
TEMPERATURE MONITOR ALARM LIGHT
4361A8
ANNUNCIATOR, DROP
INCLUDES:
B-51, 4 DROP
B-52, 8 DROP
2 LINE UNIT ASSEMBLY
4361FU
FIXTURE, LIGHTING
INCLUDES:
J-41F(RED)
4361JQ
INDICATOR, LIQUID LEVEL
4361LE
LIGHT, INDICATOR
INCLUDES:
B-41( ) (2 DIAL)
B-46( ) (1 DIAL)
B-45C (4 DIAL)
4361NB
TRANSFORMERS
4361NK
TRANSMITTER, LIQUID LEVEL
4361PS
ALARM PANELS
4361R6
RESISTOR, END-OF-LINE
INCLUDES:
7000 OHM, 5 WATT
4361UX
RELAY, ELECTRICAL
43612B
TERMINAL/ JUNCTION/FUSE BOX
INCLUDES:
2-6TB24C-2
3-6TB24C-2
4TB8M2
6TB6C-2
6TB10C-2
4TB20M-2
C-24B
C-59A
C-79A
43612Z
SWITCH, LIQUID SENSING
INCLUDES:
TYPE PP, WATER
TYPE IC/R1-U
TYPE IC/R1-V
FLOW
FLOAT
43617J
ALARM SWITCHBOARDS
INCLUDES:
IC/S10-8
IC/S10-10
IC/S20-16
IC/S20-20
IC/S
43617Z
SWITCH PRESSURE/ THERMOSTATIC
INCLUDES:
TYPE 222-10
MODEL NB-4
MODEL NL
IC/J-( )
IC/2LD
IC/4LD
IC/N31A13
IC/24D
43618Z
SWITCHES, GENERAL
INCLUDES:
S-193A (MOD.)
S2JRM3-22L
EOT CONTACT MAKERS (TYPE A-S)
1SR2A-4
1SR3A4-2
43621M
MONITORING DEVICES, RADIATION INTENSITY
INCLUDES:
AN/PDR-27( )
AN/PDR-43( )
AN/PDR-56( )
AN/PDR-65
CP-95( )/PD
DT-60( )/PD
IM-143( )/PD
IM-153( )/PD
DDG-2 CLASS
PREPARED 10-26-76


400
COMMAND AND SURVEILLANCE
430
INTERIOR COMMUNICATIONS
437
INDICATING, ORDER, AND METERING SYSTEM
DOES NOT INCLUDE:
MAGNETO CALL SYSTEMS (432)
TELEPHONE CALL SYSTEMS (432)
VOICE TUBE CALL SYSTEMS (435)
4371 M600
INDICATING, ORDER, AND METERING IC CIRCUITS
INCLUDES ALL ELEMENTS OF THE FOLLOWING IC CIRCUITS: A, K, N, M, L, PB, 1MB, 2MB, 9E, GR, 5TM, 1SB, 2SB, 4SB, TB, 3TK, 6TK, HD, AND HE, AND ALL INTERCONNECTING CABLING.
4371AM
SYNCHRO SIGNAL AMPLIFIER
INCLUDES:
BENDIX-FRIEZ, TYPE B
4371A1
BELL/BUZZER
INCLUDES:
BELL, IC/B1S4
BELL, IC/B2S4
BELL, IC/B3S4
BUZZER, IC/Z1S4
4371A8
ANNUNCIATOR, DROP
INCLUDES:
B-51, 4 DROP
B-52
4371GT
GENERATOR, TACHOMETER
INCLUDES:
IC/2B
RETT PRODUCTS TYPE "B" DETECTOR
4371JH
SALINITY CELL
INCLUDES:
TYPE L-2R
4371JJ
INDICATOR-TEMPERATURE (PYROMETER)
INCLUDES:
TYPE PM
ALNOR J1236C
ALNOR 4047C
4371JM
INDICATOR-PANEL, SALINITY
INCLUDES:
IC/D6RM
IC/E1MA
IC/E1U
4371KI
INDICATOR, REMOTE TACHOMETER
INCLUDES:
IC/PNN4-X
IC/4BNR4-X
IC/6PNC4-Z
MAGNETIC PICKUP (MODEL 3040)
WESTON TYPE KX-241
WESTON TYPE KR-241
4371LE
LIGHT, INDICATOR
INCLUDES:
B-45C
B-46A (2 DIAL)
4371NN
TRANSMITTER/INDICATOR
INCLUDES:
IC/1UA01-3
IC/1UD01-2
IC/2UA01-2
IC/2UA05-2
IC/2UA05-3
IC/2UE05-2
IC/2UD05-2
IC/3UF01-2
IC/4BG20-2
IC/7UE44-2
IC/9UF46-2
IC/1UA11-2
IC/1UD11-2
GEMS TYPE 31320
GEMS TYPE 31330
RETT PRODUCTS TYPE "B" TRANSMITTERS AND INDICATORS
4371UX
RELAY, ROTARY
43712B
TERMINAL/JUNCTION/FUSE BOX
43712Z
SWITCH, LIQUID SENSING
INCLUDES:
GEMS TYPE FS-200-SB
GEMS TYPE XM-31416
GEMS TYPE XM-31418
GEMS TYPE XM-31428
MAGNETIC FLOAT TRANSDUCERS
43717Z
SWITCH, PRESSURE/TEMPERATURE
INCLUDES:
IC/N31A1
43718Z
SWITCHES, GENERAL
INCLUDES:
E-16B
S-2JRB-10
S-2JRB-15
S-2JRM-22
S-4JR5-3A
S-4JRB-5
DDG-2 CLASS
PREPARED 10-26-76

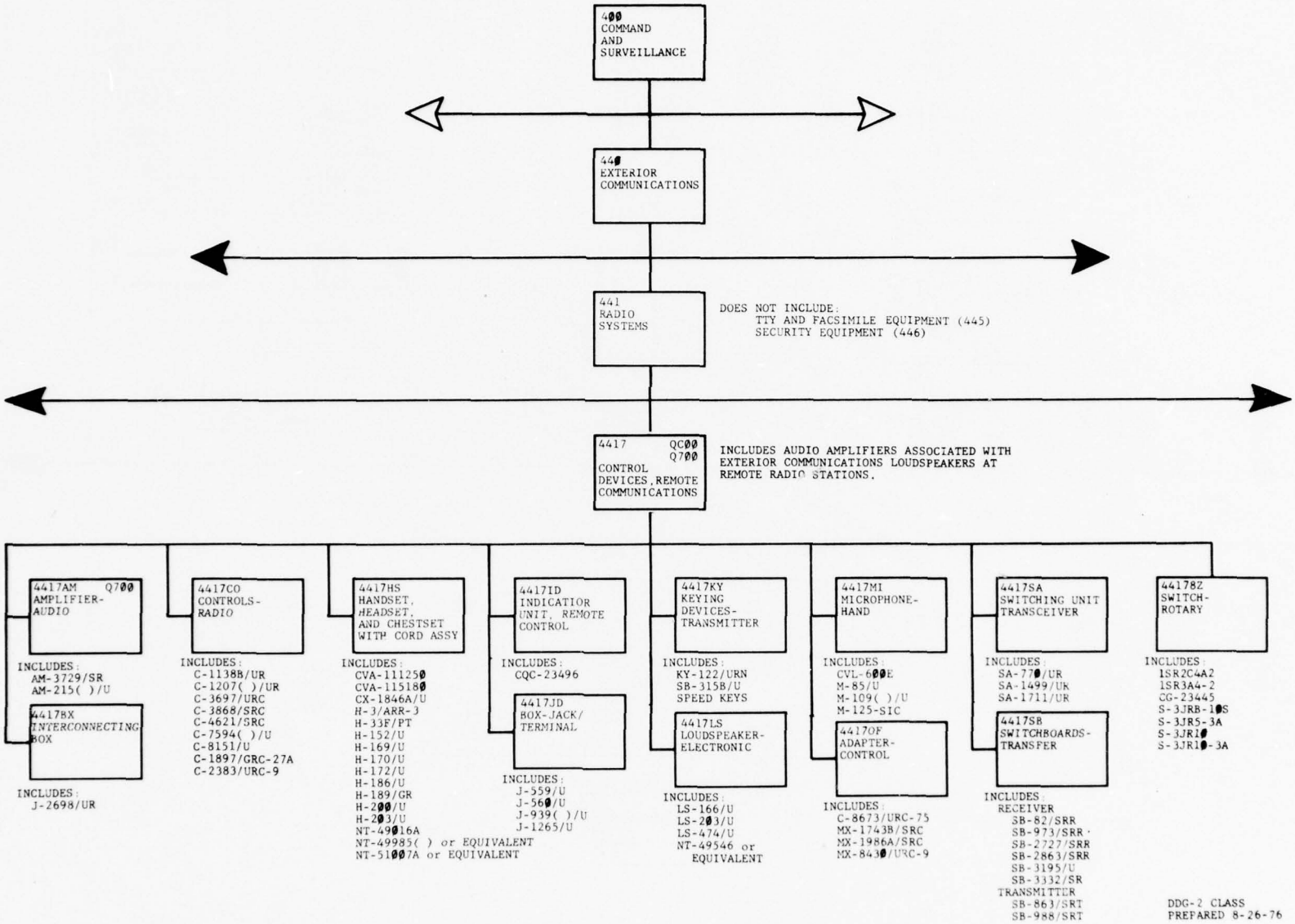


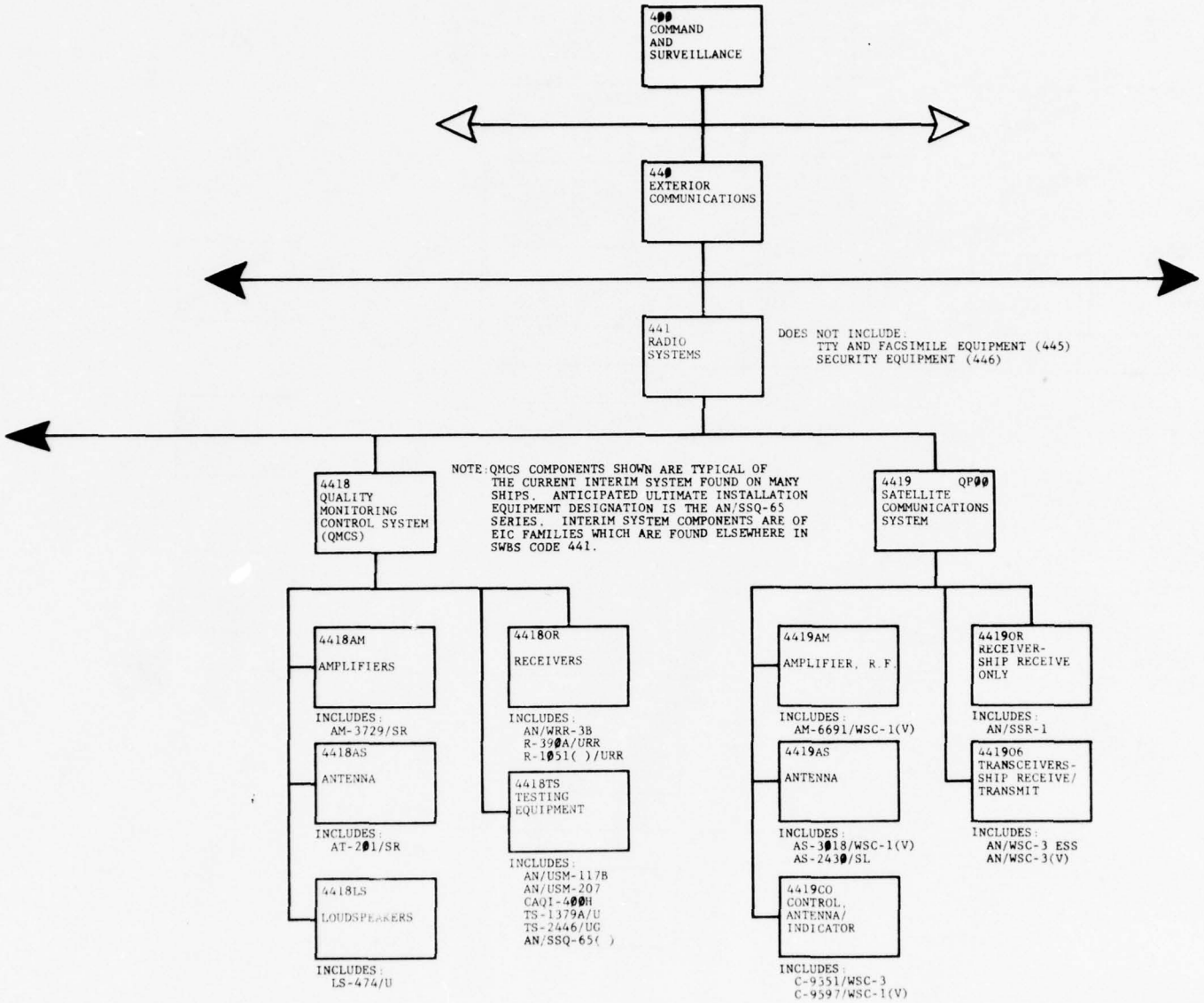
DDG-2 CLASS
PREPARED 10-26-76


400
COMMAND
AND
SURVEILLANCE
440
EXTERIOR
COMMUNICATIONS
441
RADIO
SYSTEMS
DOES NOT INCLUDE:
TTY AND FACSIMILE EQUIPMENT (445)
SECURITY EQUIPMENT (446)
4411 Q100
ANTENNA
SYSTEMS,
COMMUNICATIONS
4412 Q900
MULTICOUPLERS-
TUNERS,
ANTENNA
4413 QE00
TRANSMITTERS,
COMMUNICATIONS
4411AB
SUPPORTS-
ANTENNA (ELEX)
4411AS
ANTENNAS,
SIMPLE AND
COMPLEX
INCLUDES:
AS-390( )/SRC
AS-1018/URC
AS-1729/VRC
AS-1730/VRC
AS-1735/SRC
AS-2188/U
AS-2537( )/SR
AS-2866/SRR
AT-150/SRC
AT-271( )/PRC
AT-924( )/SR
AT-1022/SR
AT-1047/U
NT-66046
NT-66047
NT-66095
WIRE BROADBAND FANS
AT-201/SR
4411GN
GEAR ASSEMBLY,
SPEED REDUCER
4411IL
INSULATORS,
ANTENNA
INCLUDES:
IL-18/U
IL-19/U
IL-23/U
4411LE
LIGHT,
INDICATOR
4411M7
MOTOR-AC
4411NB
TRANSFORMER,
POWER
44112B
TERMINAL
BOX
INCLUDES:
6TB100C-2
2-4TB200M-2
441147
CONTROLLER,
AC
44118Z
SWITCHES-
GENERAL
441192
COUPLING,
SHAFT
4412CU
COUPLERS
ELECTRONIC
INCLUDES:
AN/SRA-13( )
AN/SRA-22
CU-714/SRA-22
AN/SRA-33
AN/SRA-34A(V)
AN/SRA-49
AN/SRA-56
CU-691/U
CU-737/URC
CU-937( )/UR
CU-1653/U
CU-1799/SRA
CU-1800/SRA
CU-1801/SRA
CU-1802/SRA
4412OE
ANTENNA
GROUPS
INCLUDES:
AN/SRA-17( )
AN/SRA-27
AN/SRA-38( )
AN/SRA-42
AN/SRA-43
4412FL
FILTER-
ASSEMBLY,
RECEIVING
INCLUDES:
AN/SRA-12( )
4413AM
AMPLIFIERS, RF
INCLUDES:
AM-3007/URT
AM-3924(P)/URT
44130T
TRANSMITTERS
INCLUDES:
AN/CRT-3
AN/URT-7( )
AN/URT-23(V)
AN/URT-24
AN/WRT-1 SER142UP (REMOVAL PLANNED)
AN/WRT-1A 82260 (REMOVAL PLANNED)
AN/WRT-1B (REMOVAL PLANNED)
AN/WRT-2
DDG-2 CLASS
PREPARED 8-26-76

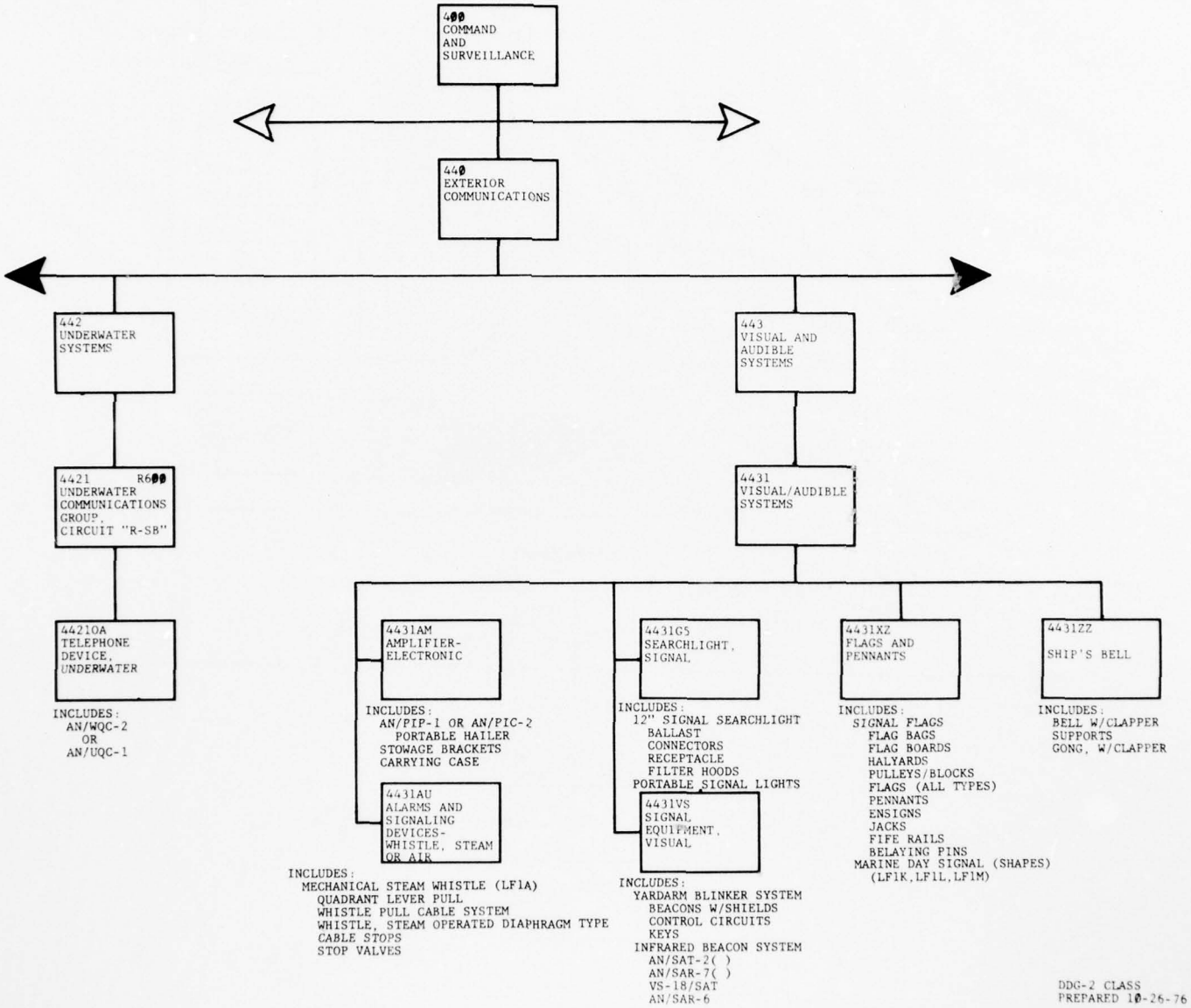


DDG-2 CLASS
PREPARED 8-26-76

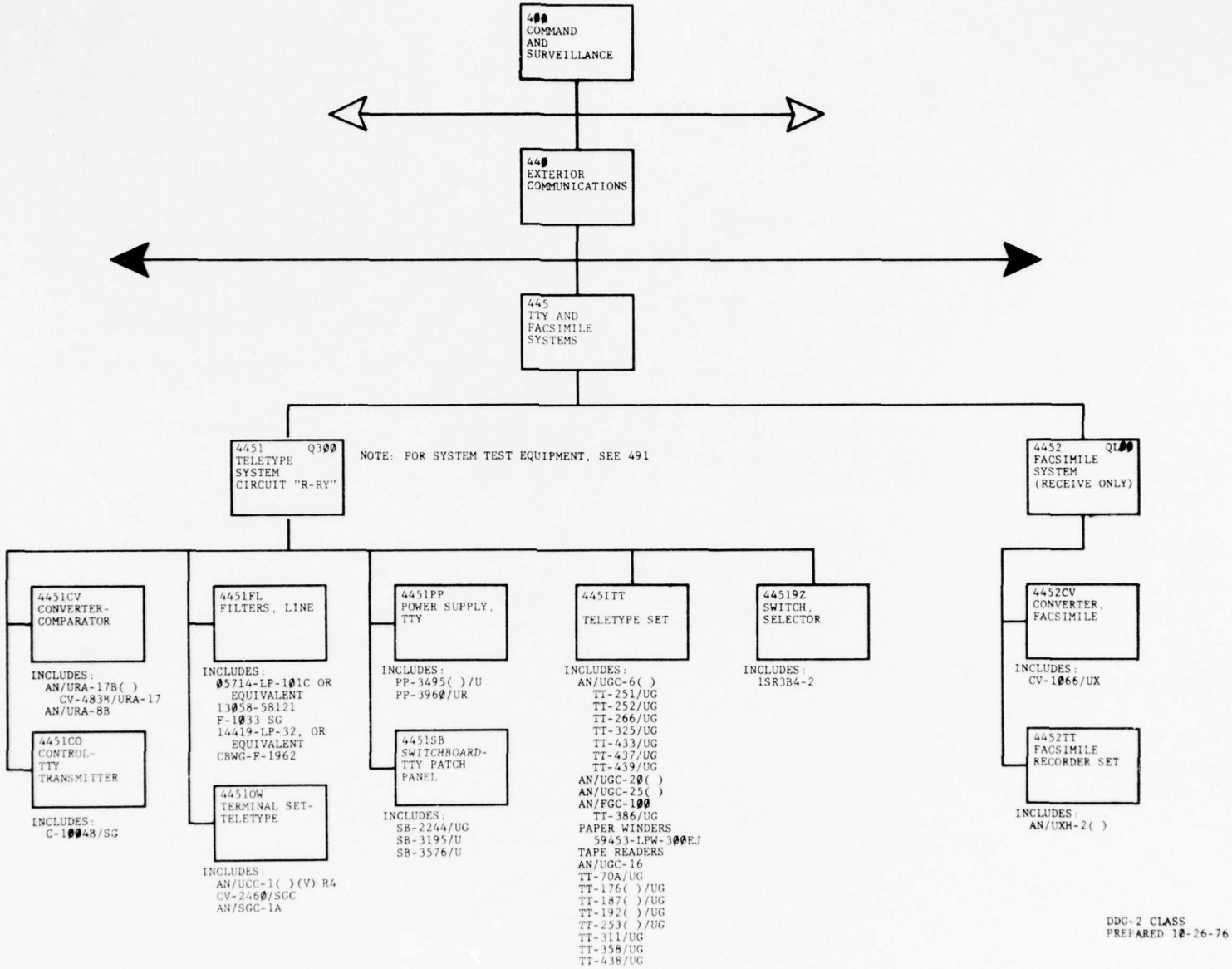

400
COMMAND
AND
SURVEILLANCE
440
EXTERIOR
COMMUNICATIONS
441
RADIO
SYSTEMS
DOES NOT INCLUDE:
TTY AND FACSIMILE EQUIPMENT (445)
SECURITY EQUIPMENT (446)
4417 QC00
Q700
CONTROL
DEVICES, REMOTE
COMMUNICATIONS
INCLUDES AUDIO AMPLIFIERS ASSOCIATED WITH
EXTERIOR COMMUNICATIONS LOUDSPEAKERS AT
REMOTE RADIO STATIONS.
4417AM Q700
AMPLIFIER-
AUDIO
INCLUDES:
AM-3729/SR
AM-215( )/U
4417BX
INTERCONNECTING
BOX
INCLUDES:
J-2698/UR
4417CO
CONTROLS-
RADIO
INCLUDES:
C-1138B/UR
C-1207( )/UR
C-3697/URC
C-3868/SRC
C-4621/SRC
C-7594( )/U
C-8151/U
C-1897/GRC-27A
C-2383/URC-9
4417HS
HANDSET,
HEADSET,
AND CHESTSET
WITH CORD ASSY
INCLUDES:
CVA-111250
CVA-115180
CX-1846A/U
H-3/ARR-3
H-33F/PT
H-152/U
H-169/U
H-170/U
H-172/U
H-186/U
H-189/GR
H-200/U
H-203/U
NT-49016A
NT-49985( ) or EQUIVALENT
NT-51007A or EQUIVALENT
4417ID
INDICATIOR
UNIT, REMOTE
CONTROL
INCLUDES:
CQC-23496
4417JD
BOX-JACK/
TERMINAL
INCLUDES:
J-559/U
J-560/U
J-939( )/U
J-1265/U
4417KY
KEYING
DEVICES-
TRANSMITTER
INCLUDES:
KY-122/URN
SB-315B/U
SPEED KEYS
4417LS
LOUDSPEAKER-
ELECTRONIC
INCLUDES:
LS-166/U
LS-203/U
LS-474/U
NT-49546 or
EQUIVALENT
4417MI
MICROPHONE-
HAND
INCLUDES:
CVL-600E
M-85/U
M-109( )/U
M-125-SIC
4417OF
ADAPTER-
CONTROL
INCLUDES:
C-8673/URC-75
MX-1743B/SRC
MX-1986A/SRC
MX-8430/URC-9
4417SA
SWITCHING UNIT
TRANSCEIVER
INCLUDES:
SA-770/UR
SA-1499/UK
SA-1711/UR
4417SB
SWITCHBOARDS-
TRANSFER
INCLUDES:
RECEIVER
SB-82/SRR
SB-973/SRR
SB-2727/SRR
SB-2863/SRR
SB-3195/U
SB-3332/SR
TRANSMITTER
SB-863/SRT
SB-988/SRT
441782
SWITCH-
ROTARY
INCLUDES:
1SR2C4A2
1SR3A4-2
CG-23445
S-3JRB-10S
S-3JR5-3A
S-3JR10
S-3JR10-3A
DDG-2 CLASS
PREPARED 8-26-76



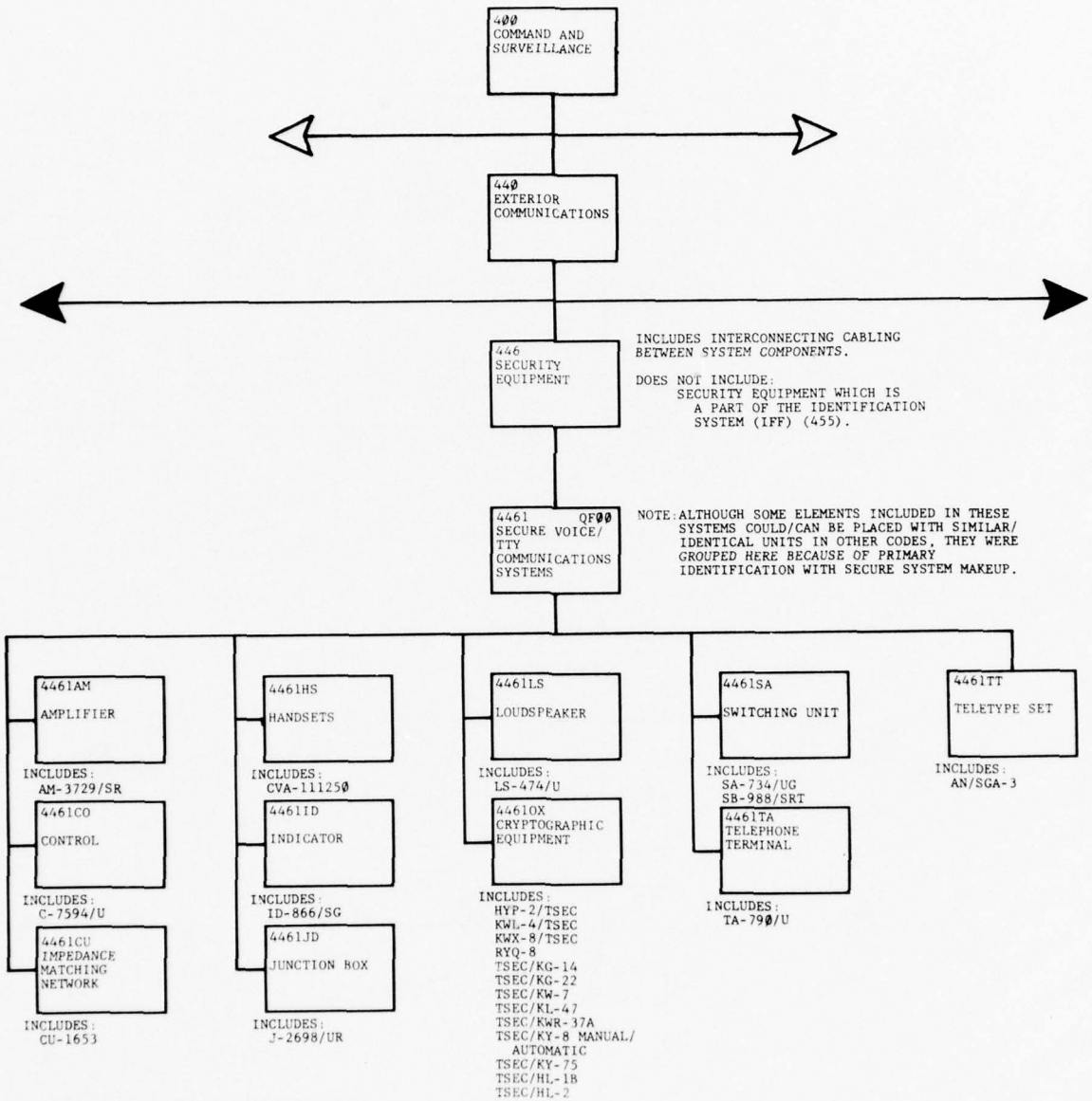
DDG-2 CLASS
PREPARED 8-26-76



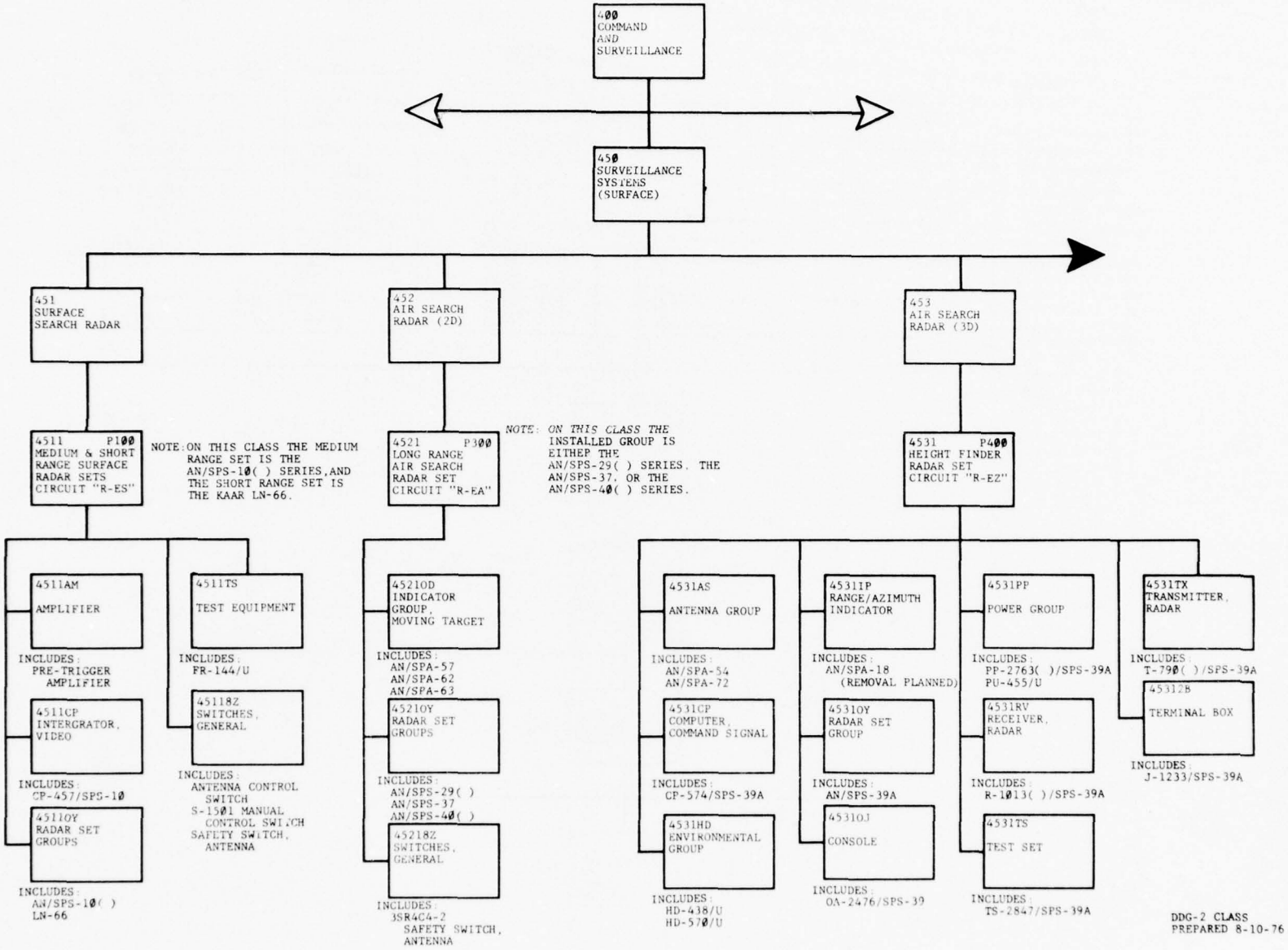
DDG-2 CLASS
PREPARED 10-26-76

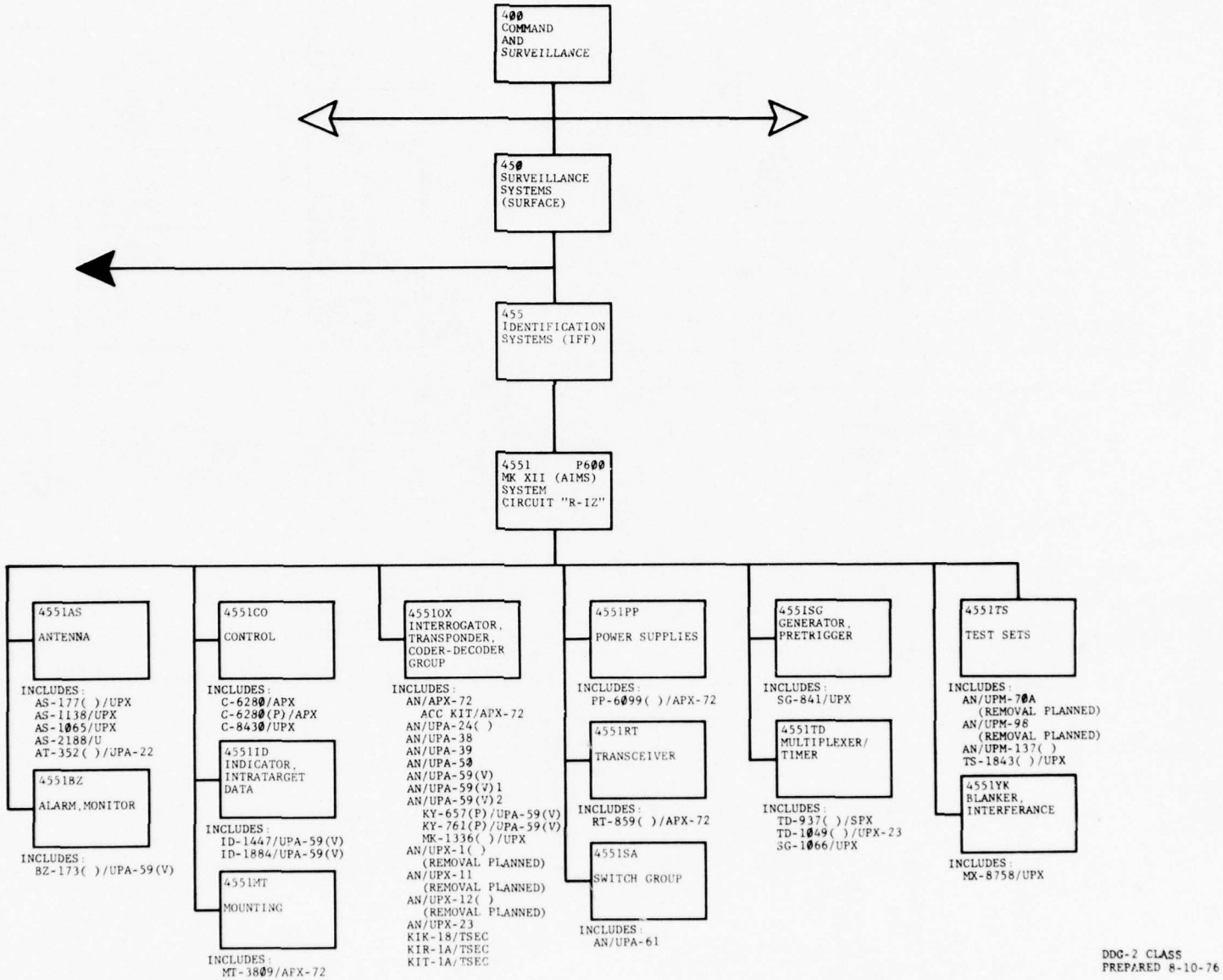


DDG-2 CLASS
PREPARED 10-26-76

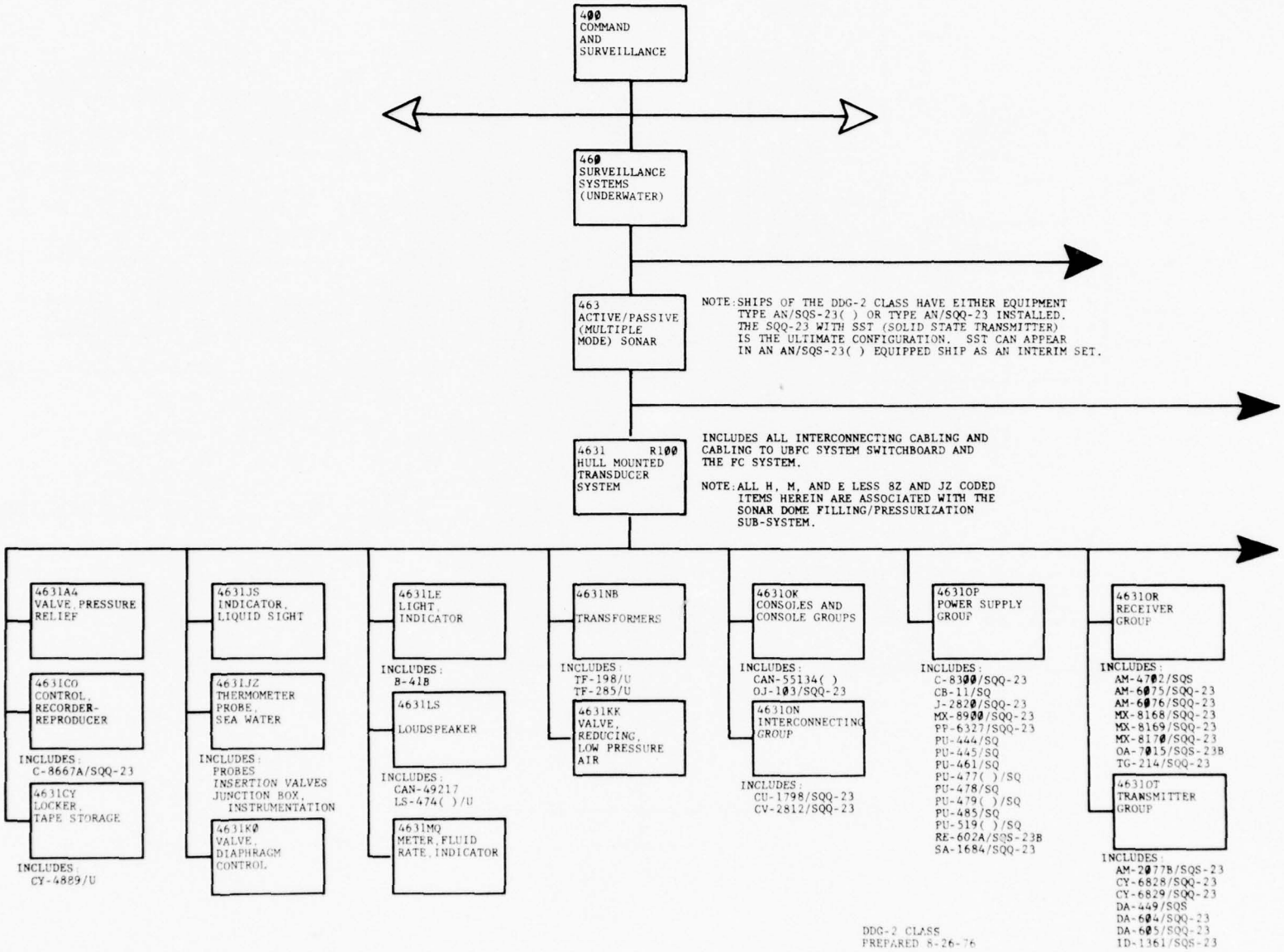


DDG-2 CLASS
PREPARED 10-26-76

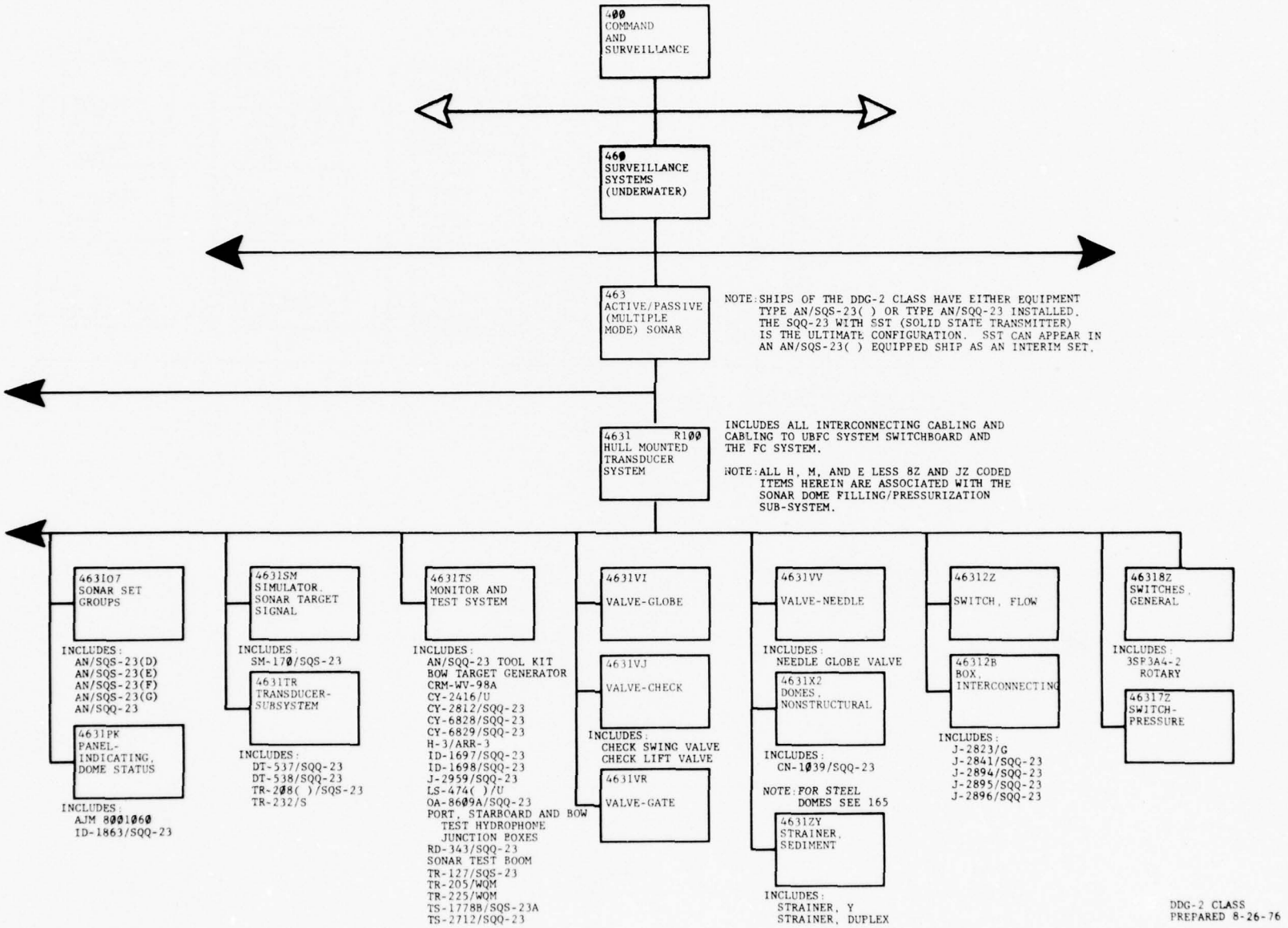

400
COMMAND
AND
SURVEILLANCE
450
SURVEILLANCE
SYSTEMS
(SURFACE)
451
SURFACE
SEARCH RADAR
452
AIR SEARCH
RADAR (2D)
453
AIR SEARCH
RADAR (3D)
4511 P100
MEDIUM & SHORT
RANGE SURFACE
RADAR SETS
CIRCUIT "R-ES"
NOTE: ON THIS CLASS THE MEDIUM RANGE SET IS THE AN/SPS-10( ) SERIES, AND THE SHORT RANGE SET IS THE KAAR LN-66.
4521 P300
LONG RANGE
AIR SEARCH
RADAR SET
CIRCUIT "R-EA"
NOTE: ON THIS CLASS THE INSTALLED GROUP IS EITHEP THE AN/SPS-29( ) SERIES, THE AN/SPS-37, OR THE AN/SPS-40( ) SERIES.
4531 P400
HEIGHT FINDER
RADAR SET
CIRCUIT "R-EZ"
4511AM
AMPLIFIER
INCLUDES:
PRE-TRIGGER
AMPLIFIER
4511CP
INTERGRATOR,
VIDEO
INCLUDES:
CP-457/SPS-10
4511OY
RADAR SET
GROUPS
INCLUDES:
AN/SPS-10( )
LN-66
4511TS
TEST EQUIPMENT
INCLUDES:
FR-144/U
45118Z
SWITCHES,
GENERAL
INCLUDES:
ANTENNA CONTROL
SWITCH
S-1501 MANUAL
CONTROL SWITCH
SAFETY SWITCH,
ANTENNA
4521OD
INDICATOR
GROUP,
MOVING TARGET
INCLUDES:
AN/SPA-57
AN/SPA-62
AN/SPA-63
4521OY
RADAR SET
GROUPS
INCLUDES:
AN/SPS-29( )
AN/SPS-37
AN/SPS-40( )
45218Z
SWITCHES,
GENERAL
INCLUDES:
3SR4C4-2
SAFETY SWITCH,
ANTENNA
4531AS
ANTENNA GROUP
INCLUDES:
AN/SPA-54
AN/SPA-72
4531CP
COMPUTER,
COMMAND SIGNAL
INCLUDES:
CP-574/SPS-39A
4531HD
ENVIRONMENTAL
GROUP
INCLUDES:
HD-438/U
HD-570/U
4531IP
RANGE/AZIMUTH
INDICATOR
INCLUDES:
AN/SPA-18
(REMOVAL PLANNED)
4531OY
RADAR SET
GROUP
INCLUDES:
AN/SPS-39A
4531OJ
CONSOLE
INCLUDES:
OA-2476/SPS-39
4531PP
POWER GROUP
INCLUDES:
PP-2763( )/SPS-39A
PU-455/U
4531RV
RECEIVER,
RADAR
INCLUDES:
R-1013( )/SPS-39A
4531TS
TEST SET
INCLUDES:
TS-2847/SPS-39A
4531TX
TRANSMITTER,
RADAR
INCLUDES:
T-790( )/SPS-39A
45312B
TERMINAL BOX
INCLUDES:
J-1233/SPS-39A
DDG-2 CLASS
PREPARED 8-10-76



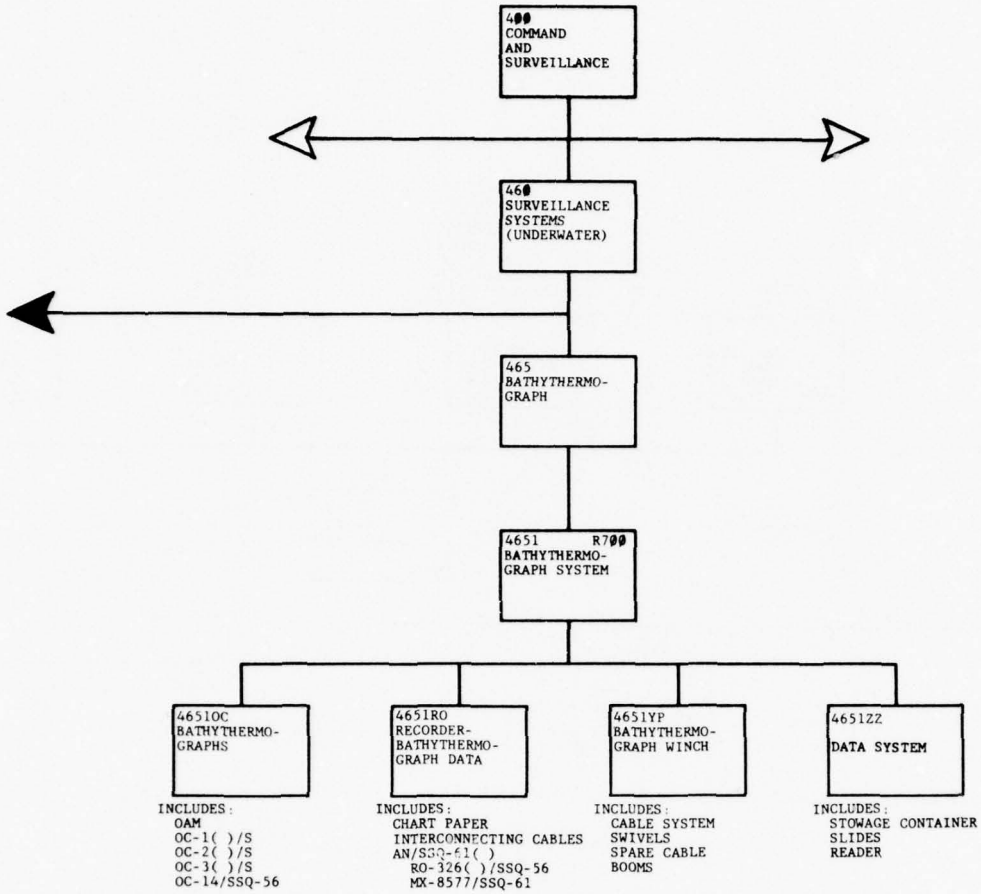
DDG-2 CLASS
PREPARED 8-10-76



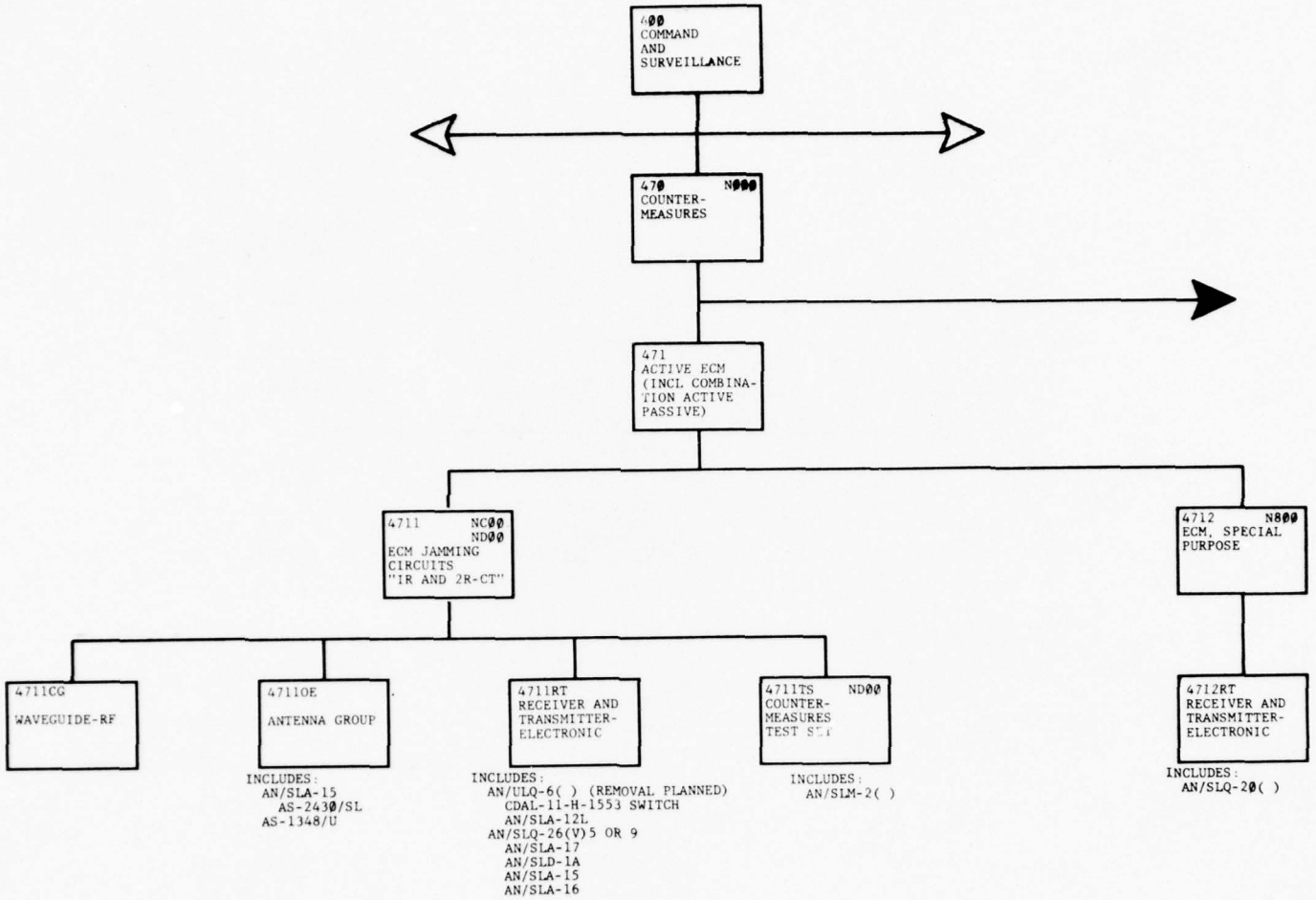
DDG-2 CLASS
PREPARED 8-26-76



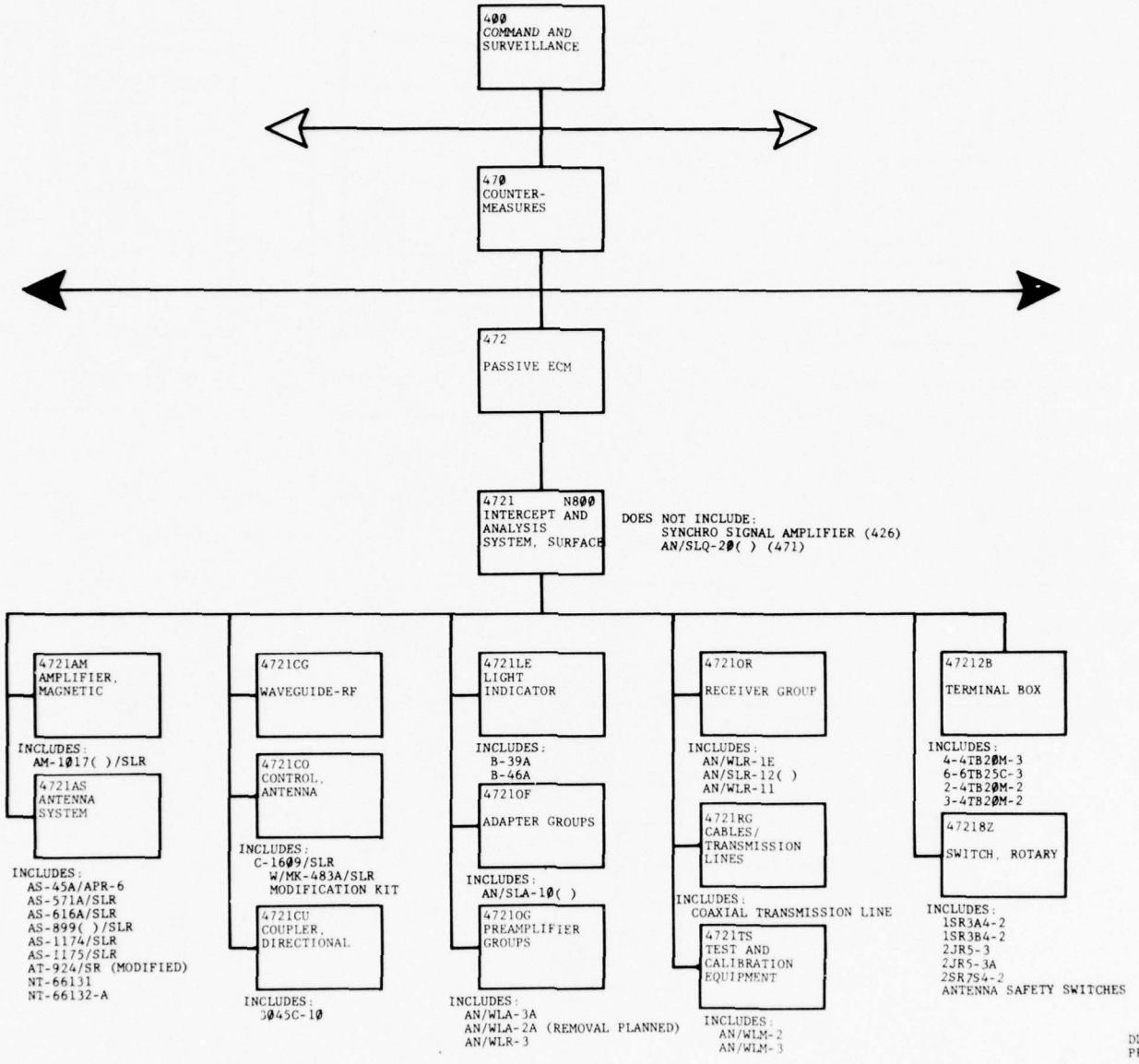
DDG-2 CLASS
PREPARED 8-26-76



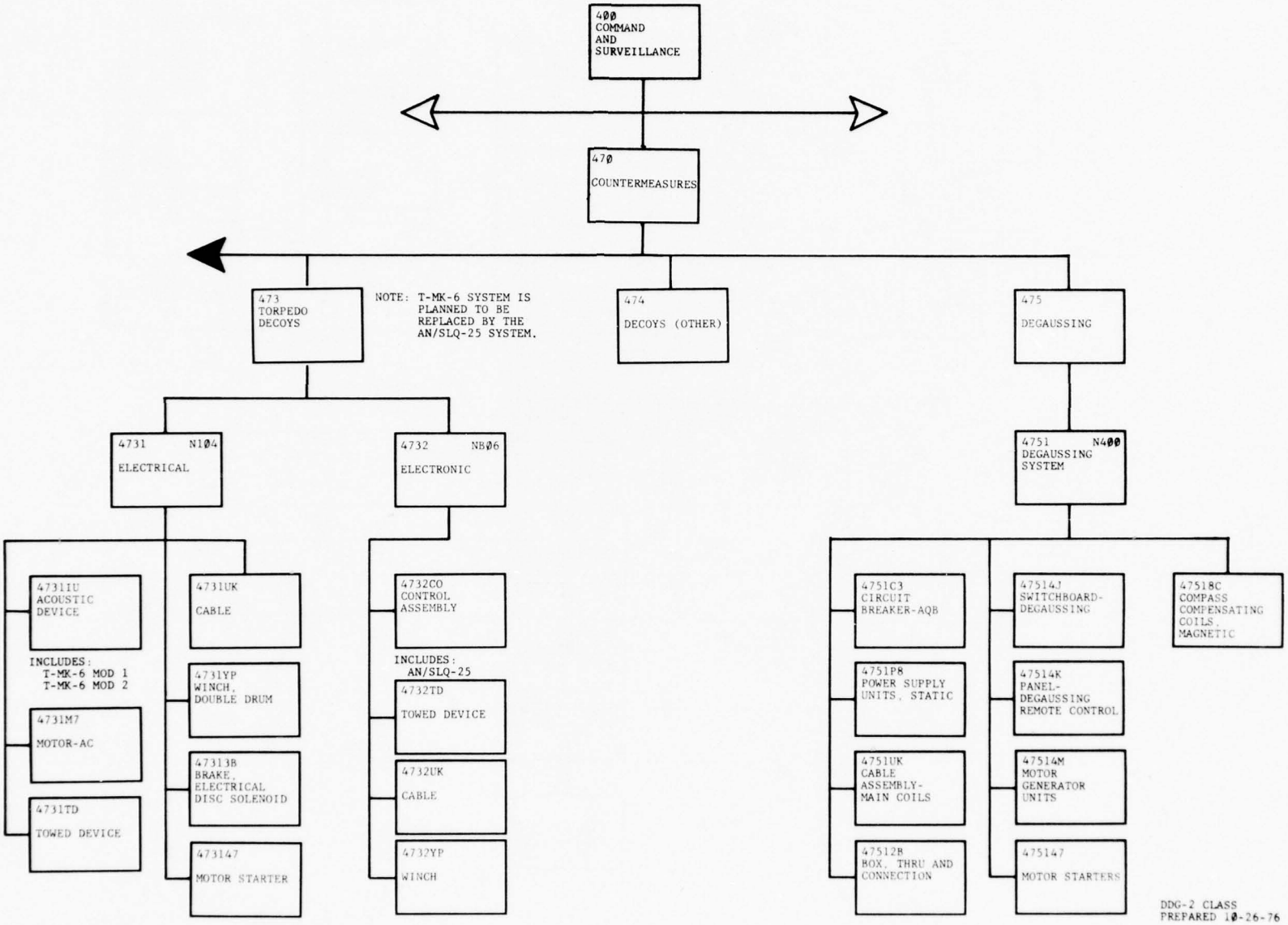
DDG-2 CLASS
PREPARED 8-10-76

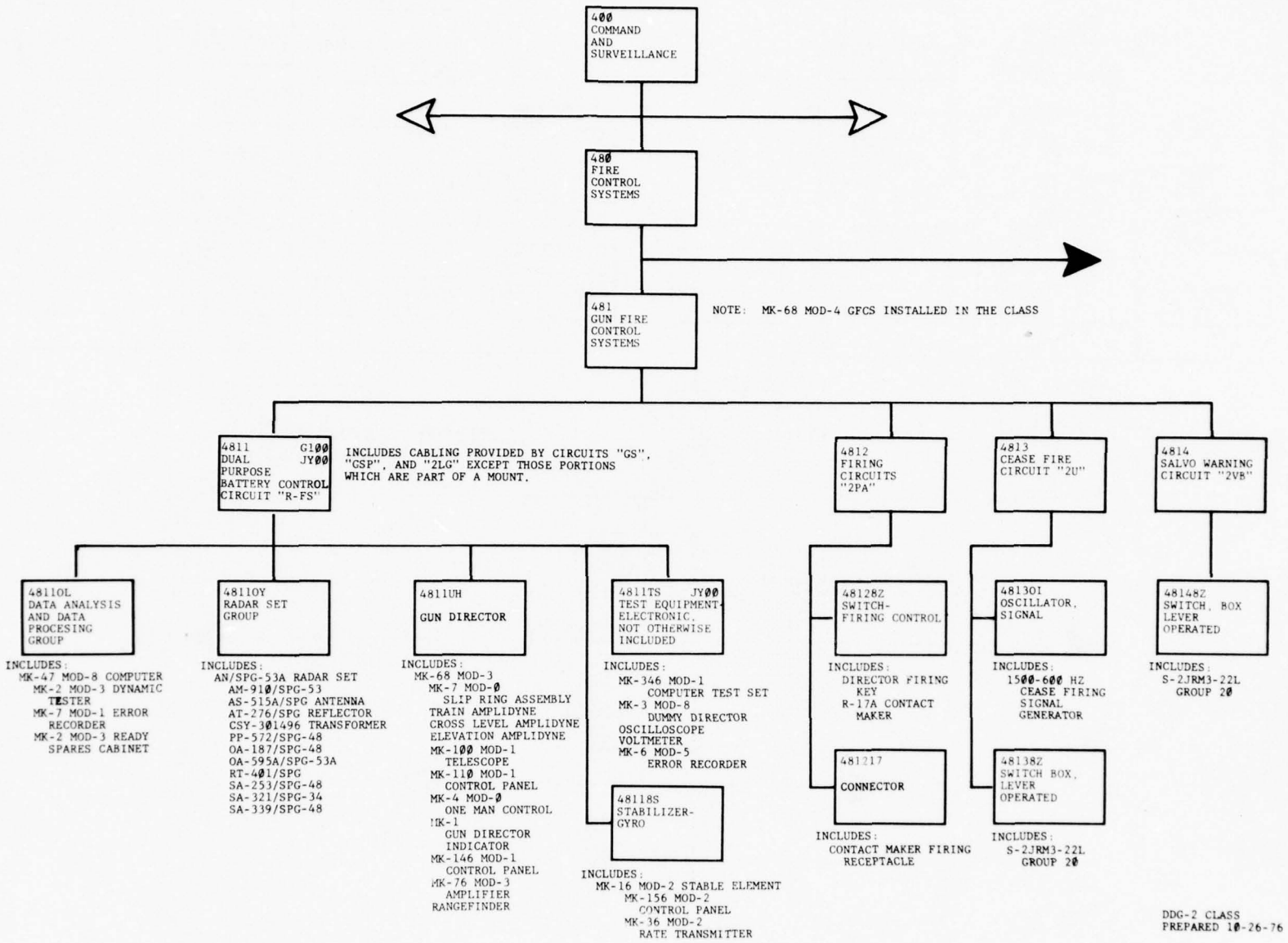


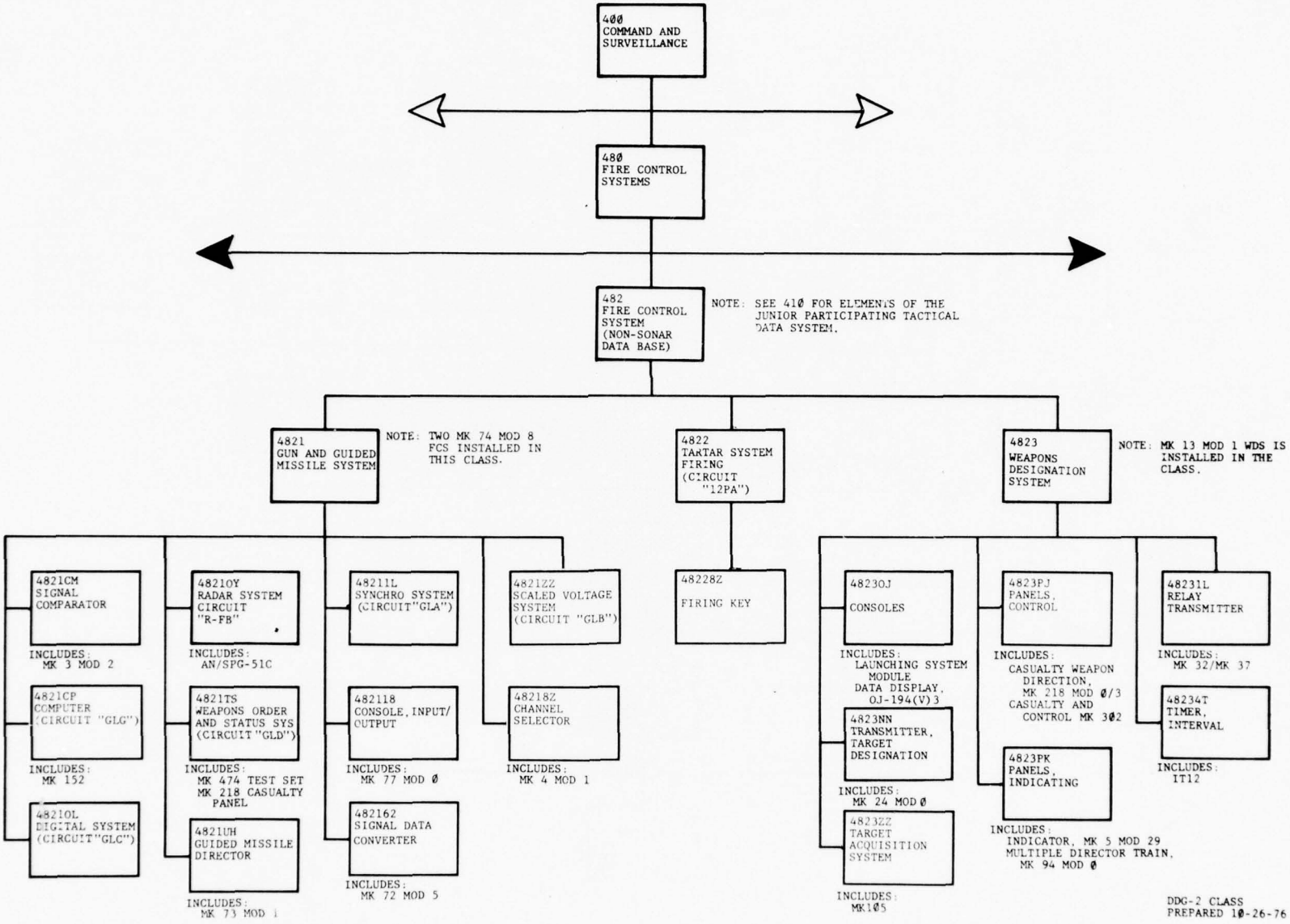
DDG-2 CLASS
PREPARED 10-26-76

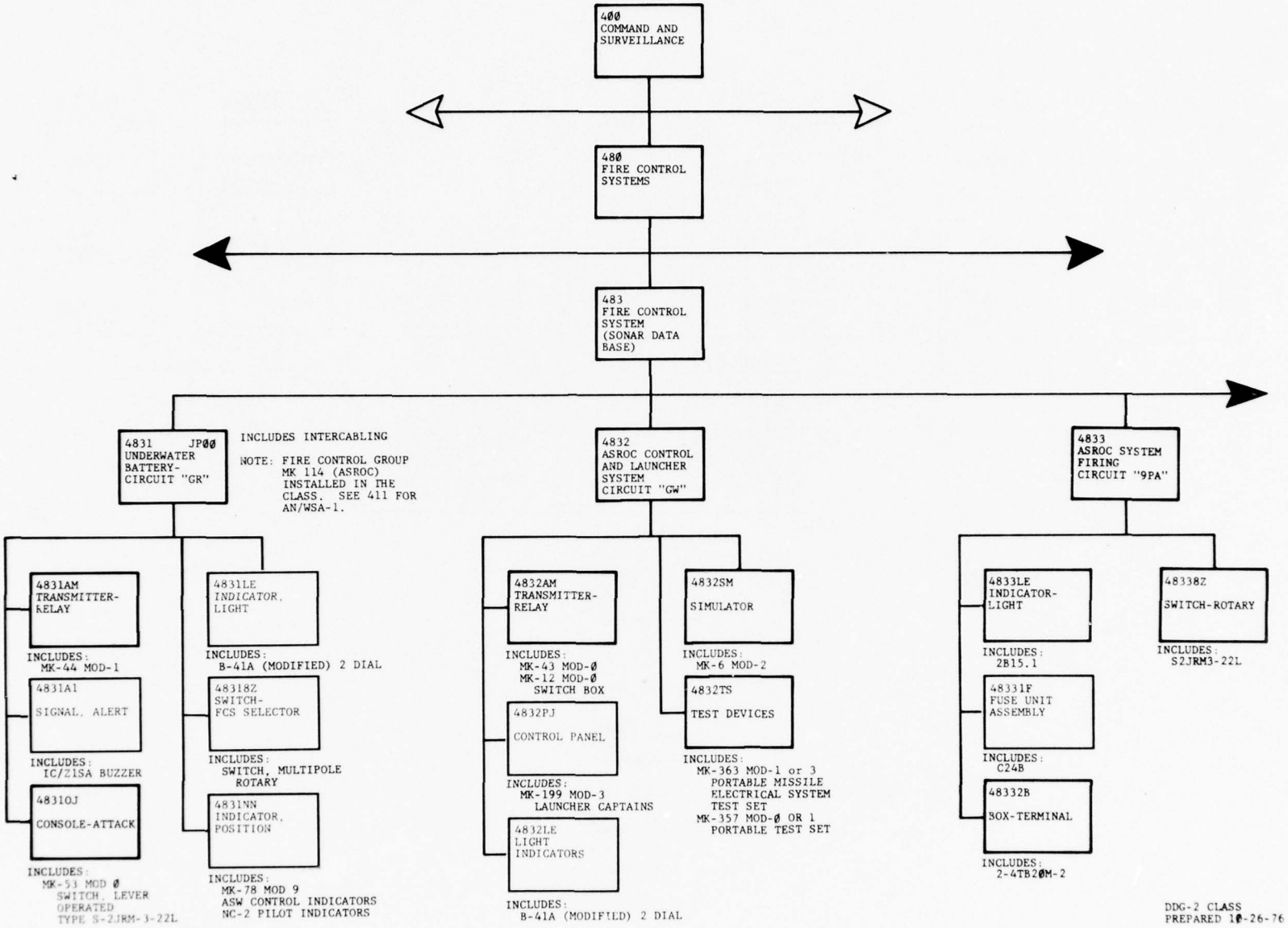


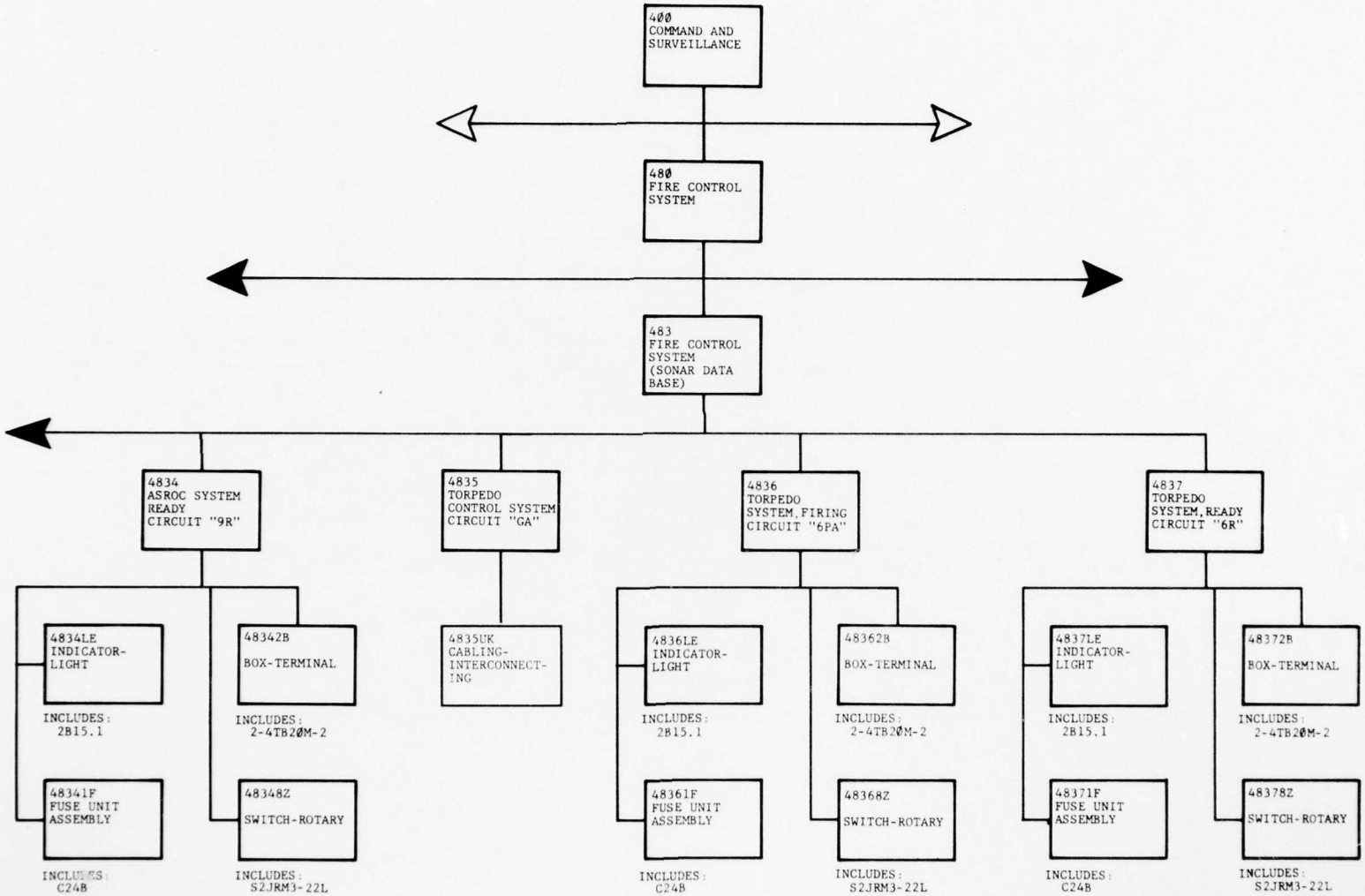
DDG-2 CLASS
PREPARED 10-26-76


400
COMMAND
AND
SURVEILLANCE
470
COUNTERMEASURES
473
TORPEDO
DECOYS
NOTE: T-MK-6 SYSTEM IS PLANNED TO BE REPLACED BY THE AN/SLQ-25 SYSTEM.
474
DECOYS (OTHER)
475
DEGAUSSING
4731 N104
ELECTRICAL
4732 NB06
ELECTRONIC
4751 N400
DEGAUSSING SYSTEM
4731IU
ACOUSTIC
DEVICE
INCLUDES:
T-MK-6 MOD 1
T-MK-6 MOD 2
4731M7
MOTOR-AC
4731TD
TOWED DEVICE
4731UK
CABLE
4731YP
WINCH,
DOUBLE DRUM
47313B
BRAKE,
ELECTRICAL
DISC SOLENOID
473147
MOTOR STARTER
4732CO
CONTROL
ASSEMBLY
INCLUDES:
AN/SLQ-25
4732TD
TOWED DEVICE
4732UK
CABLE
4732YP
WINCH
4751C3
CIRCUIT
BREAKER-AQB
4751P8
POWER SUPPLY
UNITS, STATIC
4751UK
CABLE
ASSEMBLY-
MAIN COILS
47512B
BOX, THRU AND
CONNECTION
47514J
SWITCHBOARD-
DEGAUSSING
47514K
PANEL-
DEGAUSSING
REMOTE CONTROL
47514M
MOTOR
GENERATOR
UNITS
475147
MOTOR STARTERS
47518C
COMPASS
COMPENSATING
COILS,
MAGNETIC
DDG-2 CLASS
PREPARED 10-26-76

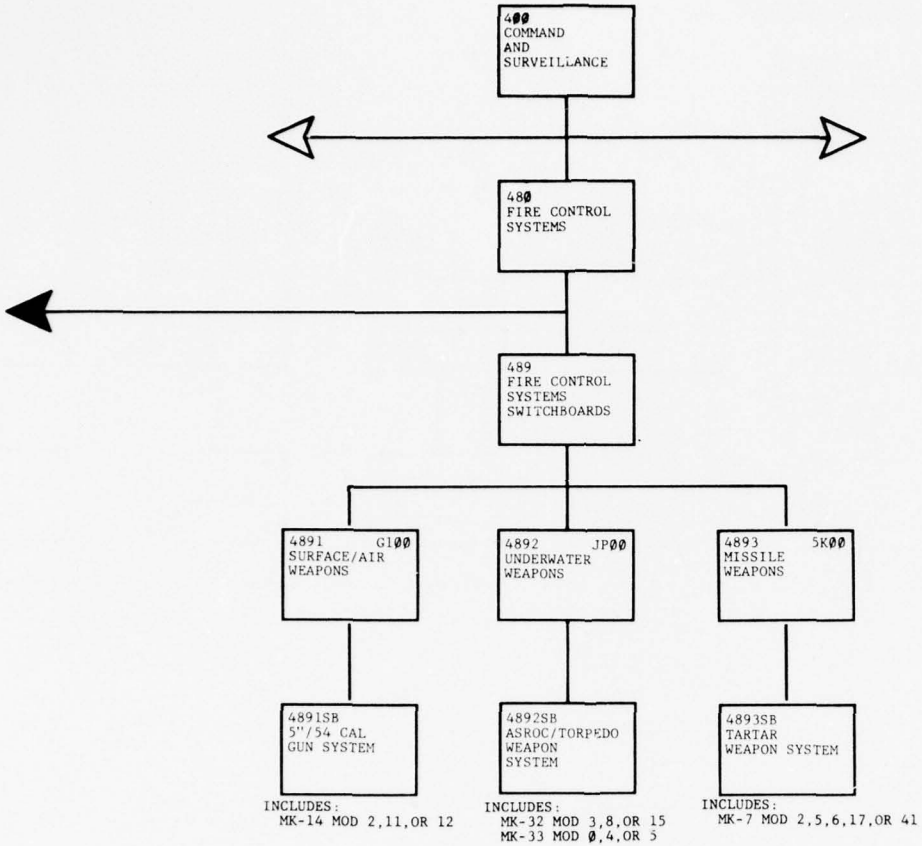

400
COMMAND AND SURVEILLANCE
480
FIRE CONTROL SYSTEMS
481
GUN FIRE CONTROL SYSTEMS
NOTE: MK-68 MOD-4 GFCS INSTALLED IN THE CLASS
4811 G100 JY00
DUAL PURPOSE BATTERY CONTROL CIRCUIT "R-FS"
INCLUDES CABLING PROVIDED BY CIRCUITS "GS", "GSP", AND "2LG" EXCEPT THOSE PORTIONS WHICH ARE PART OF A MOUNT.
4812
FIRING CIRCUITS "2PA"
4813
CEASE FIRE CIRCUIT "2U"
4814
SALVO WARNING CIRCUIT "2VB"
48110L
DATA ANALYSIS AND DATA PROCESING GROUP
INCLUDES:
MK-47 MOD-8 COMPUTER
MK-2 MOD-3 DYNAMIC TESTER
MK-7 MOD-1 ERROR RECORDER
MK-2 MOD-3 READY SPARES CABINET
48110Y
RADAR SET GROUP
INCLUDES:
AN/SPG-53A RADAR SET
AM-910/SPG-53
AS-515A/SPG ANTENNA
AT-276/SPG REFLECTOR
CSY-301496 TRANSFORMER
PP-572/SPG-48
OA-187/SPG-48
OA-595A/SPG-53A
RT-401/SPG
SA-253/SPG-48
SA-321/SPG-34
SA-339/SPG-48
4811UH
GUN DIRECTOR
INCLUDES:
MK-68 MOD-3
MK-7 MOD-0
SLIP RING ASSEMBLY
TRAIN AMPLIDYNE
CROSS LEVEL AMPLIDYNE
ELEVATION AMPLIDYNE
MK-100 MOD-1
TELESCOPE
MK-110 MOD-1
CONTROL PANEL
MK-4 MOD-0
ONE MAN CONTROL
MK-1
GUN DIRECTOR INDICATOR
MK-146 MOD-1
CONTROL PANEL
MK-76 MOD-3
AMPLIFIER
RANGEFINDER
4811TS JY00
TEST EQUIPMENT-ELECTRONIC, NOT OTHERWISE INCLUDED
INCLUDES:
MK-346 MOD-1
COMPUTER TEST SET
MK-3 MOD-8
DUMMY DIRECTOR
OSCILLOSCOPE
VOLTMETER
MK-6 MOD-5
ERROR RECORDER
48118S
STABILIZER-GYRO
INCLUDES:
MK-16 MOD-2 STABLE ELEMENT
MK-156 MOD-2
CONTROL PANEL
MK-36 MOD-2
RATE TRANSMITTER
48128Z
SWITCH-FIRING CONTROL
INCLUDES:
DIRECTOR FIRING KEY
R-17A CONTACT MAKER
481217
CONNECTOR
INCLUDES:
CONTACT MAKER FIRING RECEPTACLE
48130I
OSCILLATOR, SIGNAL
INCLUDES:
1500-600 HZ CEASE FIRING SIGNAL GENERATOR
48138Z
SWITCH BOX, LEVER OPERATED
INCLUDES:
S-2JRM3-22L GROUP 20
48148Z
SWITCH, BOX LEVER OPERATED
INCLUDES:
S-2JRM3-22L GROUP 20
DDG-2 CLASS
PREPARED 10-26-76


400
COMMAND AND SURVEILLANCE
480
FIRE CONTROL SYSTEMS
482
FIRE CONTROL SYSTEM (NON-SONAR DATA BASE)
NOTE: SEE 410 FOR ELEMENTS OF THE JUNIOR PARTICIPATING TACTICAL DATA SYSTEM.
4821
GUN AND GUIDED MISSILE SYSTEM
NOTE: TWO MK 74 MOD 8 FCS INSTALLED IN THIS CLASS.
4822
TARTAR SYSTEM FIRING (CIRCUIT "12PA")
4823
WEAPONS DESIGNATION SYSTEM
NOTE: MK 13 MOD 1 WDS IS INSTALLED IN THE CLASS.
4821CM
SIGNAL COMPARATOR
INCLUDES: MK 3 MOD 2
4821CP
COMPUTER (CIRCUIT "GLG")
INCLUDES: MK 152
4821OL
DIGITAL SYSTEM (CIRCUIT "GLC")
4821OY
RADAR SYSTEM CIRCUIT "R-FB"
INCLUDES: AN/SPG-51C
4821TS
WEAPONS ORDER AND STATUS SYS (CIRCUIT "GLD")
INCLUDES: MK 474 TEST SET MK 218 CASUALTY PANEL
4821UH
GUIDED MISSILE DIRECTOR
INCLUDES: MK 73 MOD 1
4821IL
SYNCHRO SYSTEM (CIRCUIT "GLA")
482118
CONSOLE, INPUT/OUTPUT
INCLUDES: MK 77 MOD 0
482162
SIGNAL DATA CONVERTER
INCLUDES: MK 72 MOD 5
4821ZZ
SCALED VOLTAGE SYSTEM (CIRCUIT "GLB")
48218Z
CHANNEL SELECTOR
INCLUDES: MK 4 MOD 1
48228Z
FIRING KEY
48230J
CONSOLES
INCLUDES: LAUNCHING SYSTEM MODULE DATA DISPLAY, OJ-194(V)3
4823NN
TRANSMITTER, TARGET DESIGNATION
INCLUDES: MK 24 MOD 0
4823ZZ
TARGET ACQUISITION SYSTEM
INCLUDES: MK105
4823PJ
PANELS, CONTROL
INCLUDES: CASUALTY WEAPON DIRECTION, MK 218 MOD 0/3 CASUALTY AND CONTROL MK 302
4823PK
PANELS, INDICATING
INCLUDES: INDICATOR, MK 5 MOD 29 MULTIPLE DIRECTOR TRAIN, MK 94 MOD 0
48231L
RELAY TRANSMITTER
INCLUDES: MK 32/MK 37
48234T
TIMER, INTERVAL
INCLUDES: IT12
DDG-2 CLASS
PREPARED 10-26-76

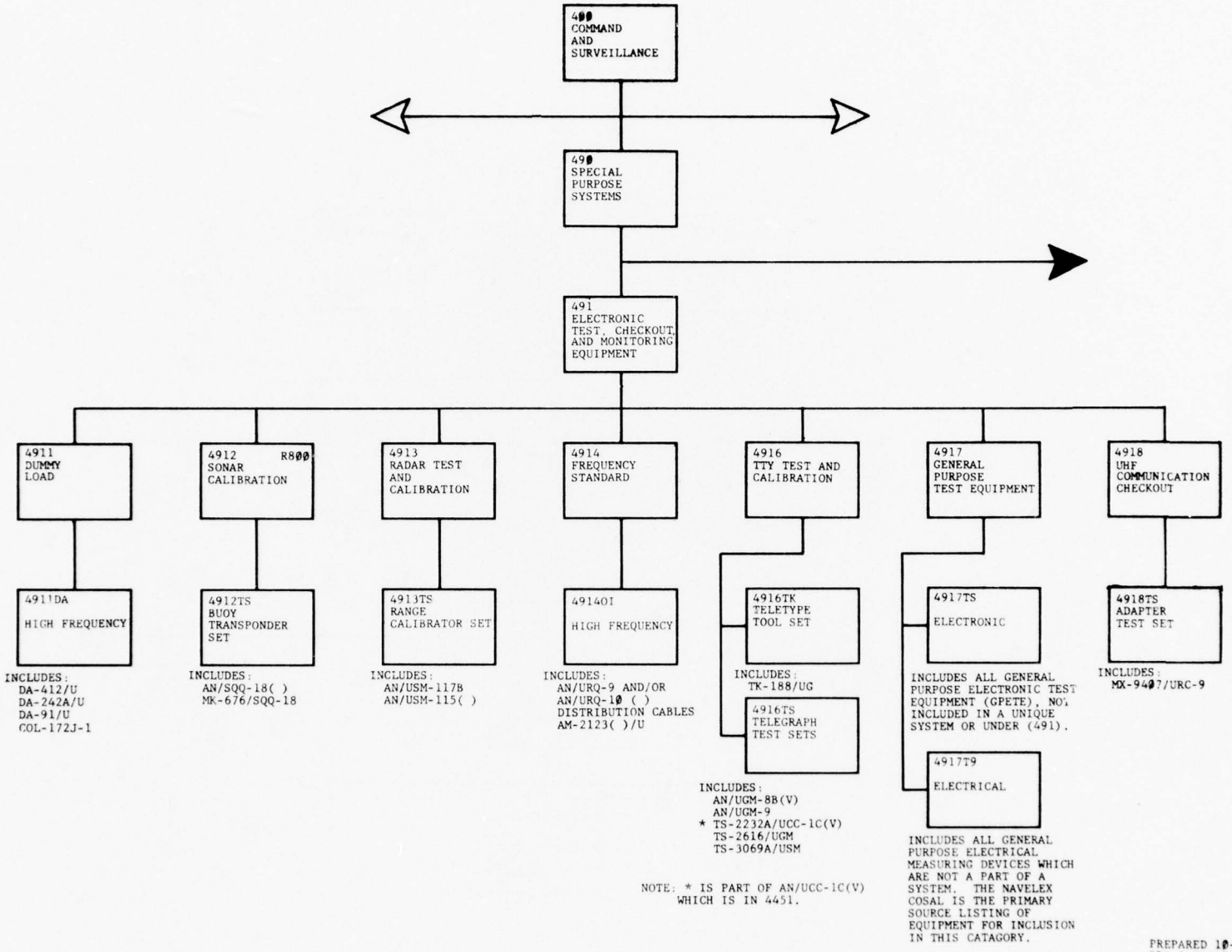

400
COMMAND AND SURVEILLANCE
480
FIRE CONTROL SYSTEMS
483
FIRE CONTROL SYSTEM (SONAR DATA BASE)
4831 JP00
UNDERWATER BATTERY-CIRCUIT "GR"
INCLUDES INTERCABLING
NOTE: FIRE CONTROL GROUP MK 114 (ASROC) INSTALLED IN THE CLASS. SEE 411 FOR AN/WSA-1.
4831AM
TRANSMITTER-RELAY
INCLUDES: MK-44 MOD-1
4831A1
SIGNAL, ALERT
INCLUDES: IC/Z1SA BUZZER
48310J
CONSOLE-ATTACK
INCLUDES: MK-53 MOD 0 SWITCH, LEVER OPERATED TYPE S-2JRM-3-22L
4831LE
INDICATOR, LIGHT
INCLUDES: B-41A (MODIFIED) 2 DIAL
48318Z
SWITCH-FCS SELECTOR
INCLUDES: SWITCH, MULTIPOLE ROTARY
4831NN
INDICATOR, POSITION
INCLUDES: MK-78 MOD 9 ASW CONTROL INDICATORS NC-2 PILOT INDICATORS
4832
ASROC CONTROL AND LAUNCHER SYSTEM CIRCUIT "GW"
4832AM
TRANSMITTER-RELAY
INCLUDES: MK-43 MOD-0 MK-12 MOD-0 SWITCH BOX
4832PJ
CONTROL PANEL
INCLUDES: MK-199 MOD-3 LAUNCHER CAPTAINS
4832LE
LIGHT INDICATORS
INCLUDES: B-41A (MODIFIED) 2 DIAL
4832SM
SIMULATOR
INCLUDES: MK-6 MOD-2
4832TS
TEST DEVICES
INCLUDES: MK-363 MOD-1 or 3 PORTABLE MISSILE ELECTRICAL SYSTEM TEST SET MK-357 MOD-0 OR 1 PORTABLE TEST SET
4833
ASROC SYSTEM FIRING CIRCUIT "9PA"
4833LE
INDICATOR-LIGHT
INCLUDES: 2B15.1
48331F
FUSE UNIT ASSEMBLY
INCLUDES: C24B
48332B
BOX-TERMINAL
INCLUDES: 2-4TB20M-2
48338Z
SWITCH-ROTARY
INCLUDES: S2JRM3-22L
DDG-2 CLASS
PREPARED 10-26-76



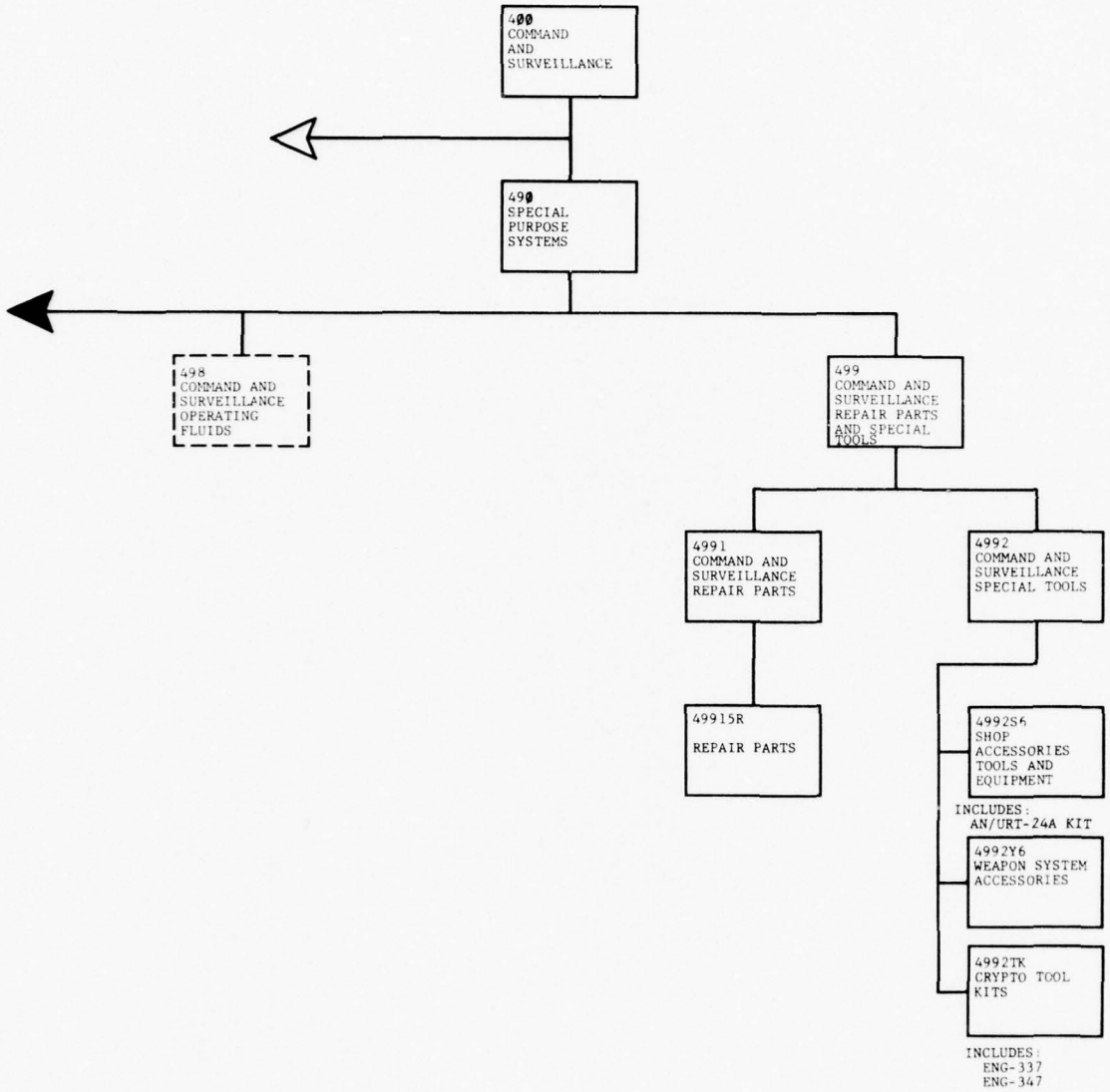
DDG-2 CLASS
PREPARED 10-26-76



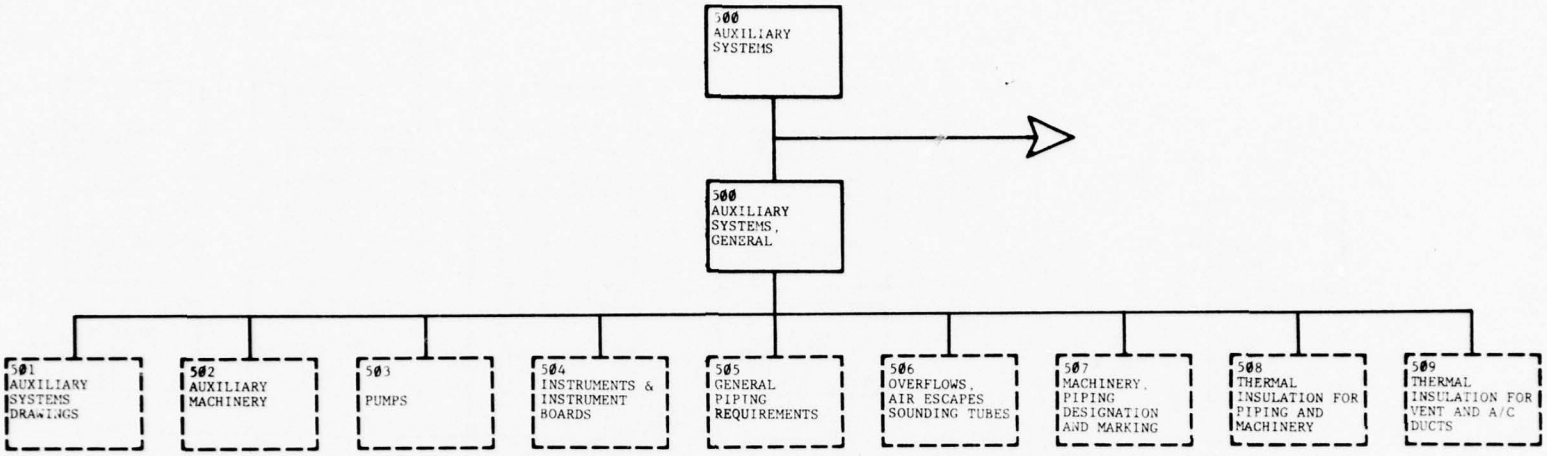
DDG-2 CLASS
PREPARED 10-26-76

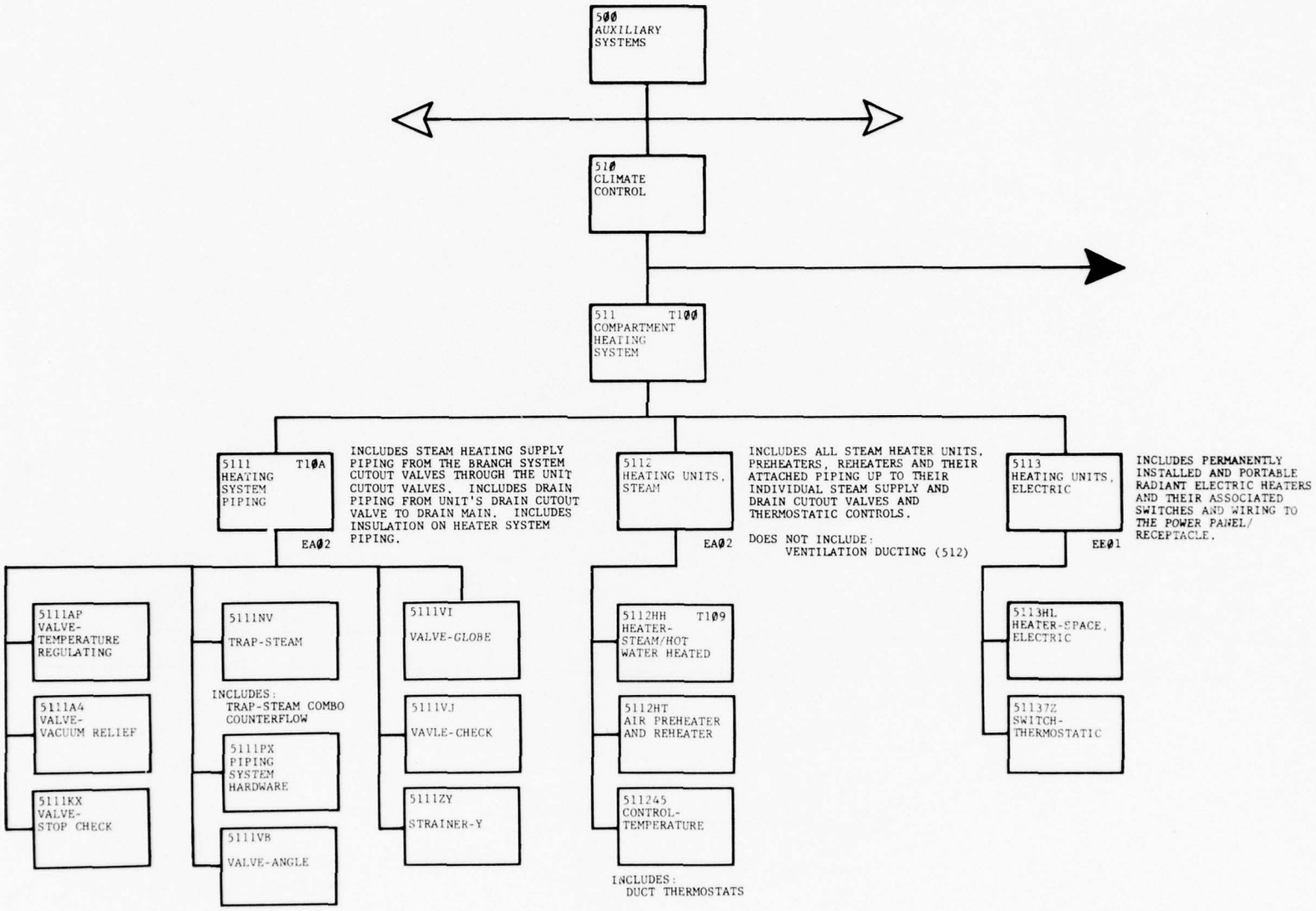


PREPARED 10-26-76
DDG-2 CLASS

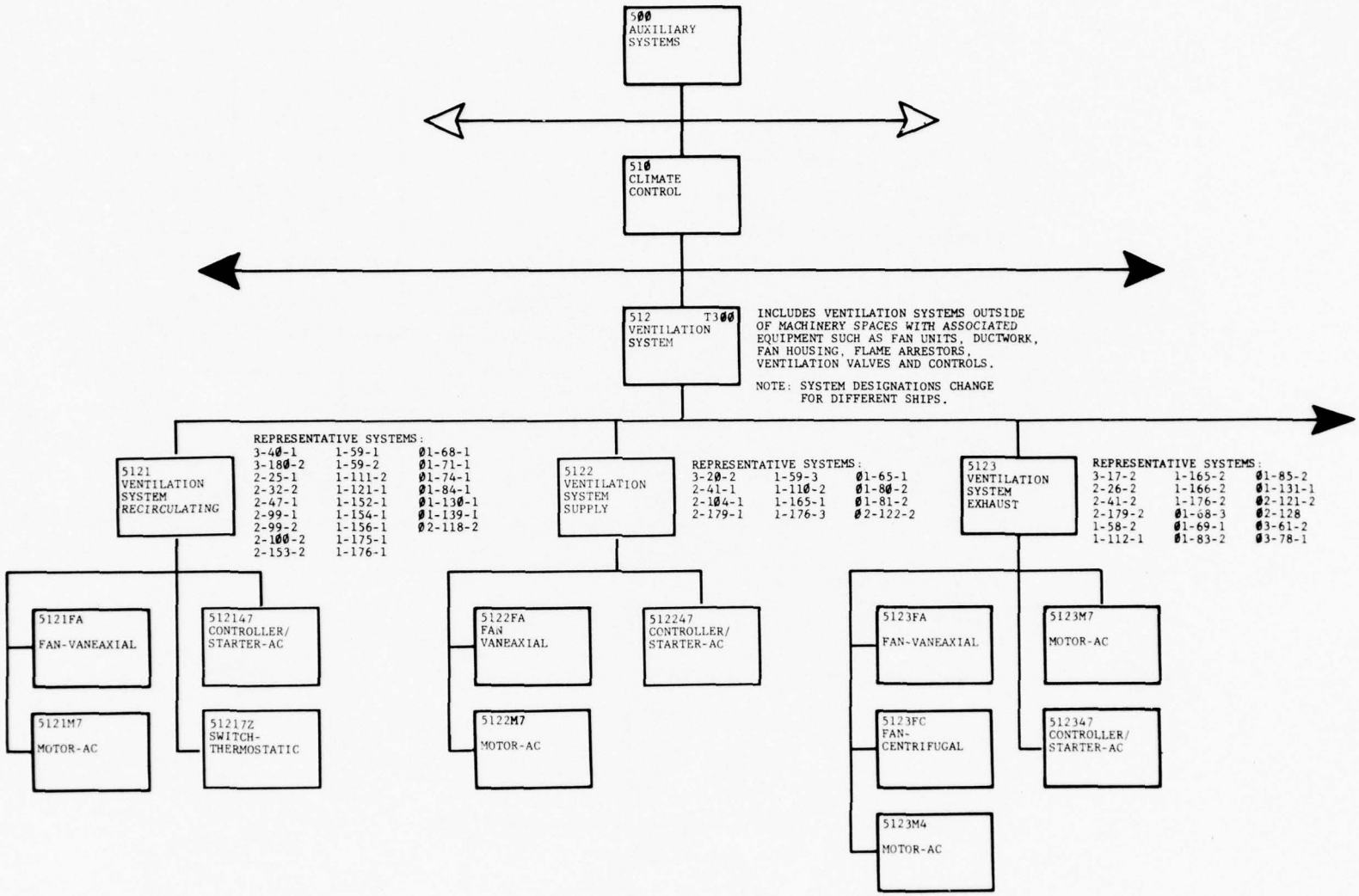


DDG-2 CLASS
PREPARED 10-26-76

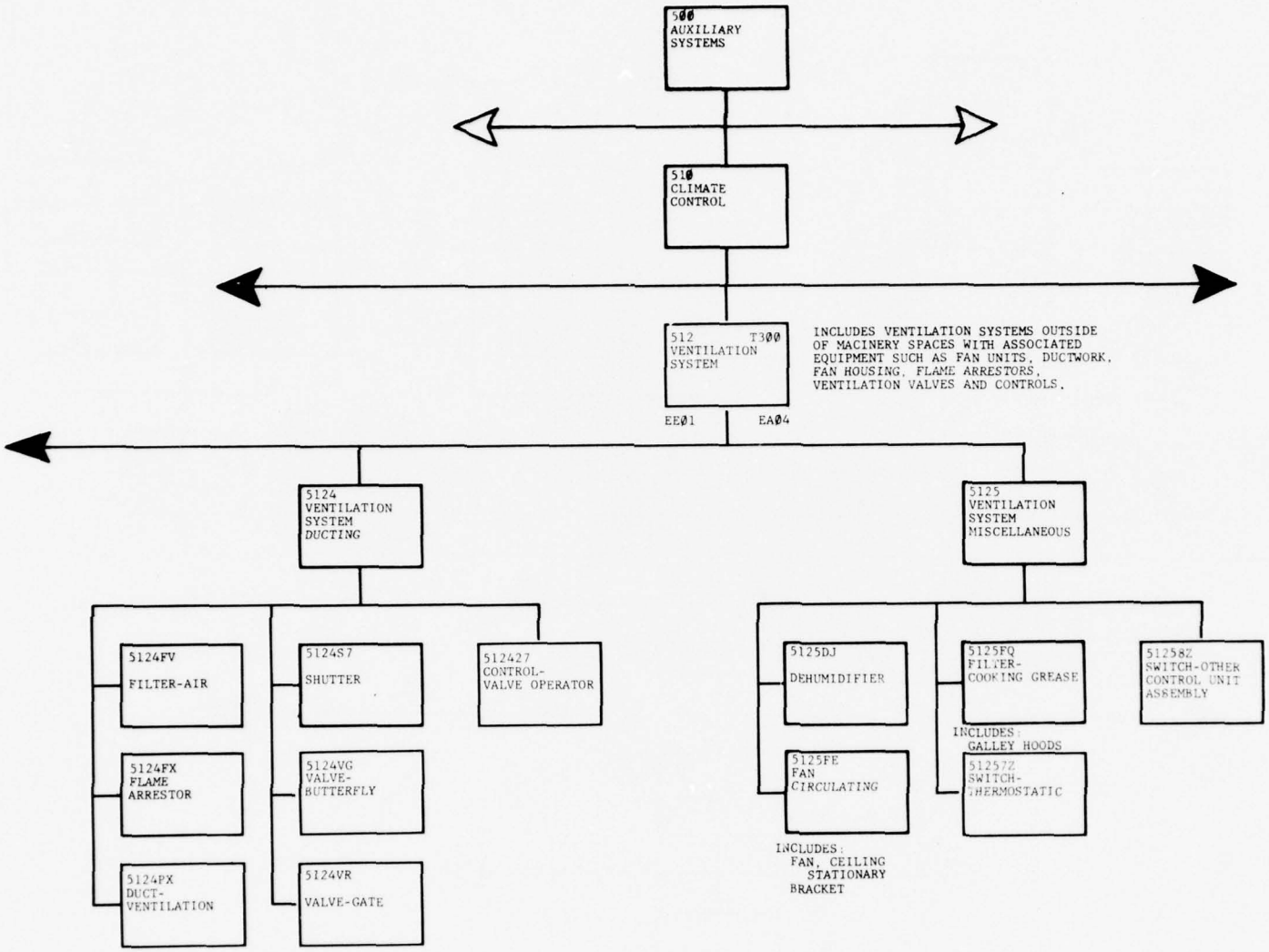

500
AUXILIARY
SYSTEMS
500
AUXILIARY
SYSTEMS,
GENERAL
501
AUXILIARY
SYSTEMS
DRAWINGS
502
AUXILIARY
MACHINERY
503
PUMPS
504
INSTRUMENTS &
INSTRUMENT
BOARDS
505
GENERAL
PIPING
REQUIREMENTS
506
OVERFLOWS,
AIR ESCAPES
SOUNDING TUBES
507
MACHINERY,
PIPING
DESIGNATION
AND MARKING
508
THERMAL
INSULATION FOR
PIPING AND
MACHINERY
509
THERMAL
INSULATION FOR
VENT AND A/C
DUCTS



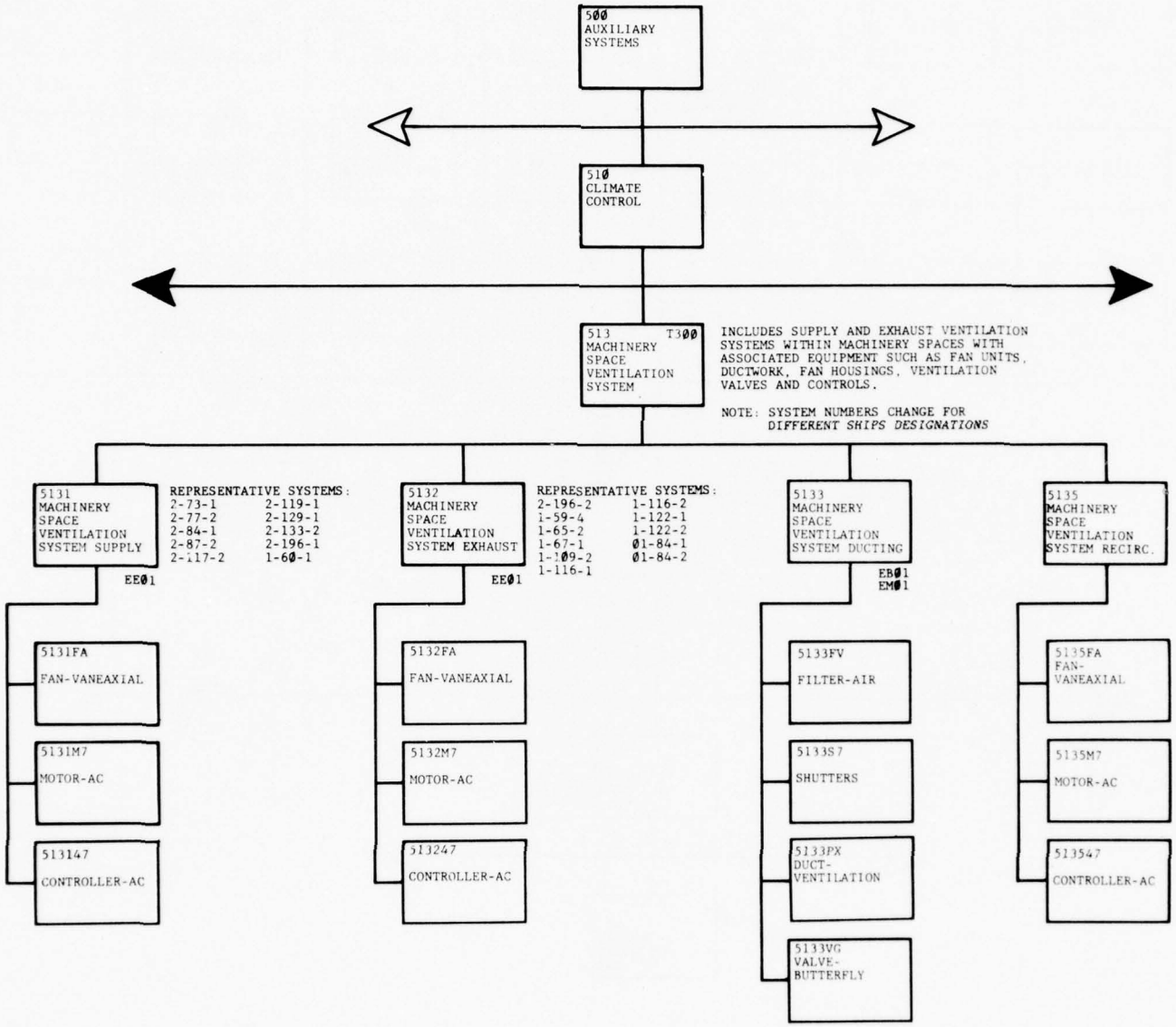
DDG-2 CLASS
PREPARED 10-7-76



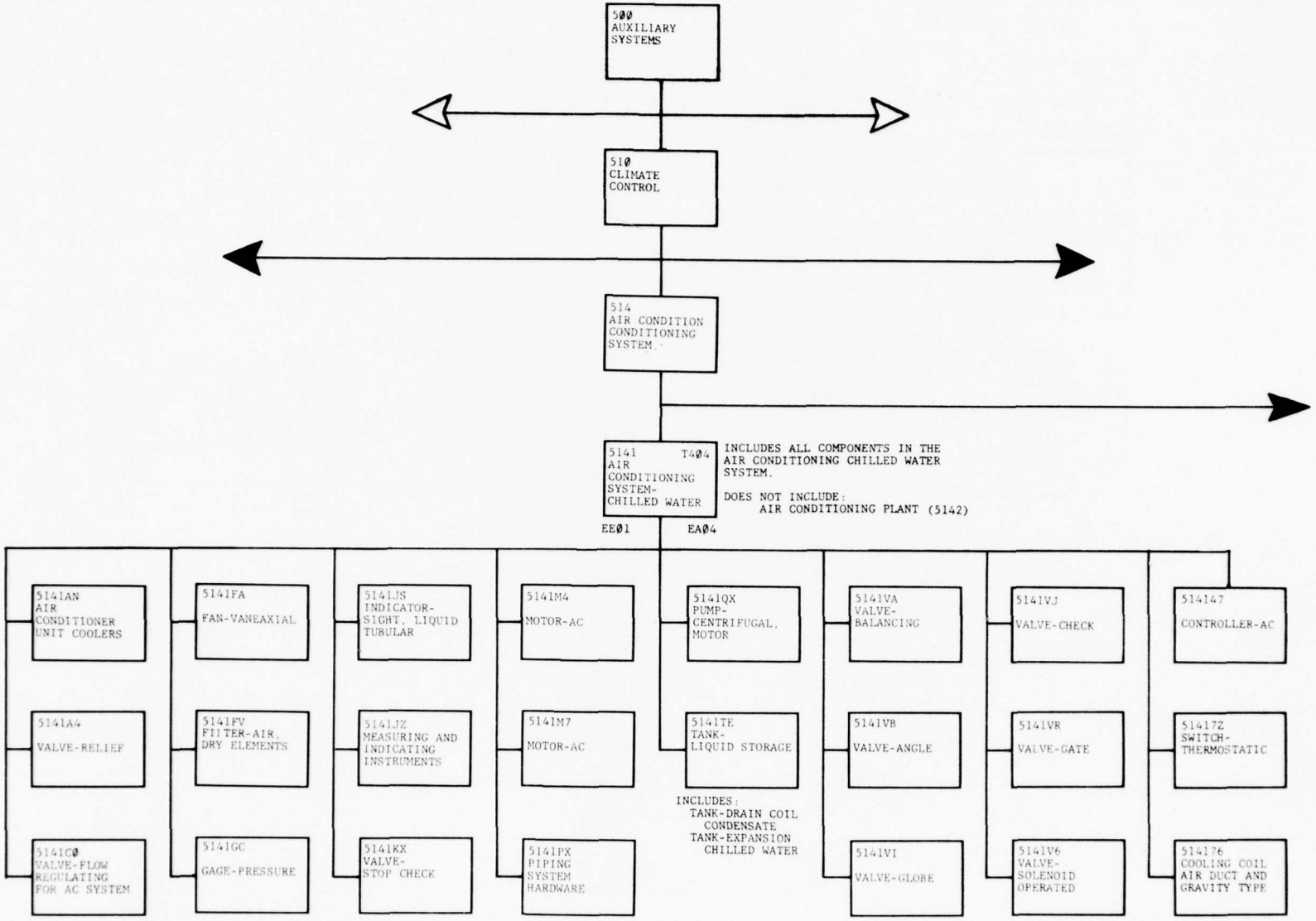
DDG-2 CLASS
PREPARED 10-7-76



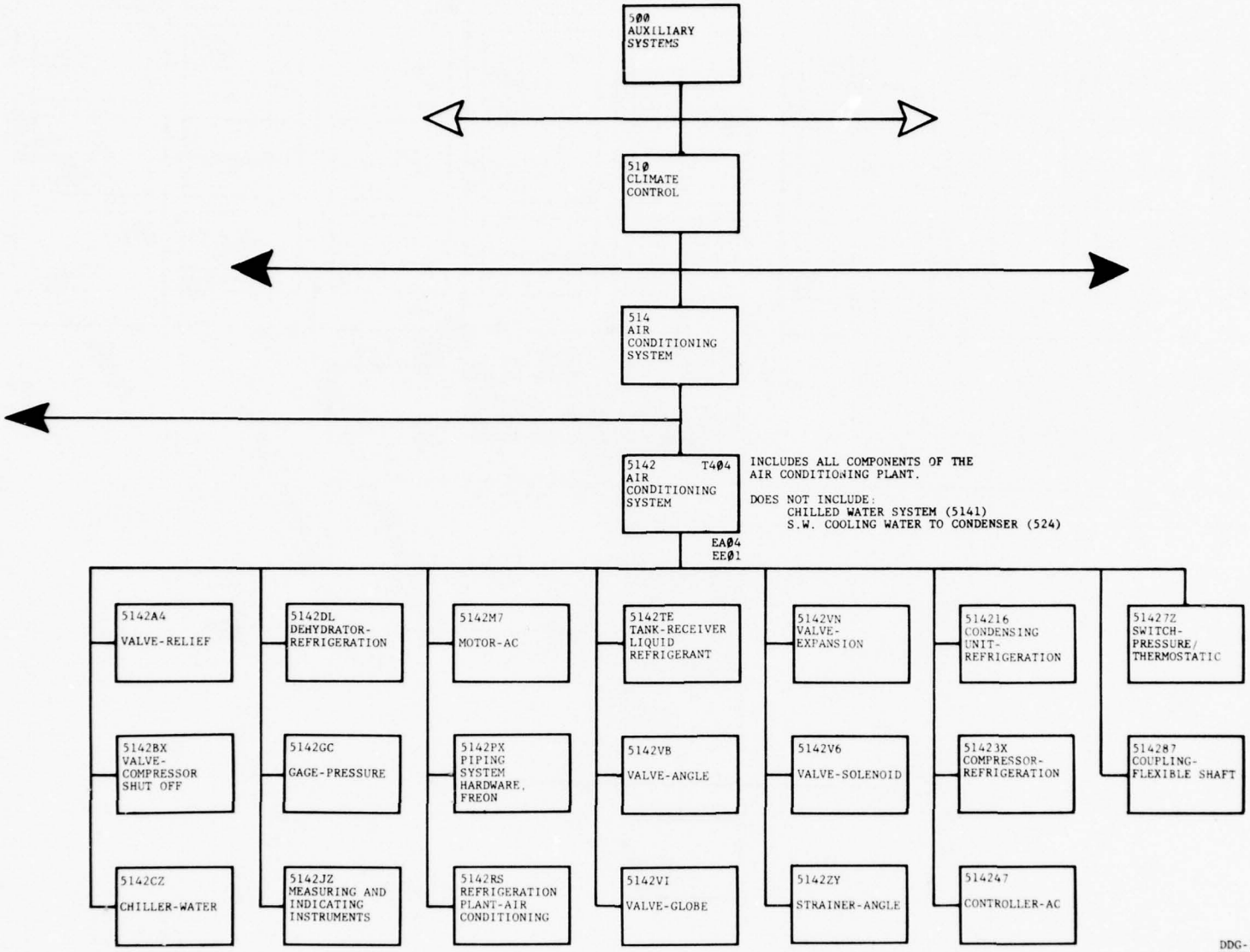
DDG-2 CLASS
PREPARED 10-7-76



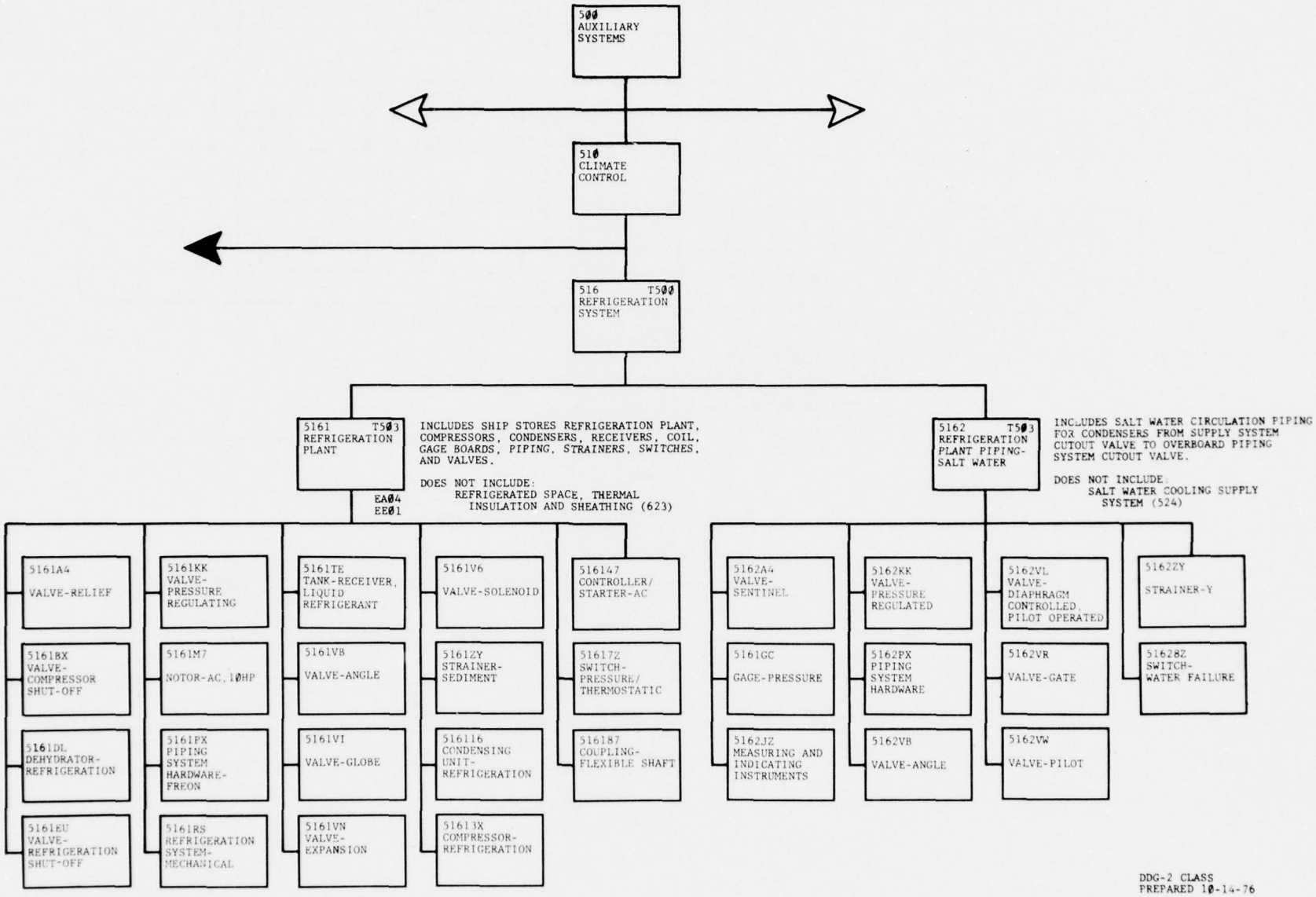
DDG-2 CLASS
PREPARED 10-7-76



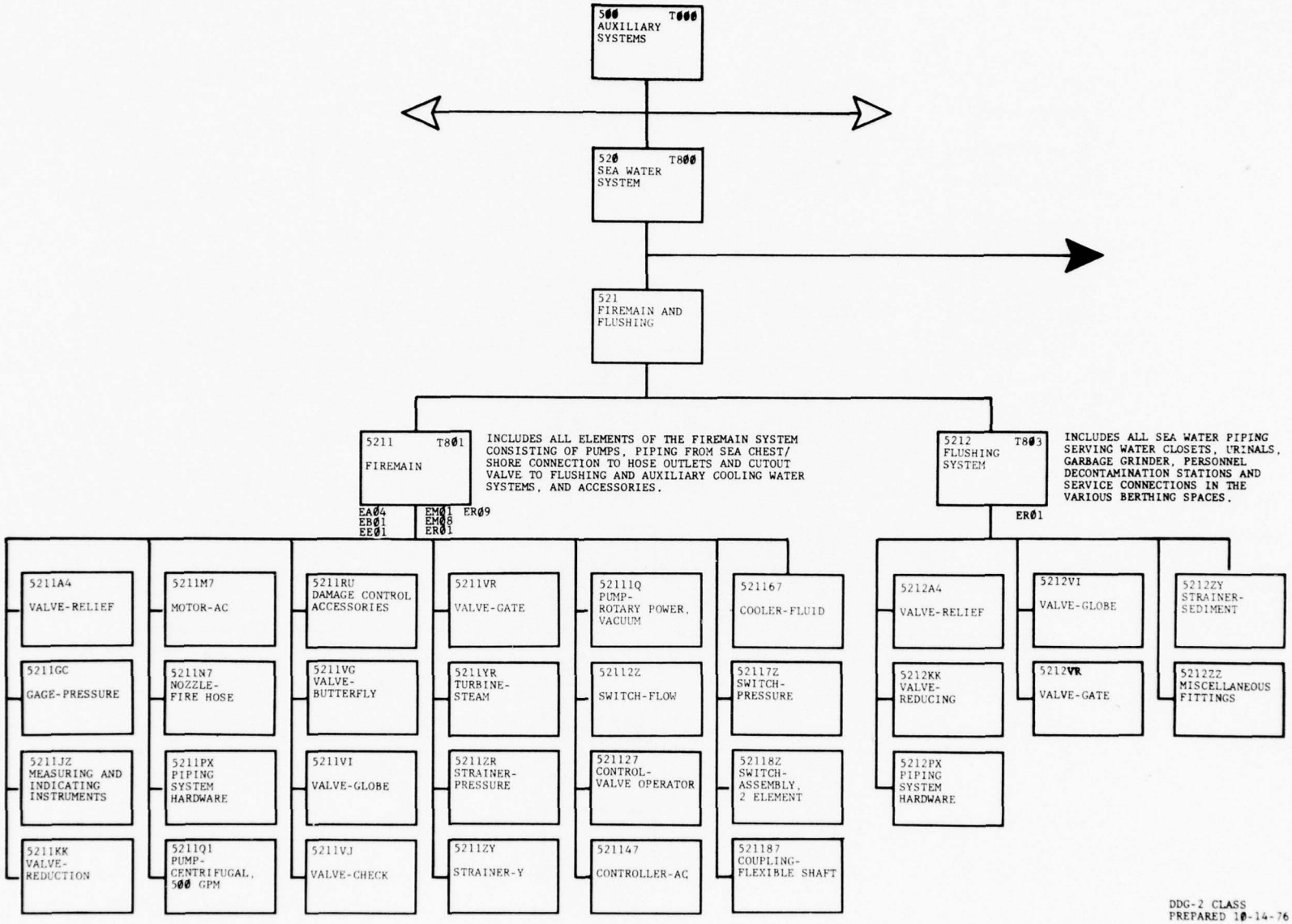
DDG-2 CLASS
PREPARED 10-7-76



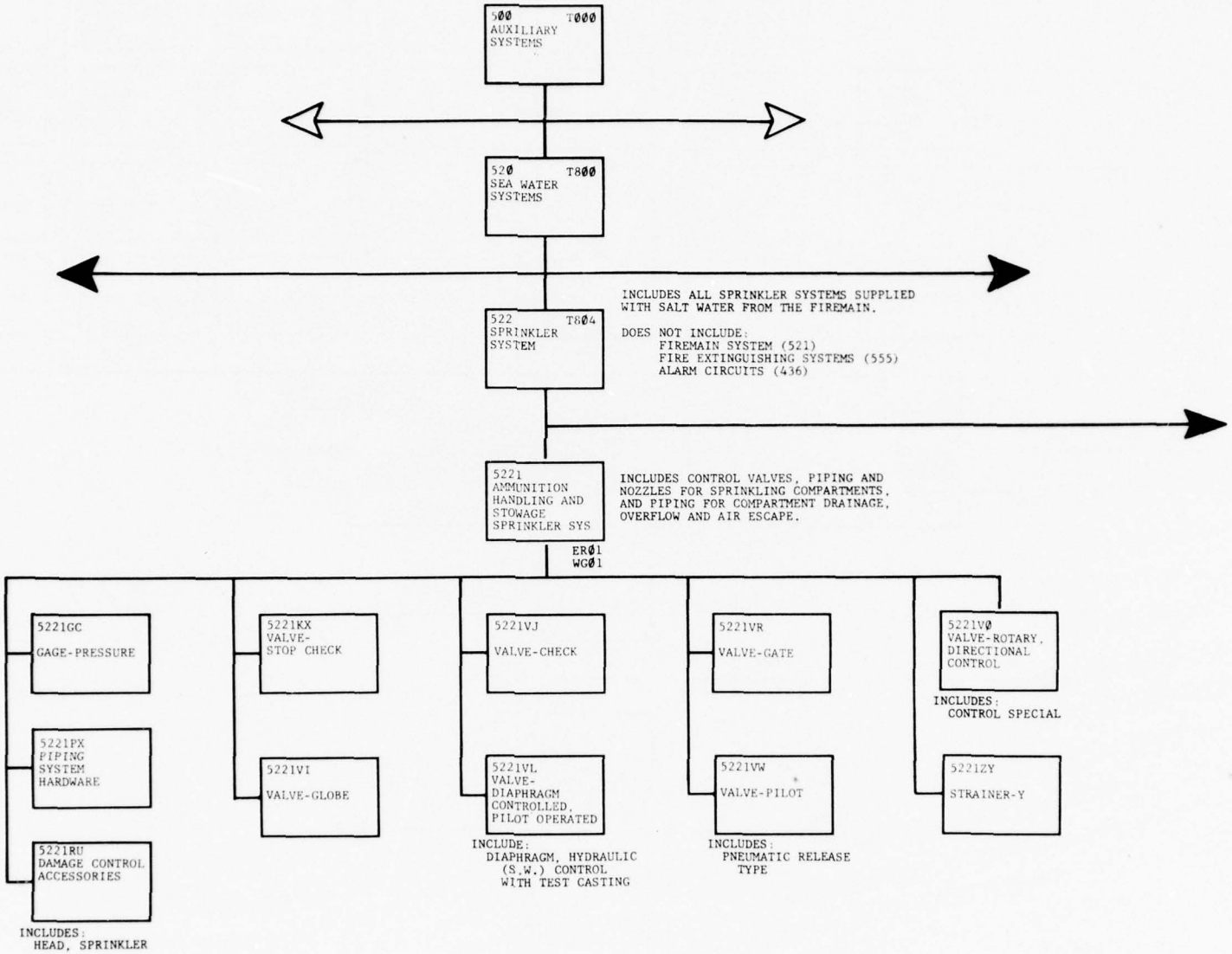
DDG-2 CLASS
PREPARED 10-14-76



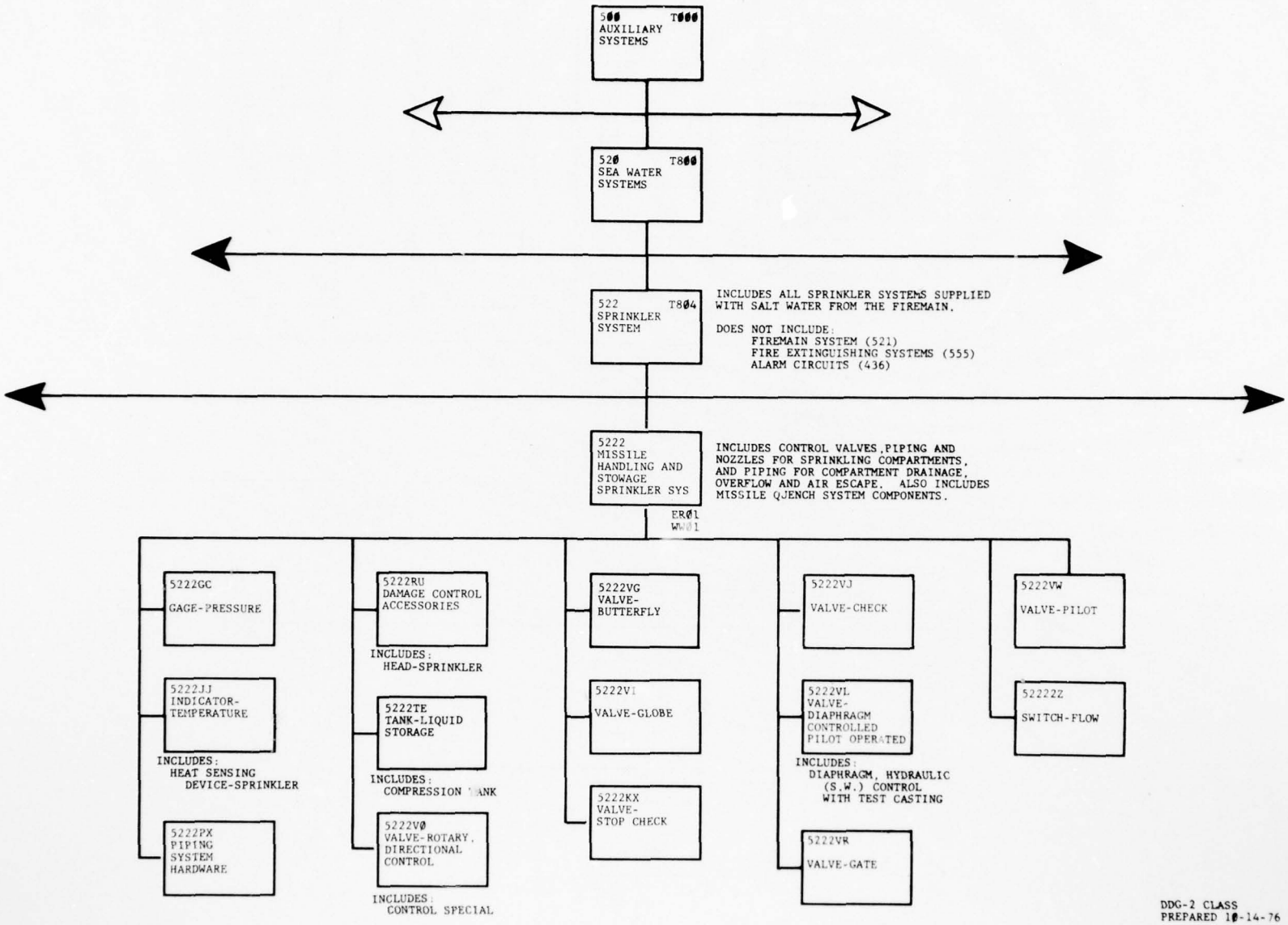
DDG-2 CLASS
PREPARED 10-14-76



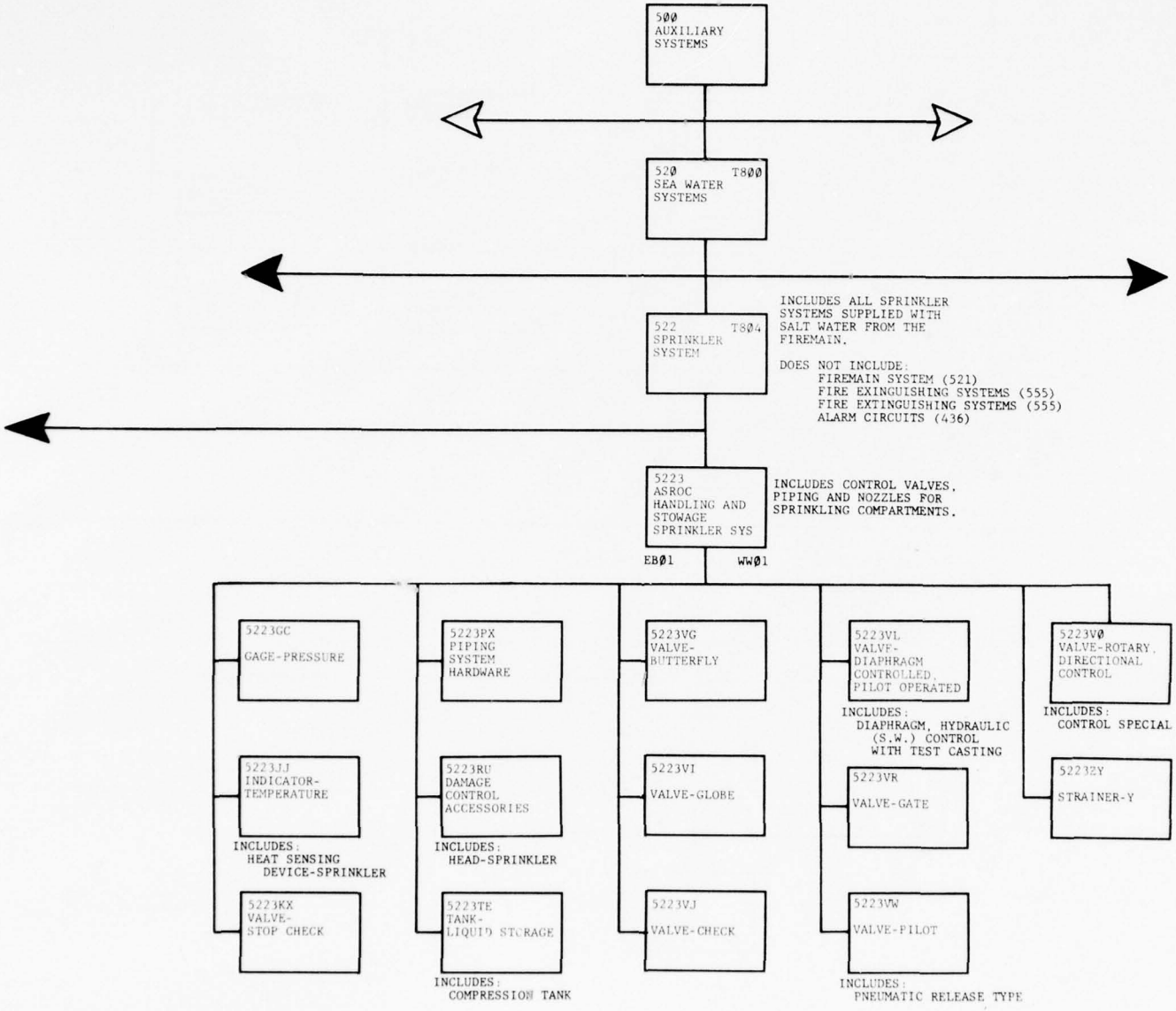
DDG-2 CLASS
PREPARED 10-14-76



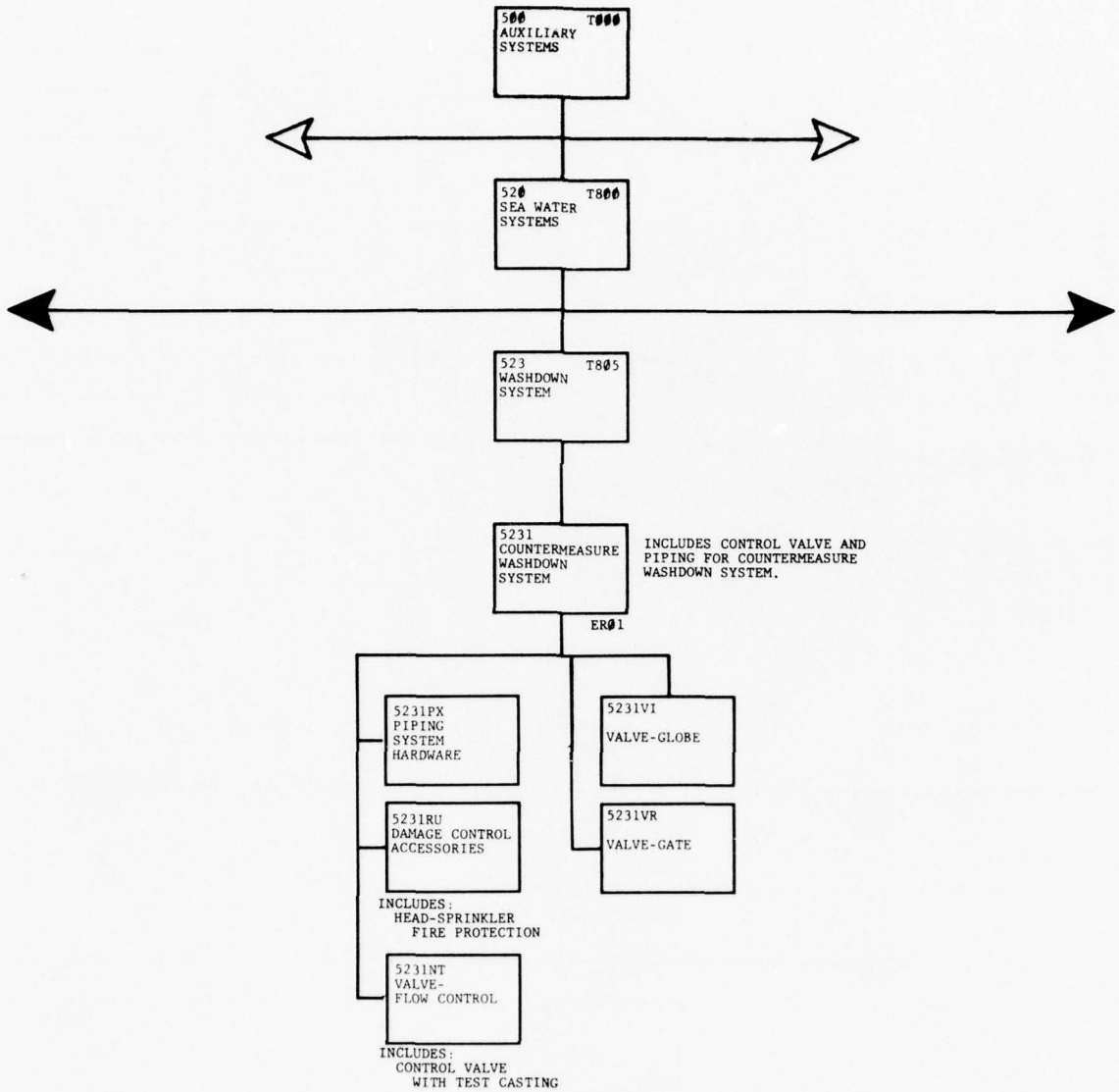
DDG-2 CLASS
PREPARED 10-14-76



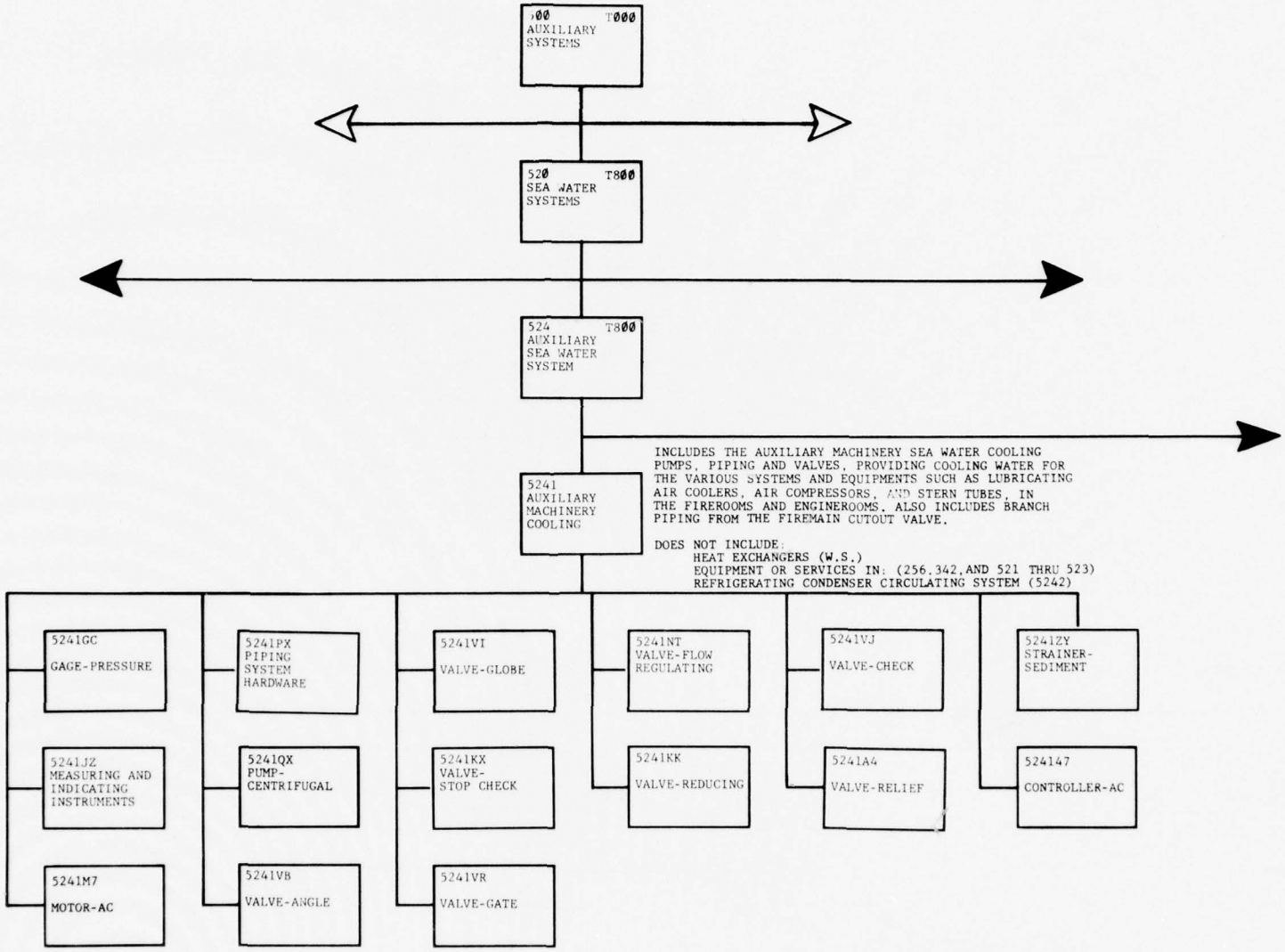
DDG-2 CLASS
PREPARED 10-14-76



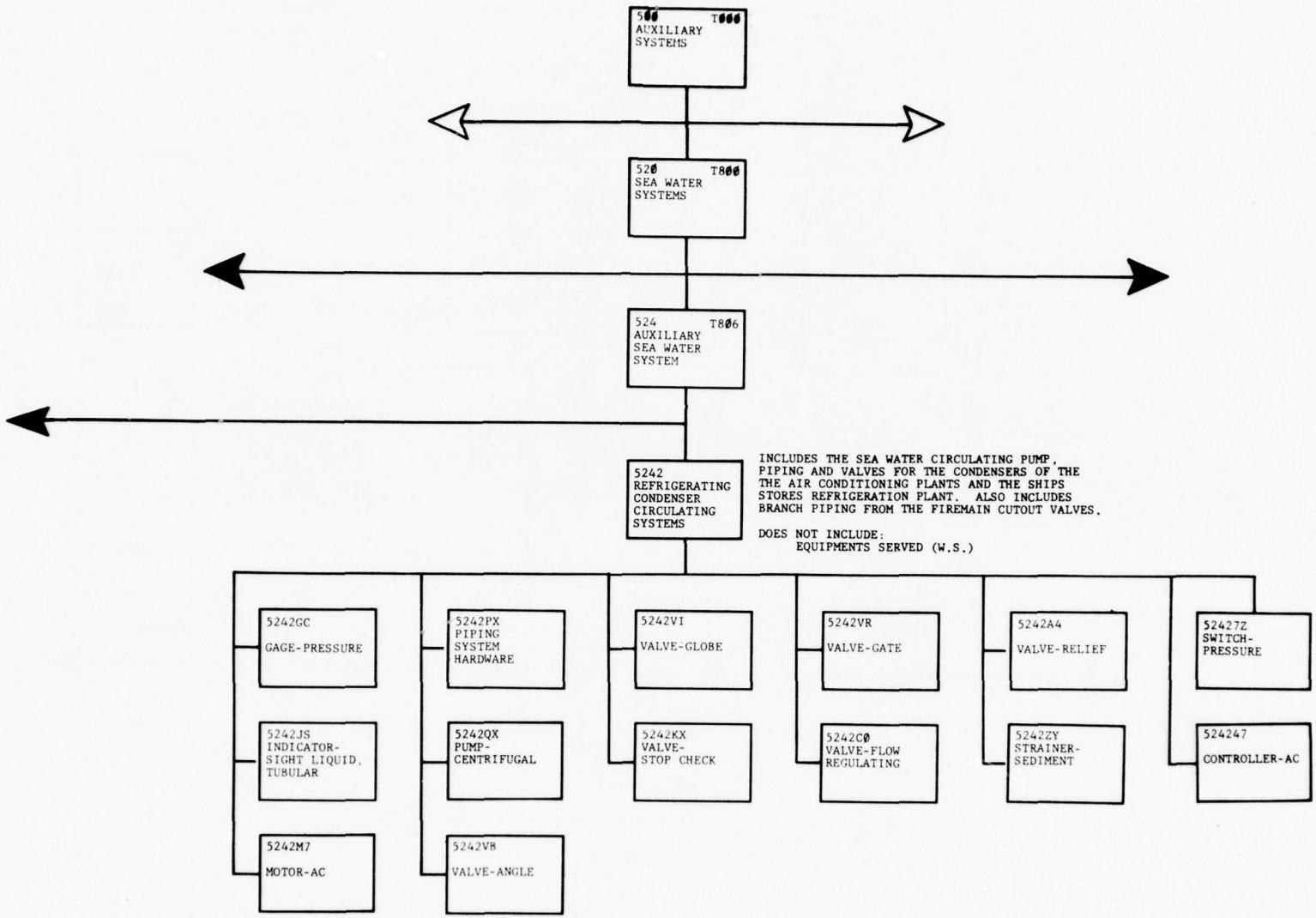
DDG-2 CLASS
PREPARED 10-14-76



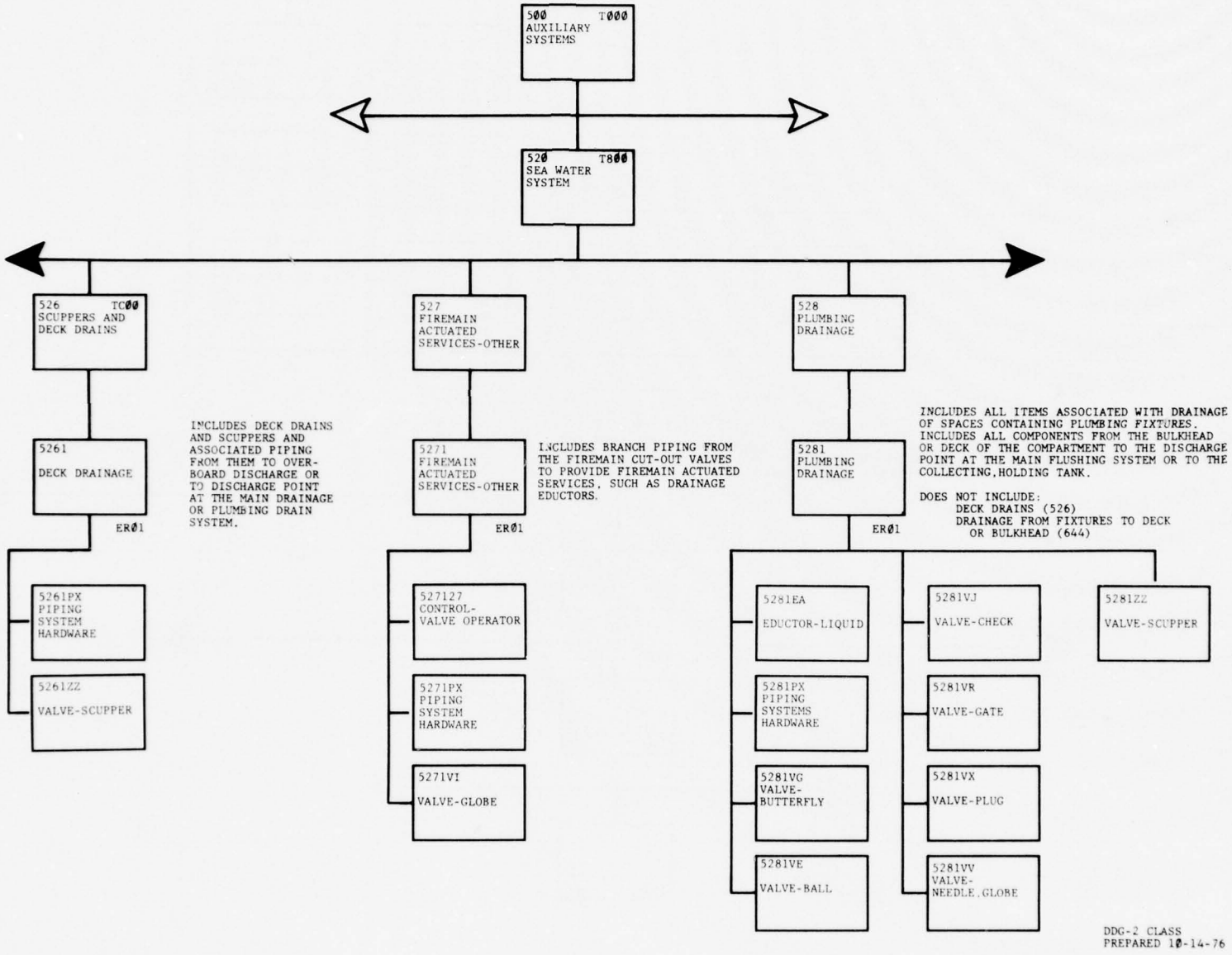
DDG-2 CLASS
PREPARED 10-14-76



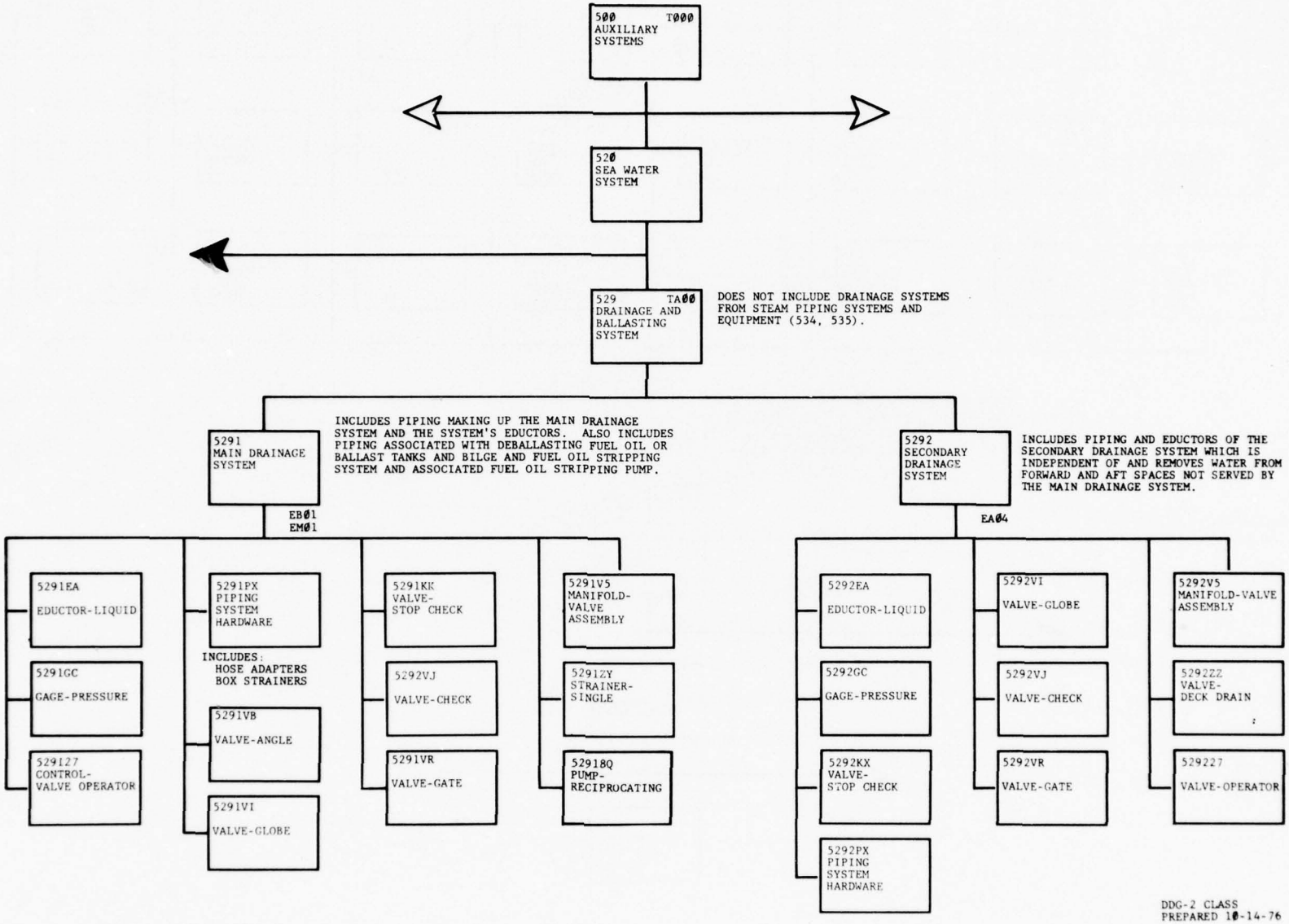
DDG-2 CLASS
PREPARED 10-14-76



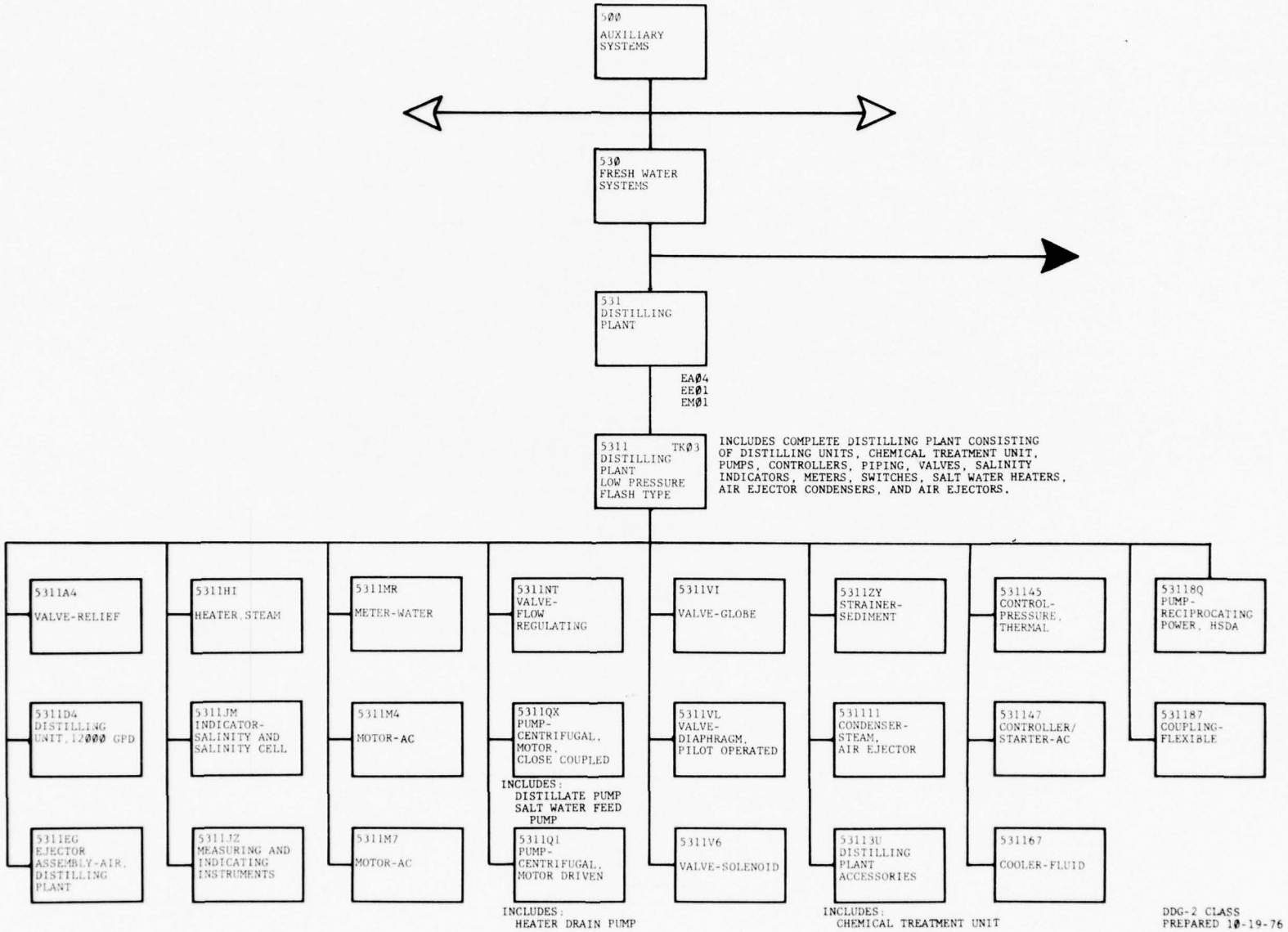
DDG-2 CLASS
PREPARED 10-14-76

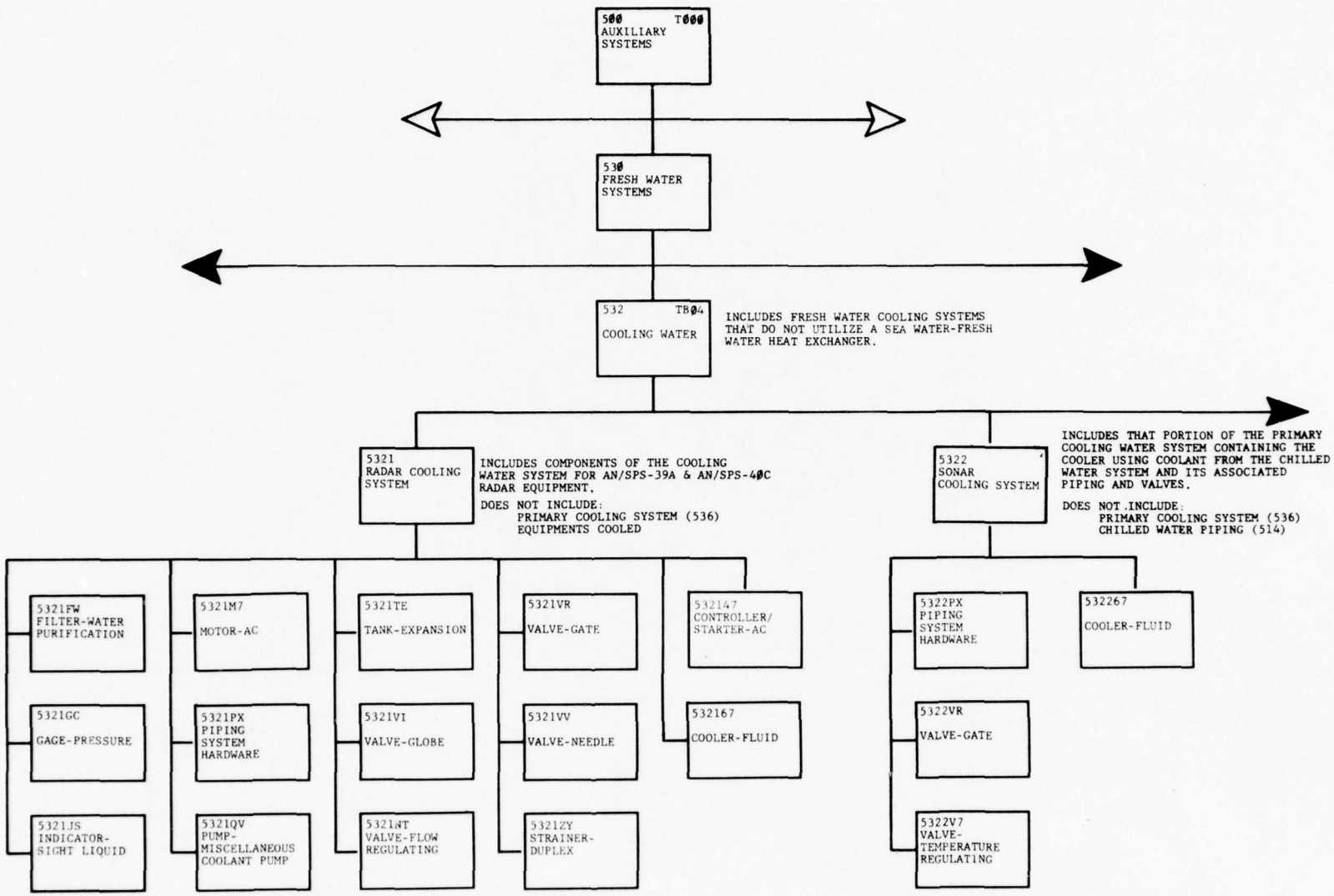


DDG-2 CLASS
PREPARED 10-14-76

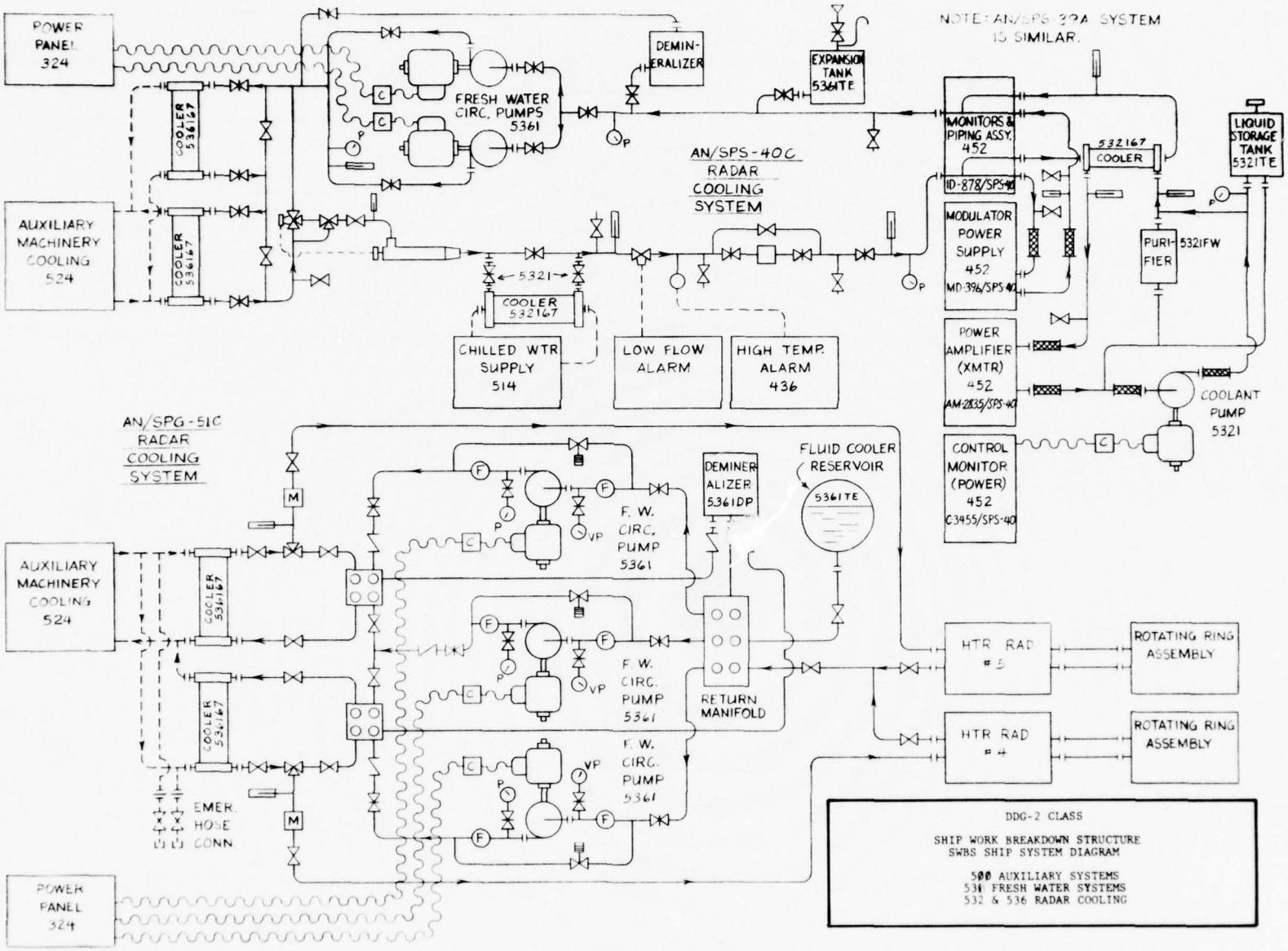


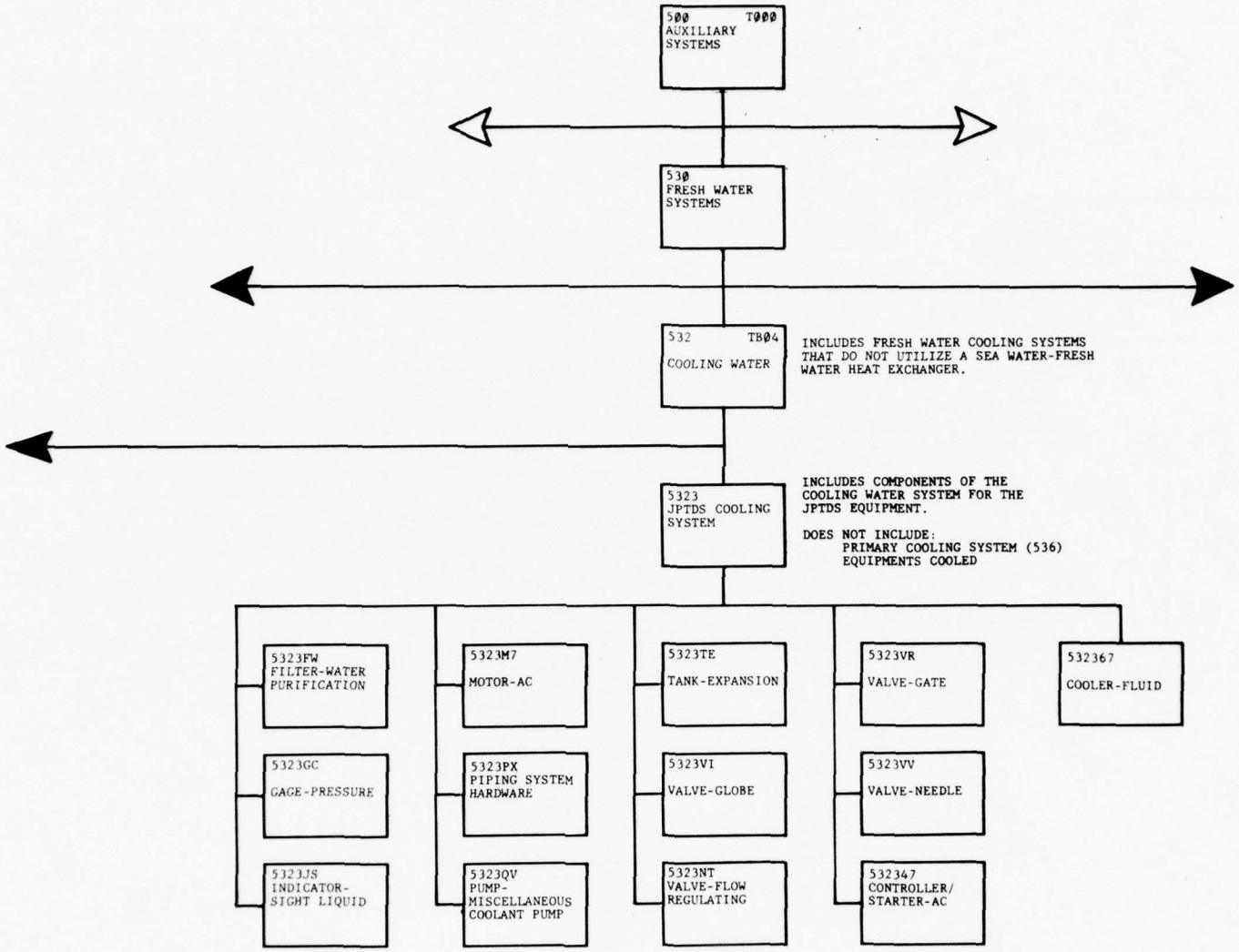
DDG-2 CLASS
PREPARED 10-14-76

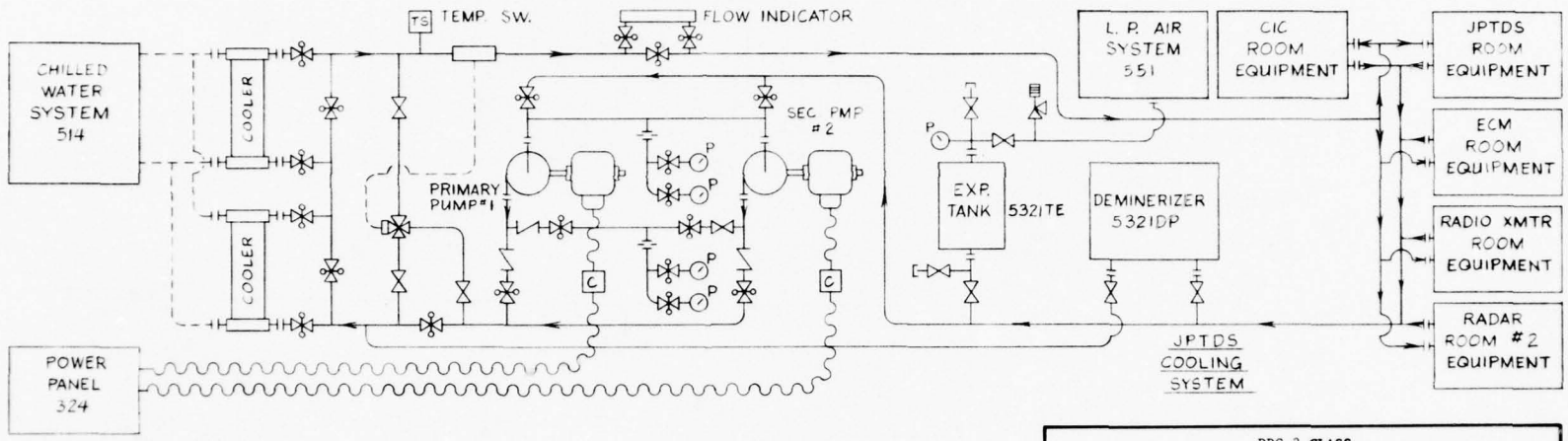

500
AUXILIARY SYSTEMS
530
FRESH WATER SYSTEMS
531
DISTILLING PLANT
EA04
EE01
EM01
5311 TK03
DISTILLING PLANT LOW PRESSURE FLASH TYPE
INCLUDES COMPLETE DISTILLING PLANT CONSISTING OF DISTILLING UNITS, CHEMICAL TREATMENT UNIT, PUMPS, CONTROLLERS, PIPING, VALVES, SALINITY INDICATORS, METERS, SWITCHES, SALT WATER HEATERS, AIR EJECTOR CONDENSERS, AND AIR EJECTORS.
5311A4 VALVE-RELIEF
5311D4 DISTILLING UNIT, 12000 GPD
5311EG EJECTOR ASSEMBLY-AIR, DISTILLING PLANT
5311HI HEATER, STEAM
5311JM INDICATOR-SALINITY AND SALINITY CELL
5311JZ MEASURING AND INDICATING INSTRUMENTS
5311MR METER-WATER
5311M4 MOTOR-AC
5311M7 MOTOR-AC
5311NT VALVE-FLOW REGULATING
5311QX PUMP-CENTRIFUGAL, MOTOR, CLOSE COUPLED
INCLUDES: DISTILLATE PUMP SALT WATER FEED PUMP
5311Q1 PUMP-CENTRIFUGAL, MOTOR DRIVEN
INCLUDES: HEATER DRAIN PUMP
5311VI VALVE-GLOBE
5311VL VALVE-DIAPHRAGM, PILOT OPERATED
5311V6 VALVE-SOLENOID
5311ZY STRAINER-SEDIMENT
531111 CONDENSER-STEAM, AIR EJECTOR
53113U DISTILLING PLANT ACCESSORIES
INCLUDES: CHEMICAL TREATMENT UNIT
531145 CONTROL-PRESSURE, THERMAL
531147 CONTROLLER/STARTER-AC
531167 COOLER-FLUID
53118Q PUMP-RECIPROCATING POWER, HSDA
531187 COUPLING-FLEXIBLE
DDG-2 CLASS
PREPARED 10-19-76



DDG-2 CLASS
PREPARED 10-14-76


POWER PANEL 324
AUXILIARY MACHINERY COOLING 524
COOLER 536167
FRESH WATER CIRC. PUMPS 5361
DEMIN-ERALIZER
EXPANSION TANK 5361TE
NOTE: AN/SPS-32A SYSTEM IS SIMILAR.
AN/SPS-40C RADAR COOLING SYSTEM
MONITORS & PIPING ASSY. 452
ID-878/SPS-40
532167 COOLER
LIQUID STORAGE TANK 5321TE
MODULATOR POWER SUPPLY 452
MD-396/SPS-40
PURI-FIER
5321FW
5321
COOLER 532167
CHILLED WTR SUPPLY 514
LOW FLOW ALARM
HIGH TEMP. ALARM 436
POWER AMPLIFIER (XMTR) 452
AM-2835/SPS-40
COOLANT PUMP 5321
CONTROL MONITOR (POWER) 452
C3455/SPS-40
AN/SPG-51C RADAR COOLING SYSTEM
FLUID COOLER RESERVOIR
5361TE
DEMINER ALIZER 5361DP
F. W. CIRC. PUMP 5361
RETURN MANIFOLD
HTR RAD # 5
HTR RAD # 4
ROTATING RING ASSEMBLY
EMER. HOSE CONN.
DDG-2 CLASS
SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM
500 AUXILIARY SYSTEMS
536 FRESH WATER SYSTEMS
532 & 536 RADAR COOLING

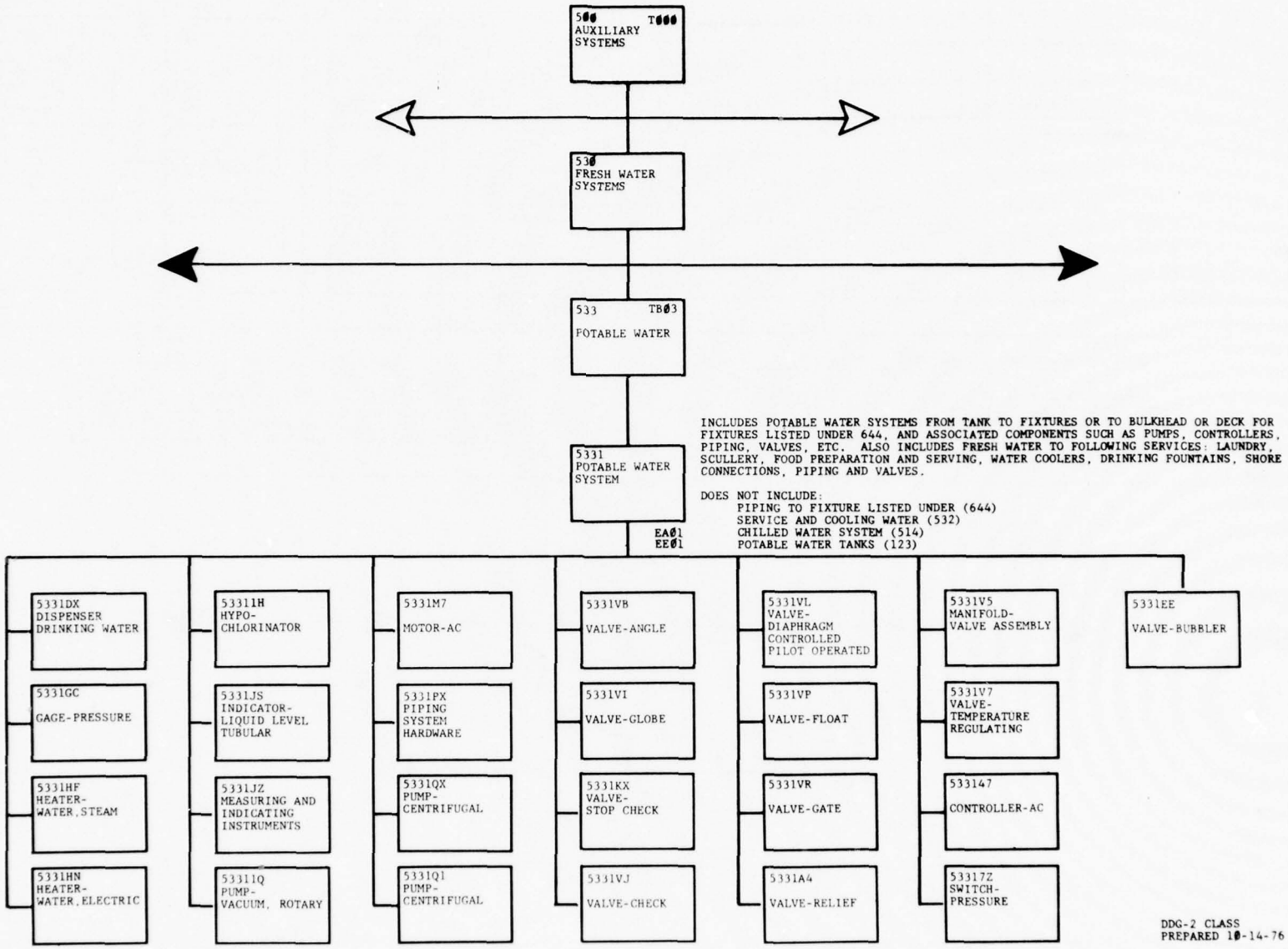

500 T000
AUXILIARY SYSTEMS
530
FRESH WATER SYSTEMS
532 TB04
COOLING WATER
INCLUDES FRESH WATER COOLING SYSTEMS THAT DO NOT UTILIZE A SEA WATER-FRESH WATER HEAT EXCHANGER.
5323
JPTDS COOLING SYSTEM
INCLUDES COMPONENTS OF THE COOLING WATER SYSTEM FOR THE JPTDS EQUIPMENT.
DOES NOT INCLUDE:
PRIMARY COOLING SYSTEM (536)
EQUIPMENTS COOLED
5323FW
FILTER-WATER PURIFICATION
5323GC
GAGE-PRESSURE
5323JS
INDICATOR-SIGHT LIQUID
5323M7
MOTOR-AC
5323PX
PIPING SYSTEM HARDWARE
5323QV
PUMP-MISCELLANEOUS COOLANT PUMP
5323TE
TANK-EXPANSION
5323VI
VALVE-GLOBE
5323NT
VALVE-FLOW REGULATING
5323VR
VALVE-GATE
5323VV
VALVE-NEEDLE
532347
CONTROLLER/STARTER-AC
532367
COOLER-FLUID

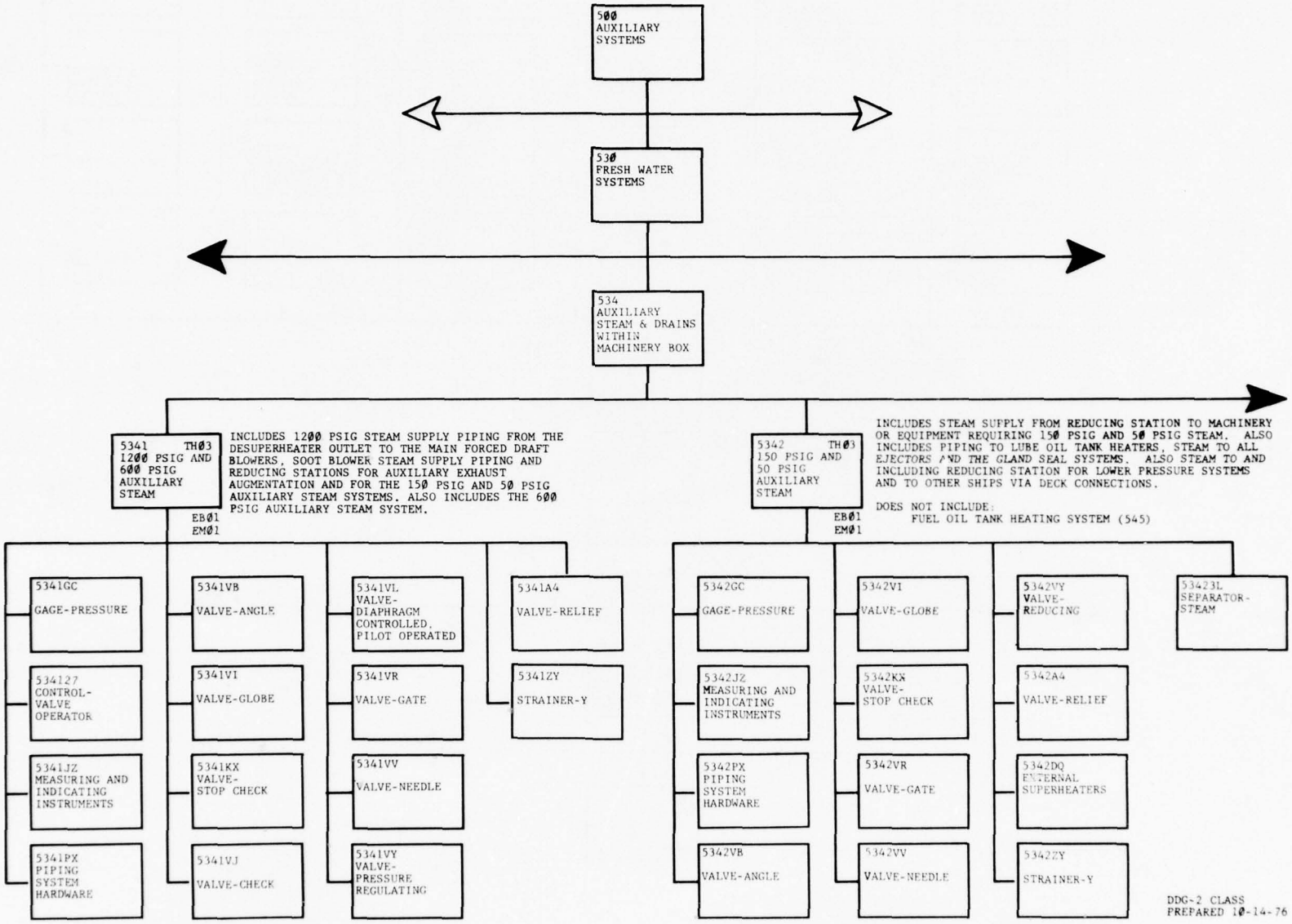


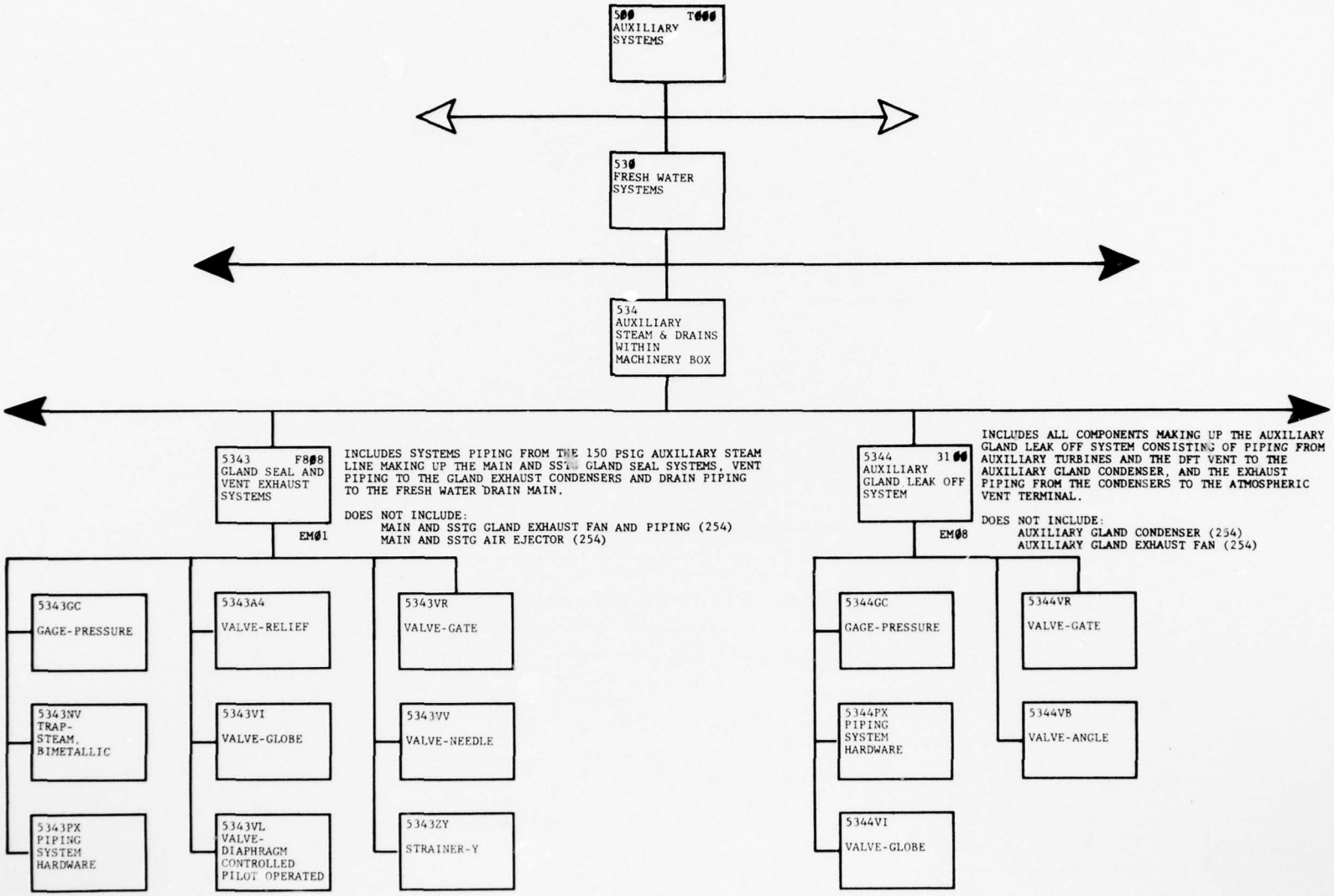
DDG-2 CLASS

SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM

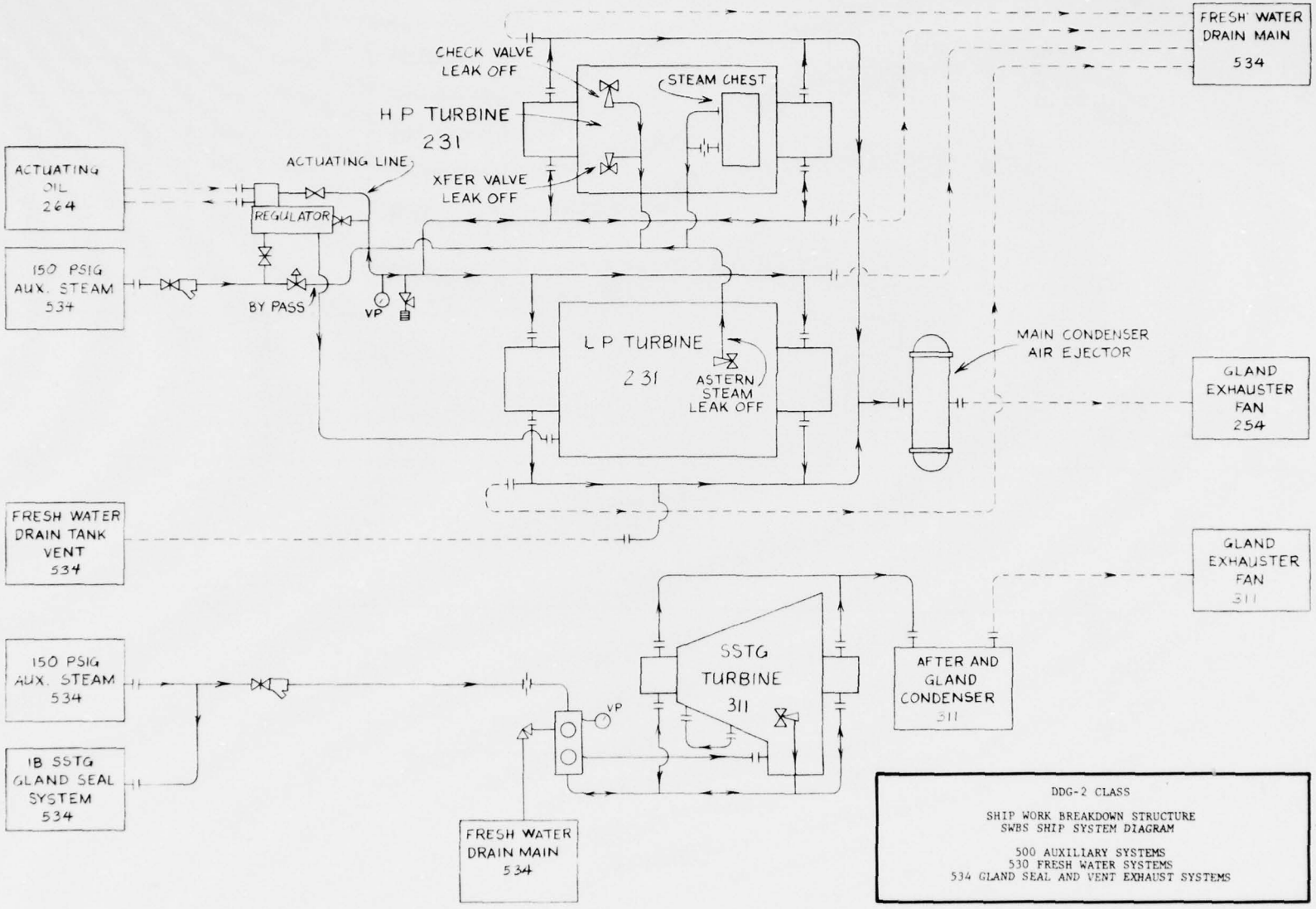
500 AUXILIARY SYSTEMS
530 FRESH WATER SYSTEMS
532 JPTDS COOLING


500 T000
AUXILIARY SYSTEMS
530
FRESH WATER SYSTEMS
533 TB03
POTABLE WATER
5331
POTABLE WATER SYSTEM
EA01
EE01
INCLUDES POTABLE WATER SYSTEMS FROM TANK TO FIXTURES OR TO BULKHEAD OR DECK FOR FIXTURES LISTED UNDER 644, AND ASSOCIATED COMPONENTS SUCH AS PUMPS, CONTROLLERS, PIPING, VALVES, ETC. ALSO INCLUDES FRESH WATER TO FOLLOWING SERVICES: LAUNDRY, SCULLERY, FOOD PREPARATION AND SERVING, WATER COOLERS, DRINKING FOUNTAINS, SHORE CONNECTIONS, PIPING AND VALVES.
DOES NOT INCLUDE:
PIPING TO FIXTURE LISTED UNDER (644)
SERVICE AND COOLING WATER (532)
CHILLED WATER SYSTEM (514)
POTABLE WATER TANKS (123)
5331DX DISPENSER DRINKING WATER
5331GC GAGE-PRESSURE
5331HF HEATER-WATER,STEAM
5331HN HEATER-WATER,ELECTRIC
53311H HYPO-CHLORINATOR
5331JS INDICATOR-LIQUID LEVEL TUBULAR
5331JZ MEASURING AND INDICATING INSTRUMENTS
53311Q PUMP-VACUUM, ROTARY
5331M7 MOTOR-AC
5331PX PIPING SYSTEM HARDWARE
5331QX PUMP-CENTRIFUGAL
5331Q1 PUMP-CENTRIFUGAL
5331VB VALVE-ANGLE
5331VI VALVE-GLOBE
5331KX VALVE-STOP CHECK
5331VJ VALVE-CHECK
5331VL VALVE-DIAPHRAGM CONTROLLED PILOT OPERATED
5331VP VALVE-FLOAT
5331VR VALVE-GATE
5331A4 VALVE-RELIEF
5331V5 MANIFOLD-VALVE ASSEMBLY
5331V7 VALVE-TEMPERATURE REGULATING
533147 CONTROLLER-AC
53317Z SWITCH-PRESSURE
5331EE VALVE-BUBBLER
DDG-2 CLASS
PREPARED 10-14-76


500
AUXILIARY
SYSTEMS
530
FRESH WATER
SYSTEMS
534
AUXILIARY
STEAM & DRAINS
WITHIN
MACHINERY BOX
5341 TH03
1200 PSIG AND
600 PSIG
AUXILIARY
STEAM
EB01
EM01
INCLUDES 1200 PSIG STEAM SUPPLY PIPING FROM THE DESUPERHEATER OUTLET TO THE MAIN FORCED DRAFT BLOWERS, SOOT BLOWER STEAM SUPPLY PIPING AND REDUCING STATIONS FOR AUXILIARY EXHAUST AUGMENTATION AND FOR THE 150 PSIG AND 50 PSIG AUXILIARY STEAM SYSTEMS. ALSO INCLUDES THE 600 PSIG AUXILIARY STEAM SYSTEM.
5342 TH03
150 PSIG AND
50 PSIG
AUXILIARY
STEAM
EB01
EM01
INCLUDES STEAM SUPPLY FROM REDUCING STATION TO MACHINERY OR EQUIPMENT REQUIRING 150 PSIG AND 50 PSIG STEAM. ALSO INCLUDES PIPING TO LUBE OIL TANK HEATERS, STEAM TO ALL EJECTORS AND THE GLAND SEAL SYSTEMS. ALSO STEAM TO AND INCLUDING REDUCING STATION FOR LOWER PRESSURE SYSTEMS AND TO OTHER SHIPS VIA DECK CONNECTIONS.
DOES NOT INCLUDE:
FUEL OIL TANK HEATING SYSTEM (545)
5341GC
GAGE-PRESSURE
534127
CONTROL-
VALVE
OPERATOR
5341JZ
MEASURING AND
INDICATING
INSTRUMENTS
5341PX
PIPING
SYSTEM
HARDWARE
5341VB
VALVE-ANGLE
5341VI
VALVE-GLOBE
5341KX
VALVE-
STOP CHECK
5341VJ
VALVE-CHECK
5341VL
VALVE-
DIAPHRAGM
CONTROLLED,
PILOT OPERATED
5341VR
VALVE-GATE
5341VV
VALVE-NEEDLE
5341VY
VALVE-
PRESSURE
REGULATING
5341A4
VALVE-RELIEF
5341ZY
STRAINER-Y
5342GC
GAGE-PRESSURE
5342JZ
MEASURING AND
INDICATING
INSTRUMENTS
5342PX
PIPING
SYSTEM
HARDWARE
5342VB
VALVE-ANGLE
5342VI
VALVE-GLOBE
5342KX
VALVE-
STOP CHECK
5342VR
VALVE-GATE
5342VV
VALVE-NEEDLE
5342VY
VALVE-
REDUCING
5342A4
VALVE-RELIEF
5342DQ
EXTERNAL
SUPERHEATERS
5342ZY
STRAINER-Y
53423L
SEPARATOR-
STEAM
DDG-2 CLASS
PREPARED 10-14-76



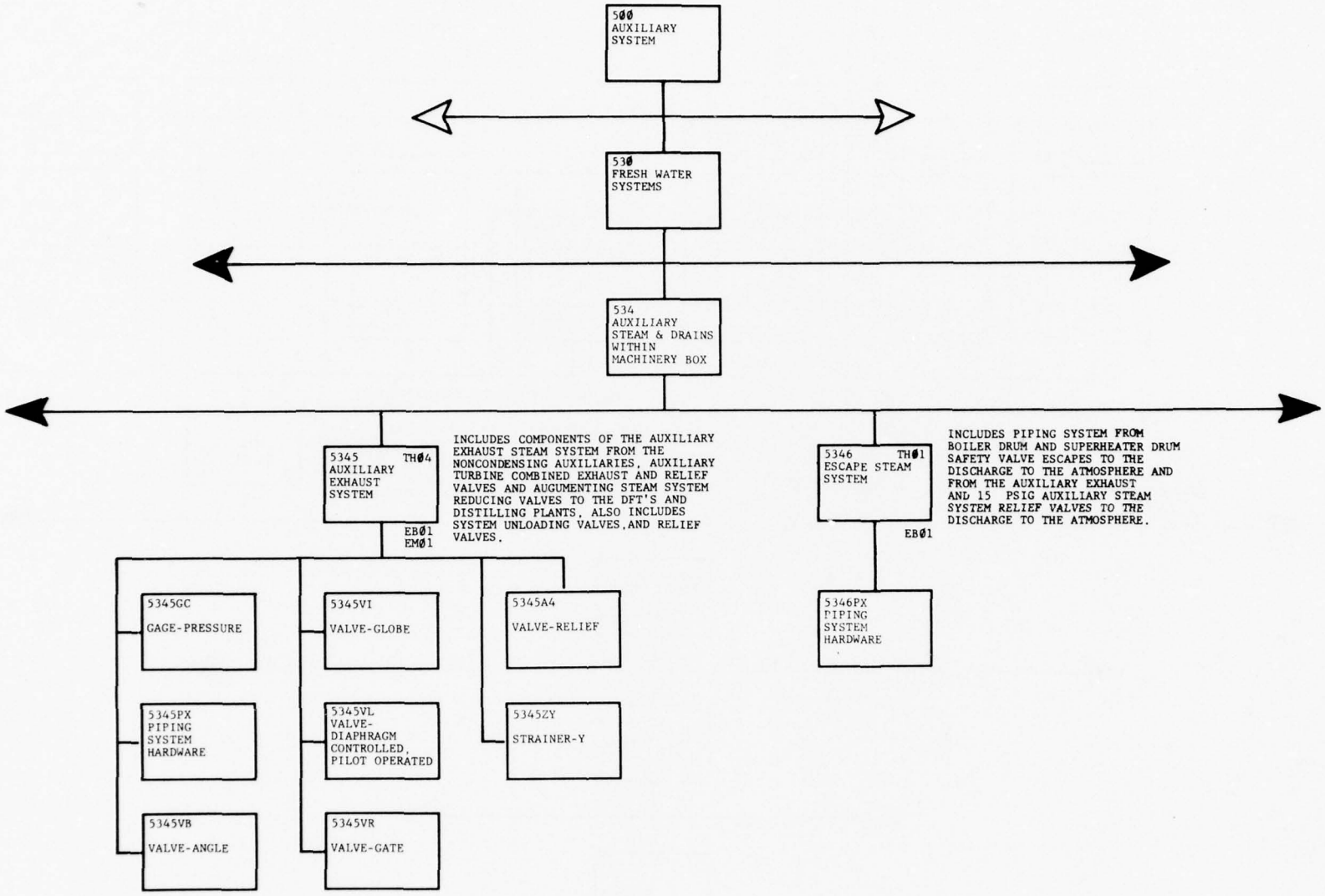
DDG-2 CLASS
PREPARED 1Ø-14-76



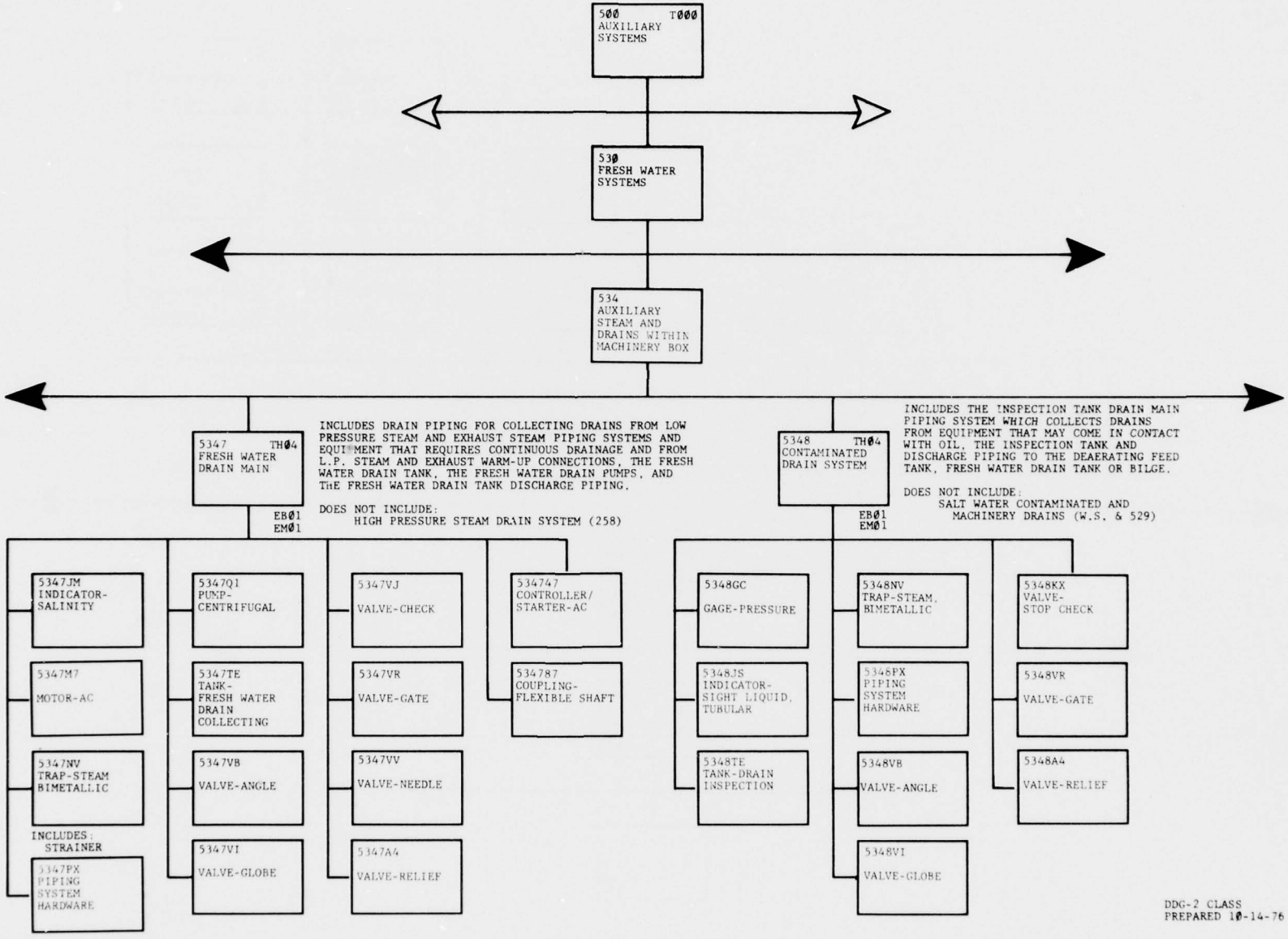
DDG-2 CLASS

SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM

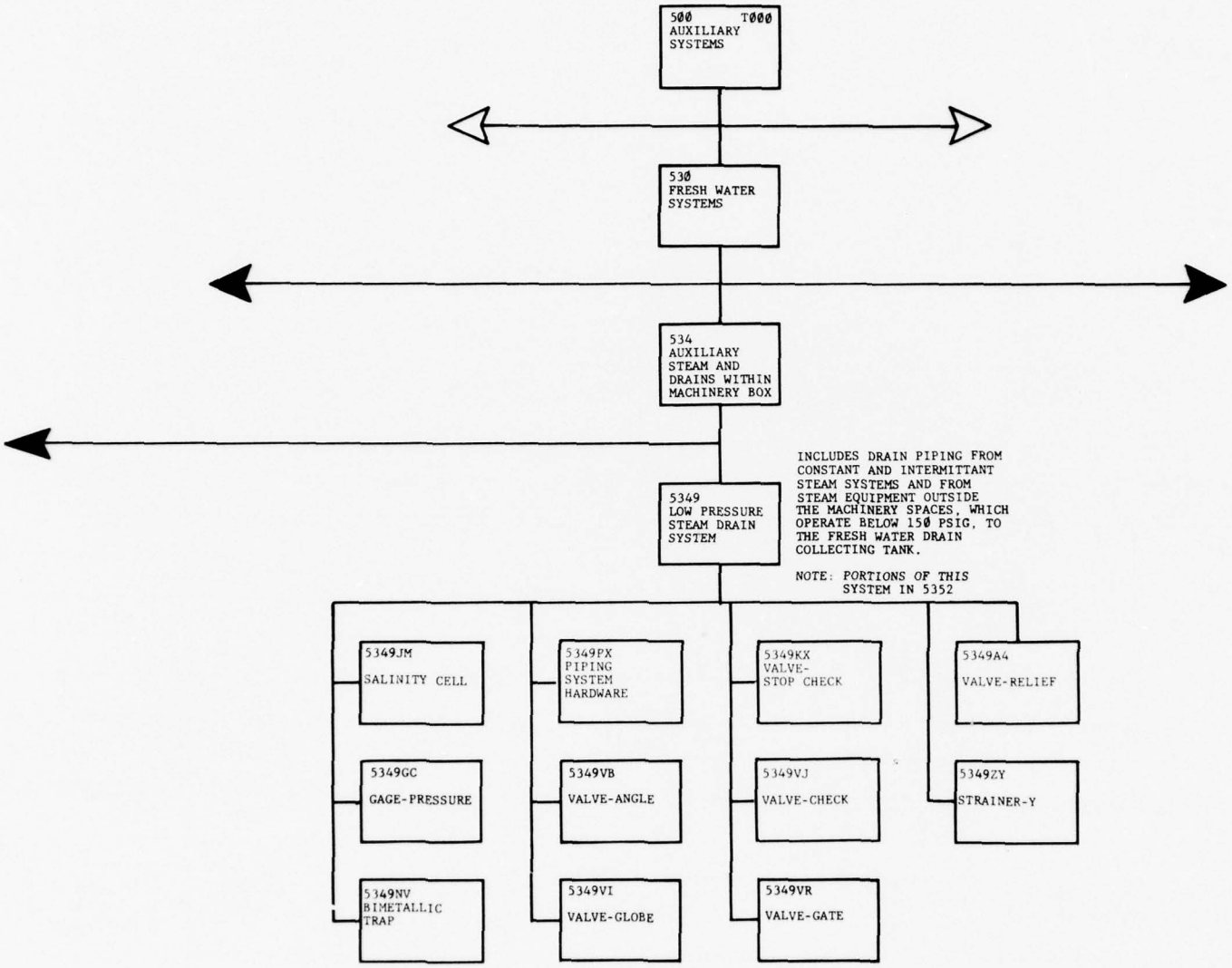
500 AUXILIARY SYSTEMS
530 FRESH WATER SYSTEMS
534 GLAND SEAL AND VENT EXHAUST SYSTEMS



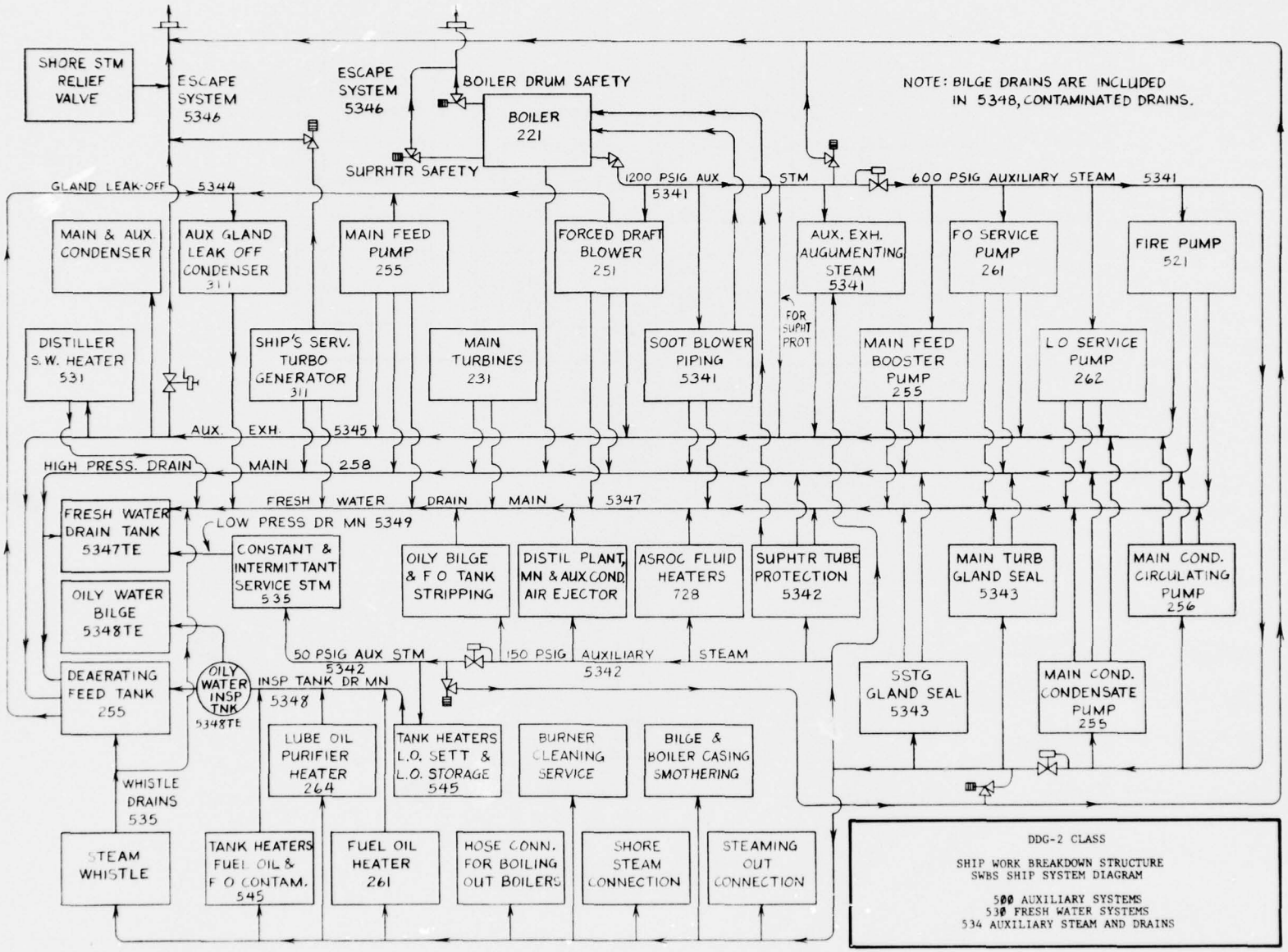
DDG-2 CLASS
PREPARED 10-14-76

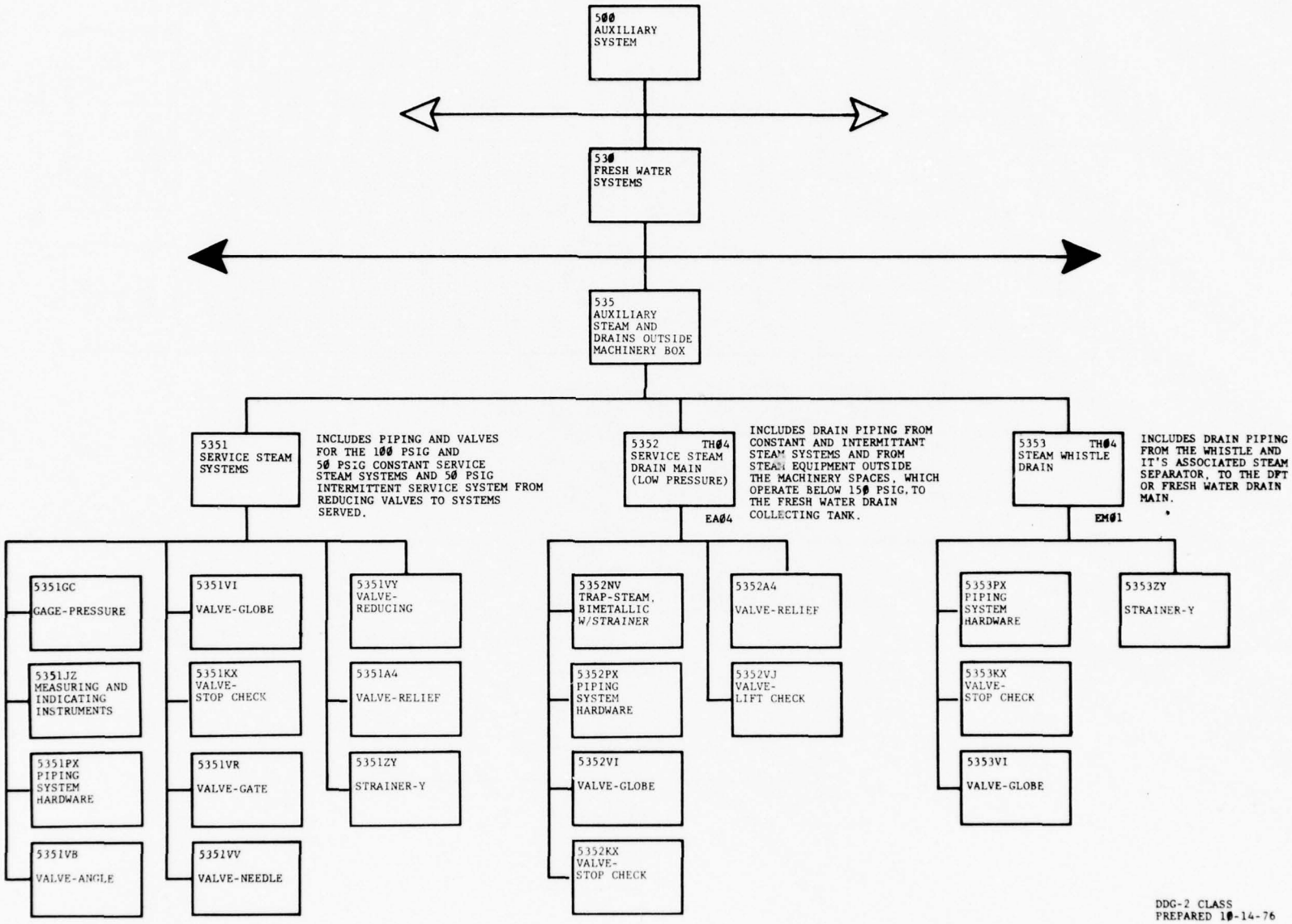


DDG-2 CLASS
PREPARED 10-14-76

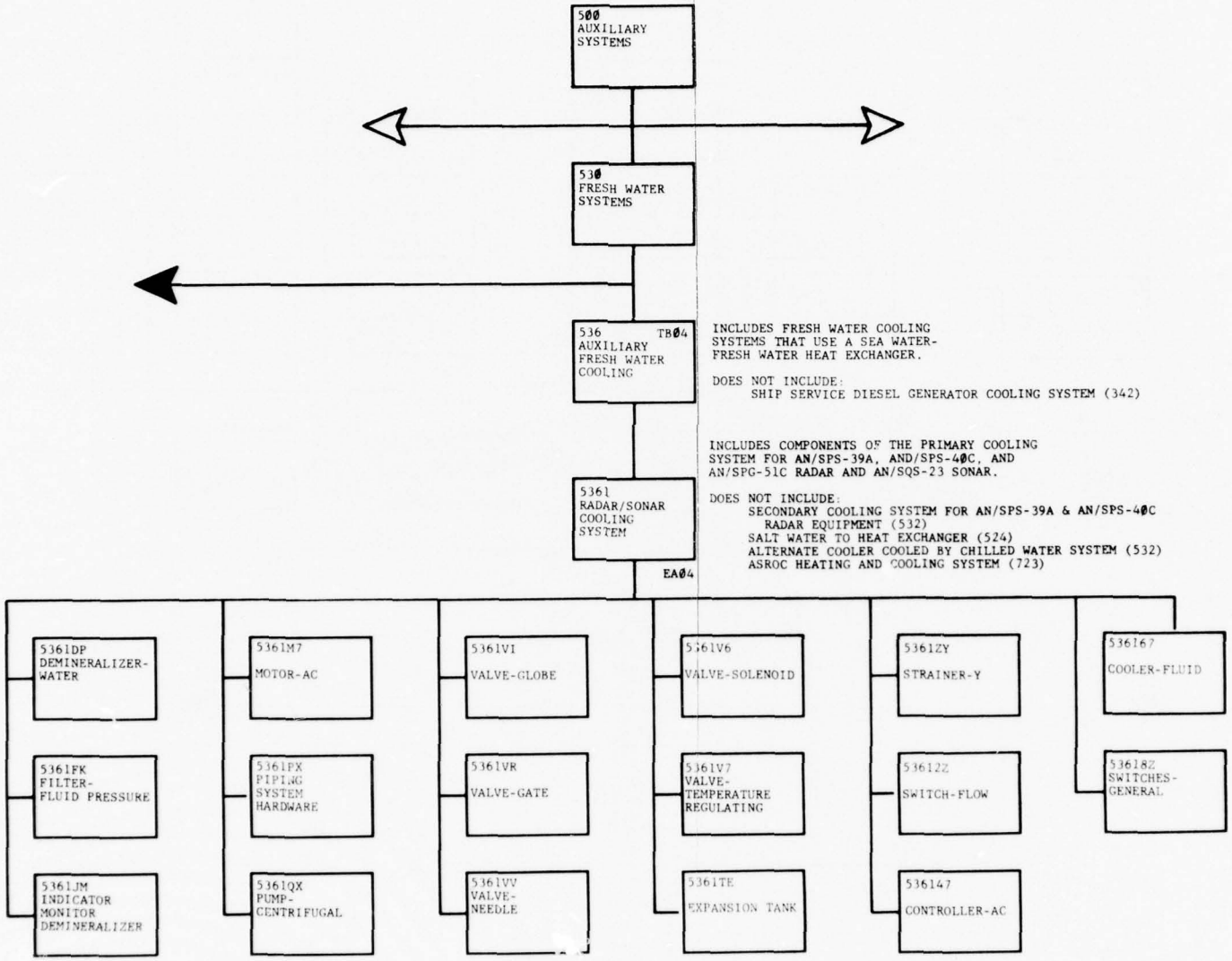


DDG-2 CLASS
PREPARED 10-14-76

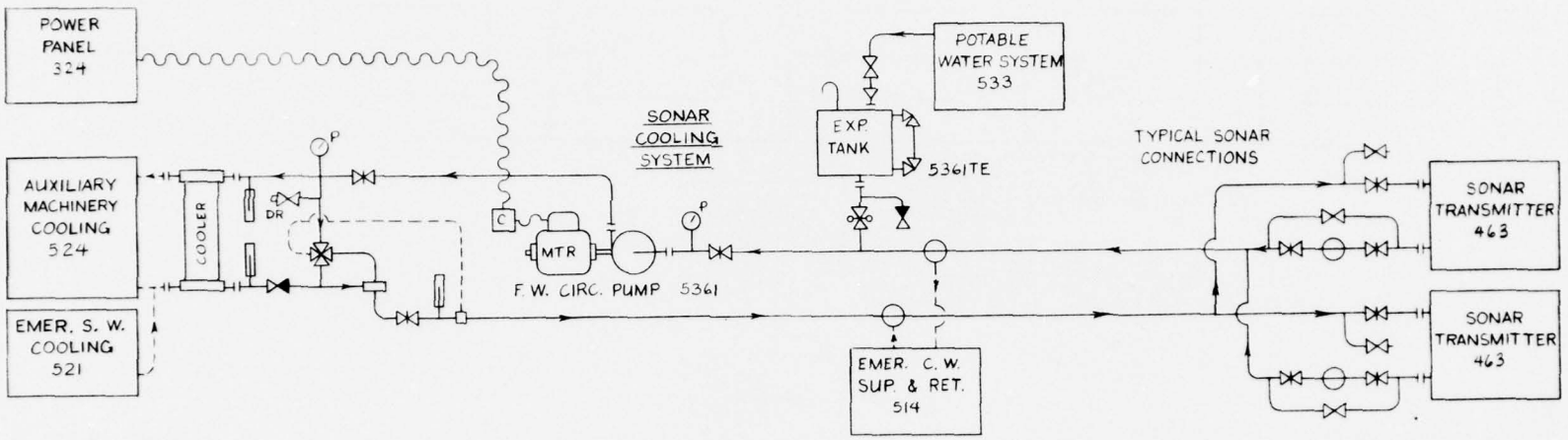

SHORE STM RELIEF VALVE
ESCAPE SYSTEM 5346
ESCAPE SYSTEM 5346
BOILER DRUM SAFETY
BOILER 221
SUPRHTR SAFETY
NOTE: BILGE DRAINS ARE INCLUDED IN 5348, CONTAMINATED DRAINS.
GLAND LEAK-OFF 5344
1200 PSIG AUX 5341
STM
600 PSIG AUXILIARY STEAM 5341
MAIN & AUX. CONDENSER
AUX GLAND LEAK OFF CONDENSER 311
MAIN FEED PUMP 255
FORCED DRAFT BLOWER 251
AUX. EXH. AUGUMENTING STEAM 5341
FO SERVICE PUMP 261
FIRE PUMP 521
FOR SUPHT PROT
DISTILLER S.W. HEATER 531
SHIP'S SERV. TURBO GENERATOR 311
MAIN TURBINES 231
SOOT BLOWER PIPING 5341
MAIN FEED BOOSTER PUMP 255
LO SERVICE PUMP 262
AUX. EXH. 5345
HIGH PRESS. DRAIN
MAIN 258
FRESH WATER DRAIN MAIN 5347
FRESH WATER DRAIN TANK 5347TE
LOW PRESS DR MN 5349
CONSTANT & INTERMITTANT SERVICE STM 535
OILY BILGE & F O TANK STRIPPING
DISTIL PLANT, MN & AUX COND AIR EJECTOR
ASROC FLUID HEATERS 728
SUPHTR TUBE PROTECTION 5342
MAIN TURB GLAND SEAL 5343
MAIN COND. CIRCULATING PUMP 256
OILY WATER BILGE 5348TE
50 PSIG AUX STM 5342
150 PSIG AUXILIARY 5342
STEAM
DEAERATING FEED TANK 255
OILY WATER INSP TNK 5348TE
INSP TANK DR MN 5348
SSTG GLAND SEAL 5343
MAIN COND. CONDENSATE PUMP 255
LUBE OIL PURIFIER HEATER 264
TANK HEATERS L.O. SETT & L.O. STORAGE 545
BURNER CLEANING SERVICE
BILGE & BOILER CASING SMOTHERING
WHISTLE DRAINS 535
STEAM WHISTLE
TANK HEATERS FUEL OIL & F O CONTAM. 545
FUEL OIL HEATER 261
HOSE CONN. FOR BOILING OUT BOILERS
SHORE STEAM CONNECTION
STEAMING OUT CONNECTION
DDG-2 CLASS
SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM
500 AUXILIARY SYSTEMS
530 FRESH WATER SYSTEMS
534 AUXILIARY STEAM AND DRAINS



DDG-2 CLASS
PREPARED 10-14-76



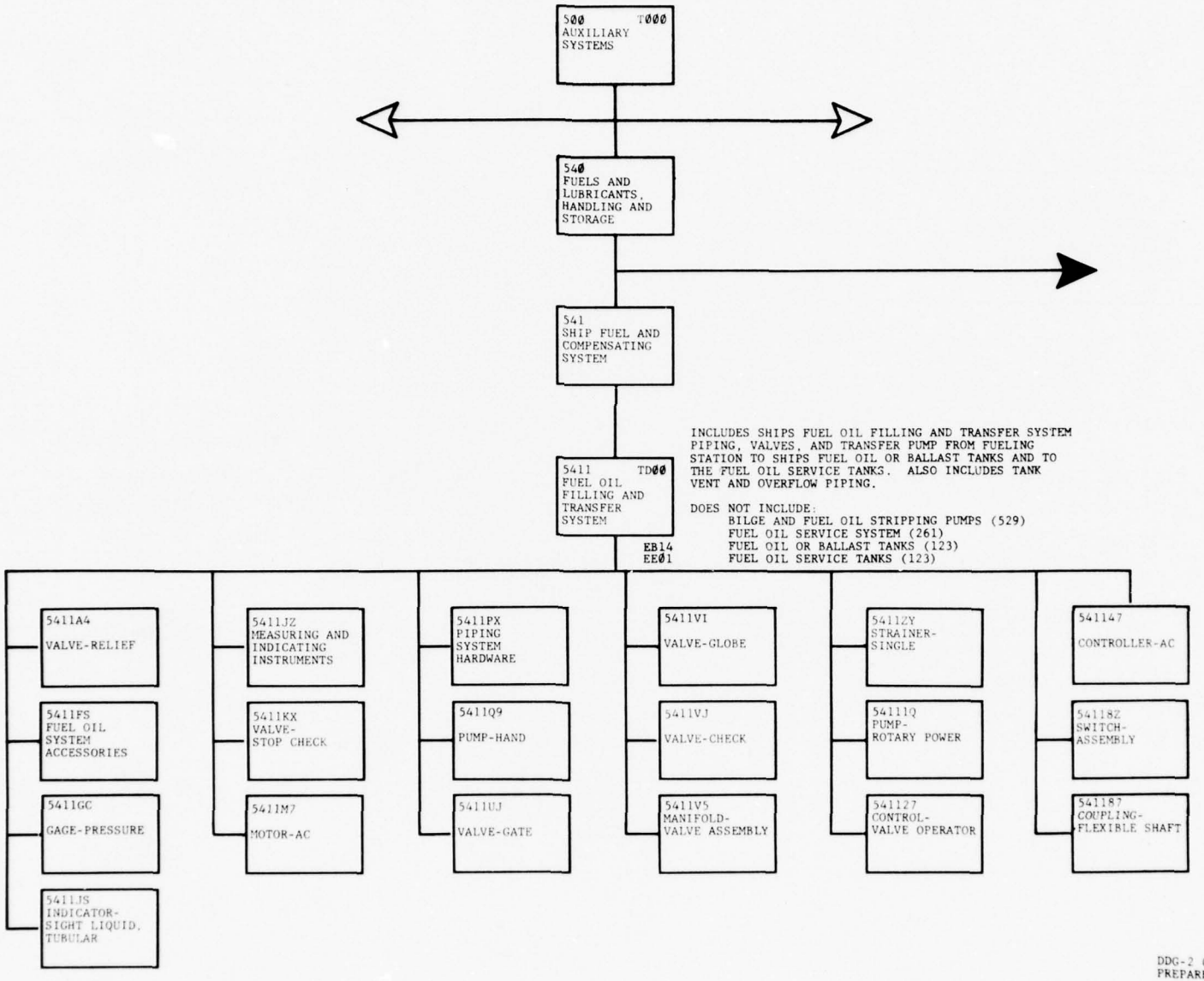
DDG-2 CLASS
PREPARED 10-14-76



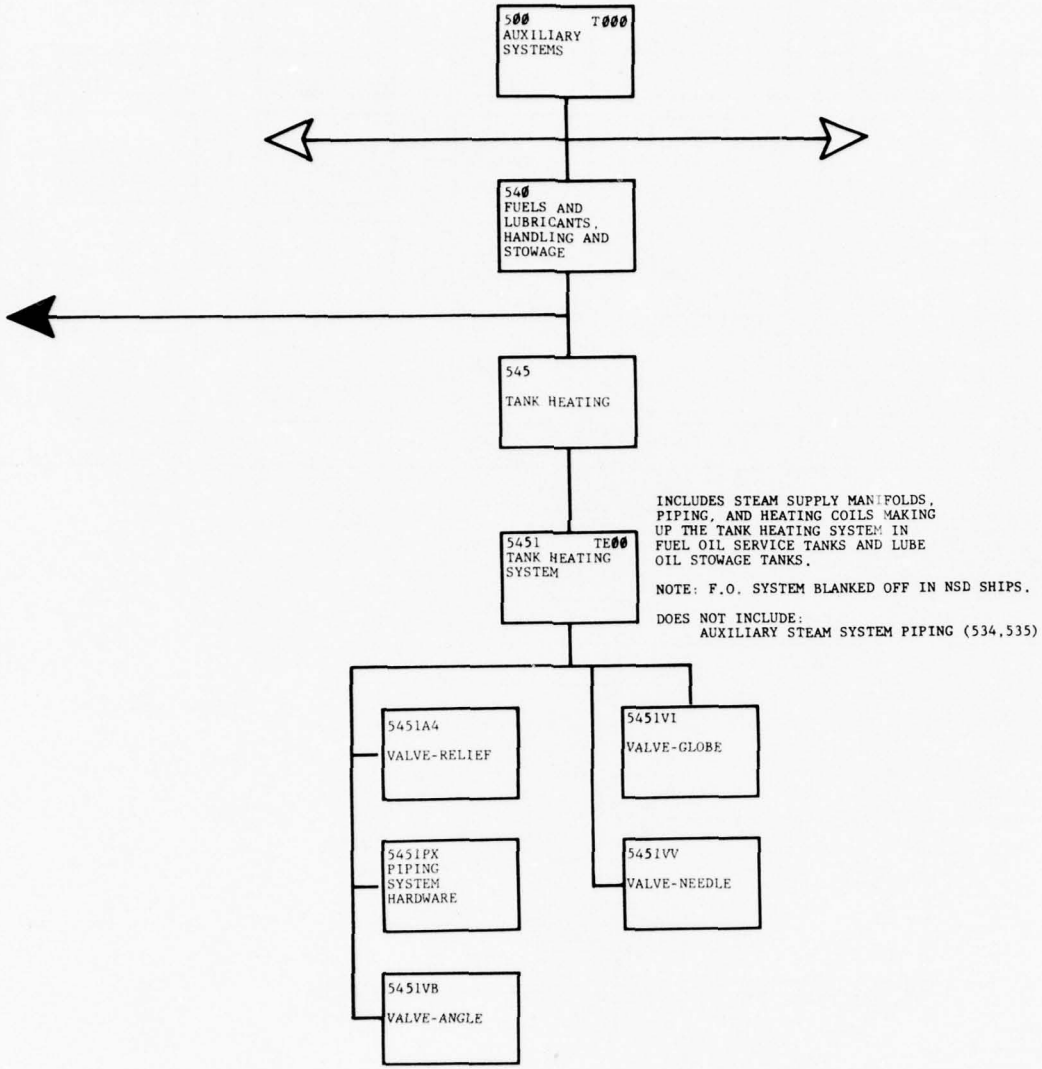
DDG-2 CLASS

SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM

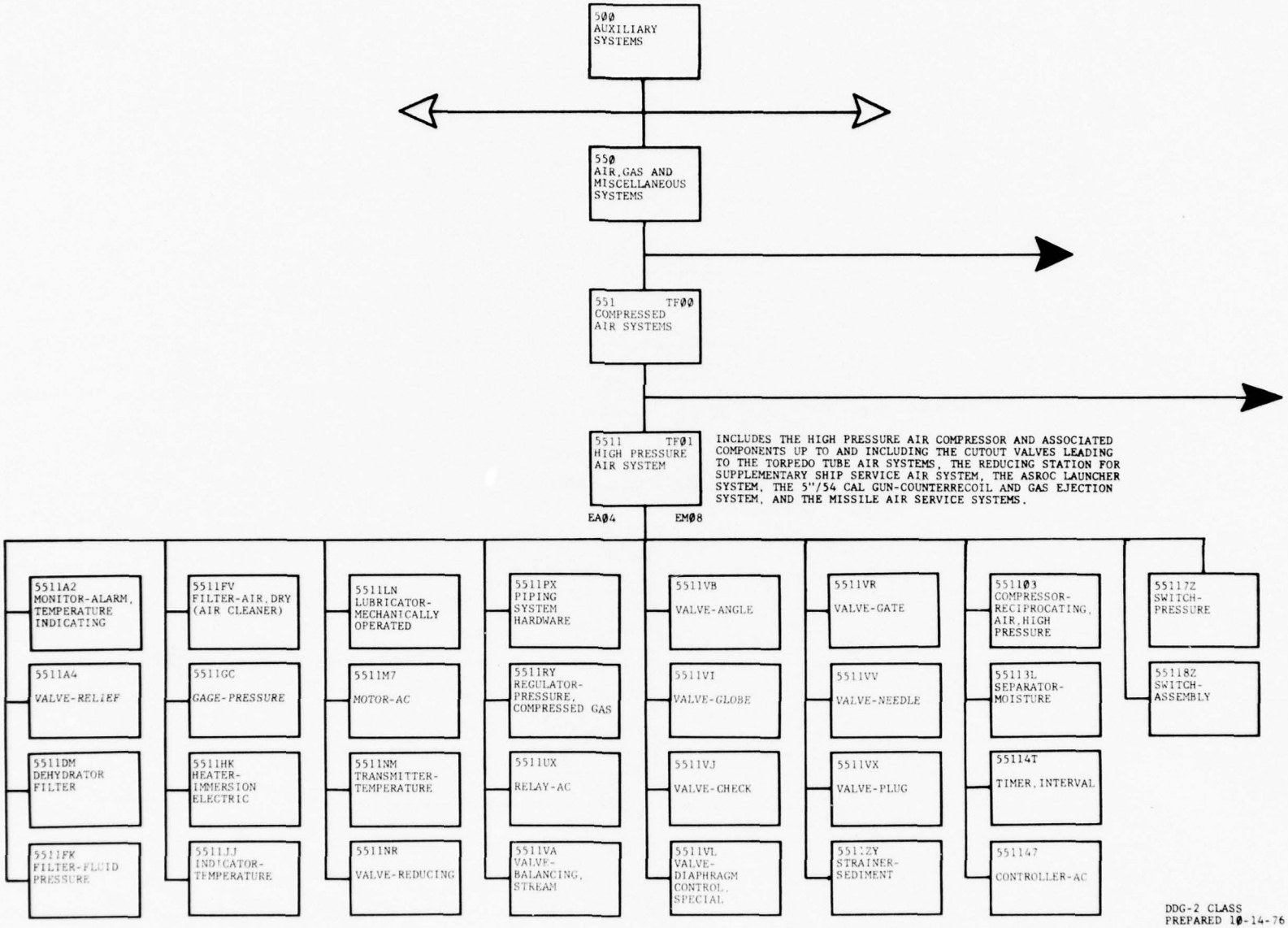
500 AUXILIARY SYSTEMS
530 FRESH WATER SYSTEMS
536 SONAR COOLING



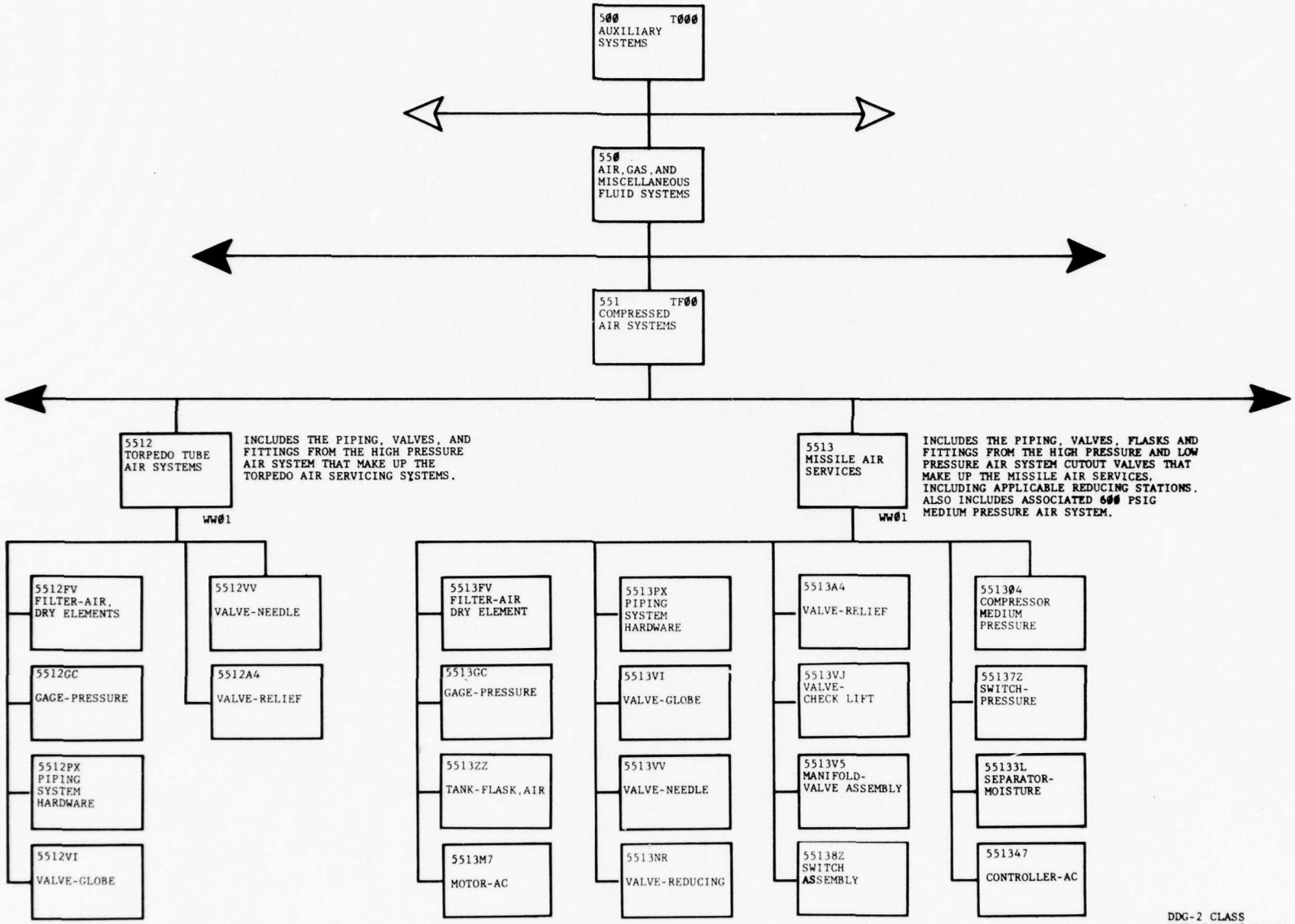
DDG-2 CLASS
PREPARED 10-14-76



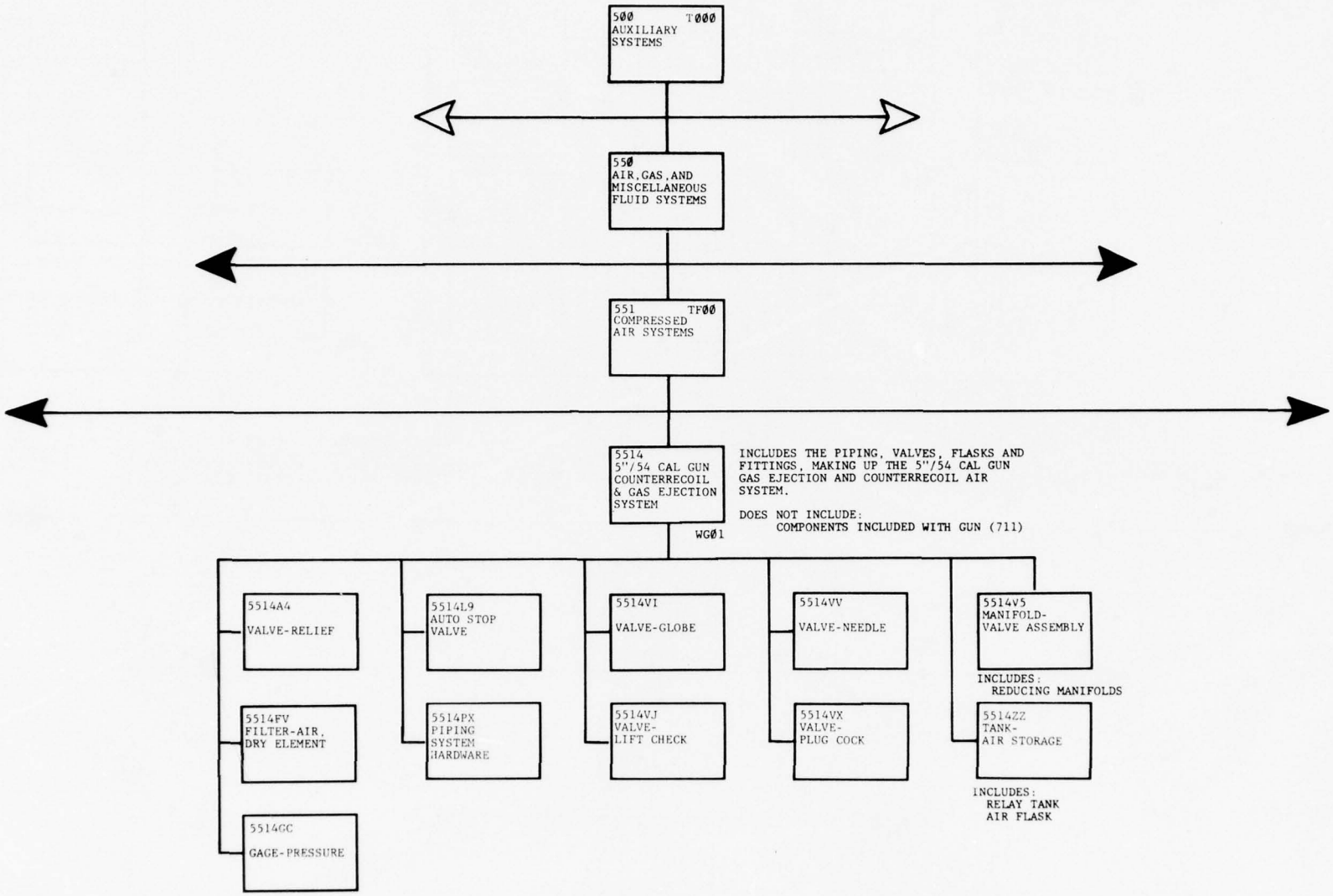
DDG-2 CLASS
PREPARED 10-14-76



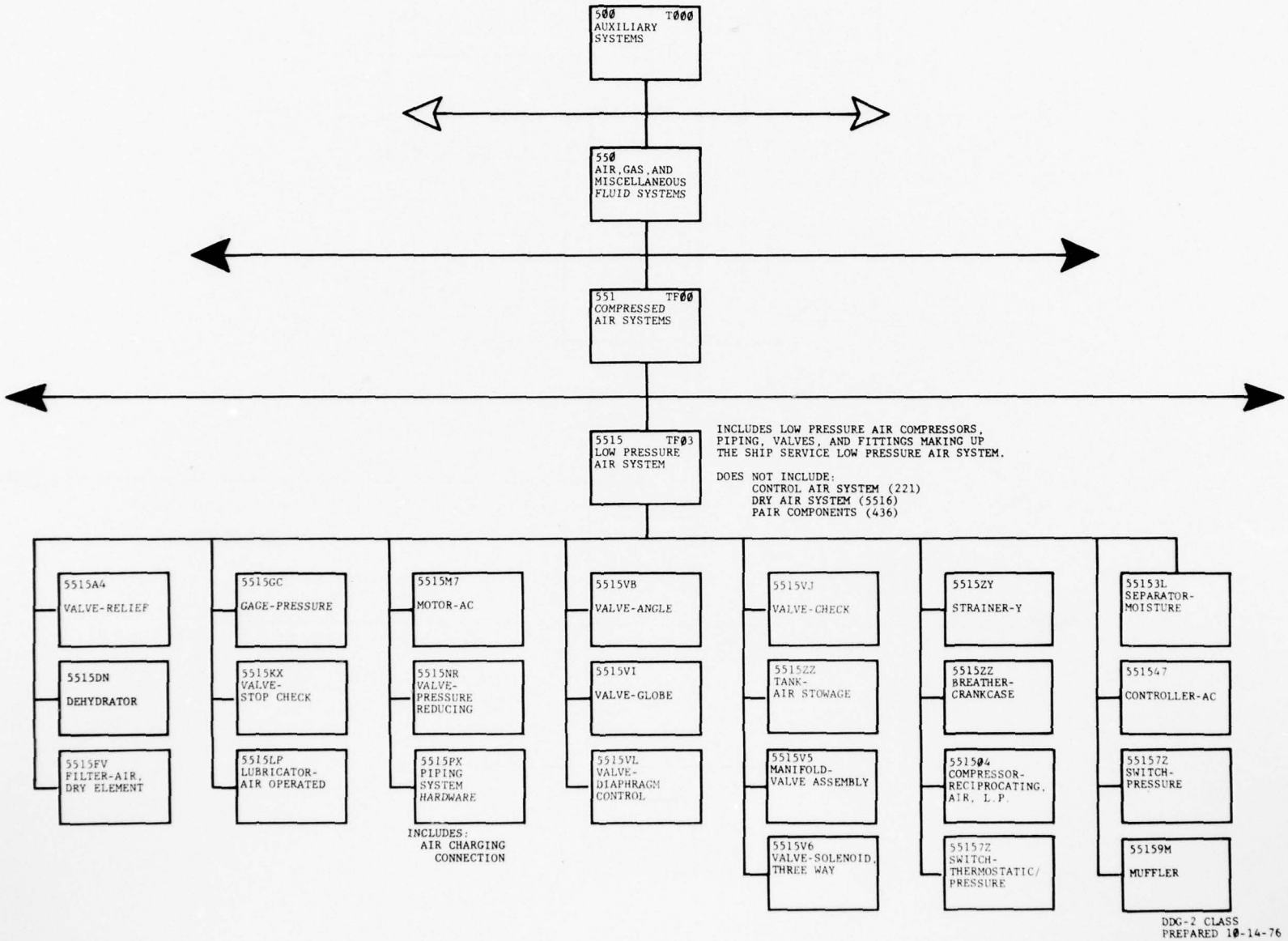
DDG-2 CLASS
PREPARED 10-14-76

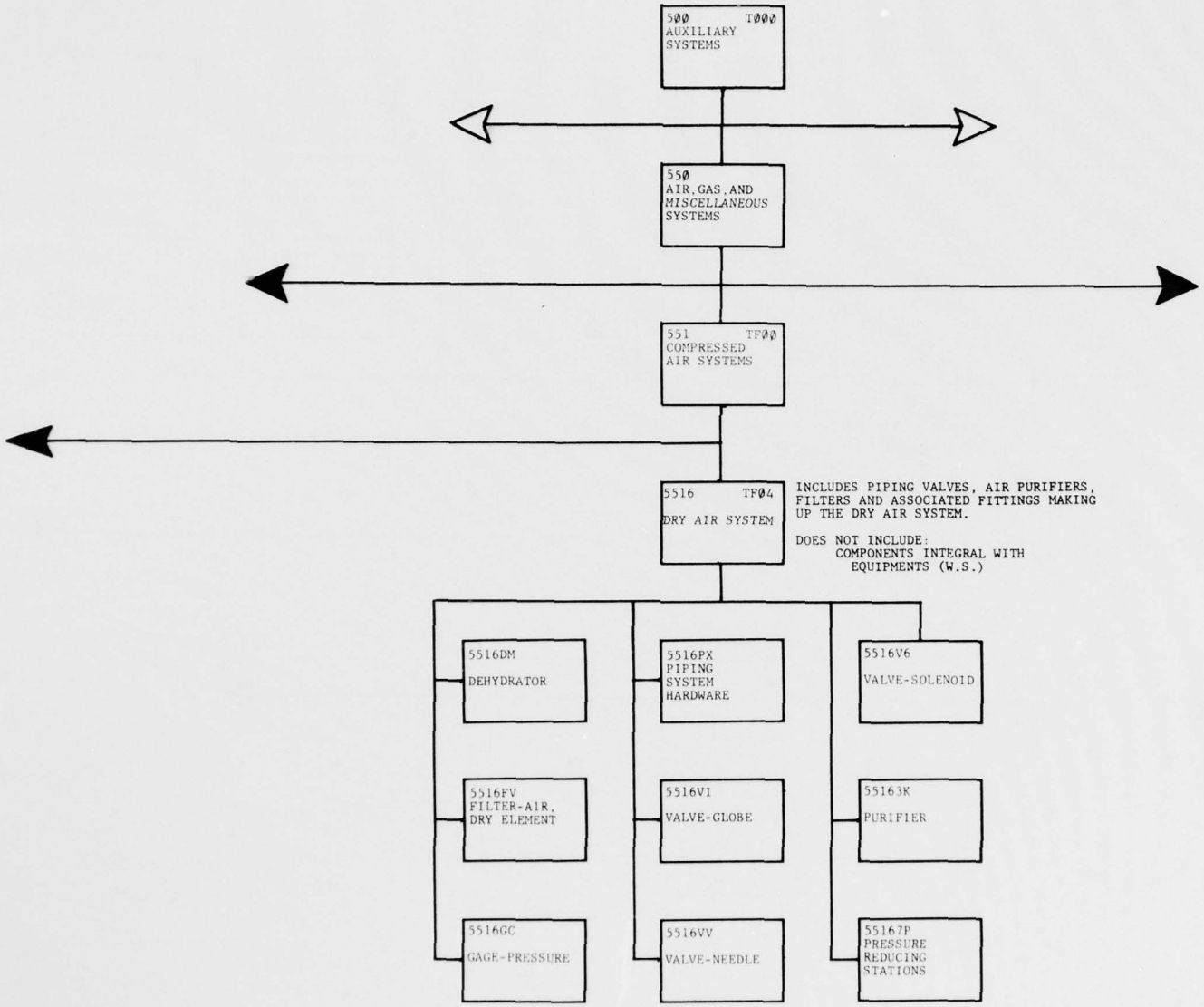


DDG-2 CLASS
PREPARED 10-14-76

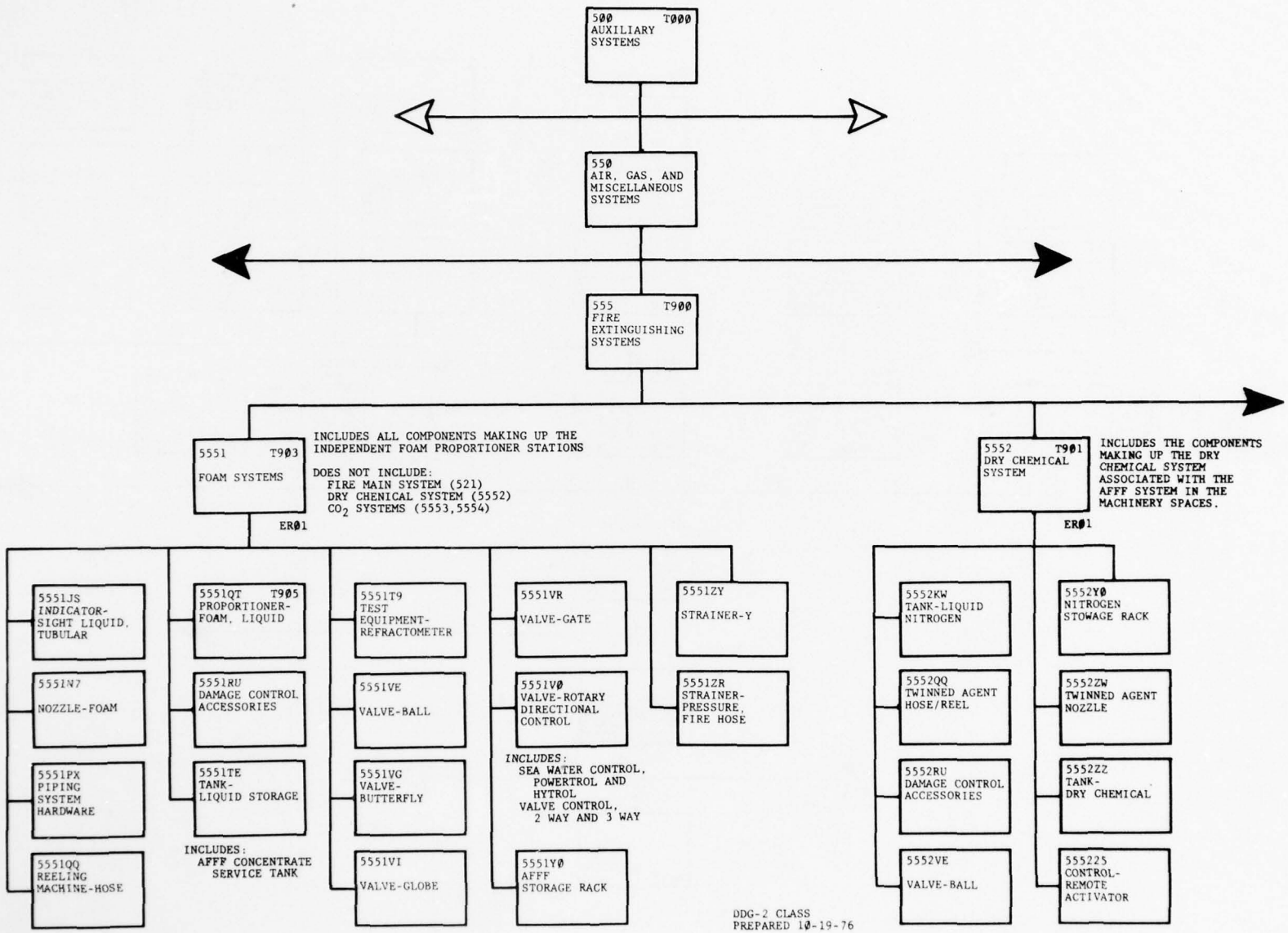


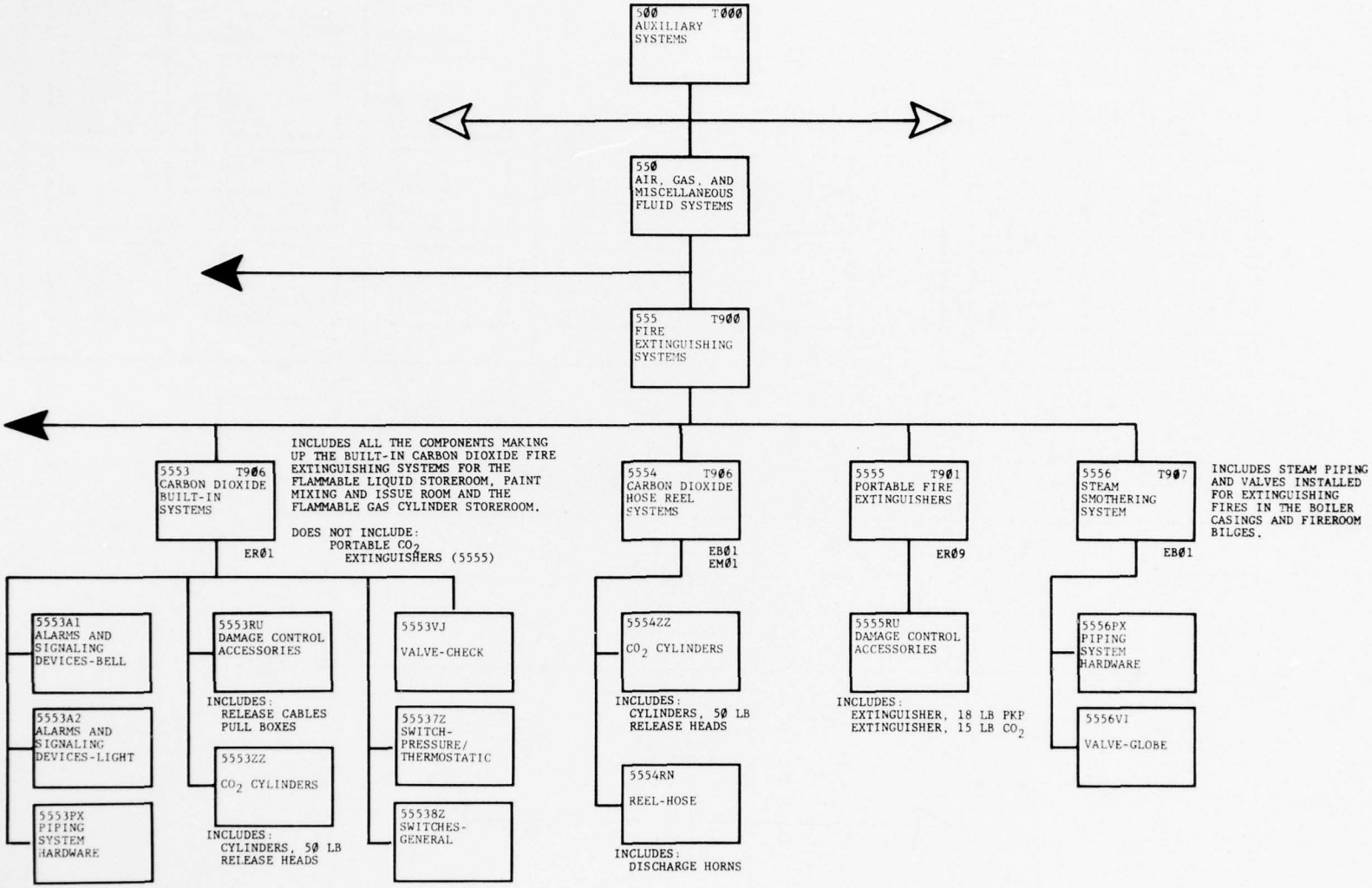
DDG-2 CLASS
PREPARED 10-14-76


500 T000
AUXILIARY SYSTEMS
550
AIR, GAS, AND MISCELLANEOUS FLUID SYSTEMS
551 TF00
COMPRESSED AIR SYSTEMS
5515 TF03
LOW PRESSURE AIR SYSTEM
INCLUDES LOW PRESSURE AIR COMPRESSORS, PIPING, VALVES, AND FITTINGS MAKING UP THE SHIP SERVICE LOW PRESSURE AIR SYSTEM.
DOES NOT INCLUDE:
CONTROL AIR SYSTEM (221)
DRY AIR SYSTEM (5516)
PAIR COMPONENTS (436)
5515A4 VALVE-RELIEF
5515DN DEHYDRATOR
5515FV FILTER-AIR, DRY ELEMENT
5515GC GAGE-PRESSURE
5515KX VALVE-STOP CHECK
5515LP LUBRICATOR-AIR OPERATED
5515M7 MOTOR-AC
5515NR VALVE-PRESSURE REDUCING
5515PX PIPING SYSTEM HARDWARE
INCLUDES: AIR CHARGING CONNECTION
5515VB VALVE-ANGLE
5515VI VALVE-GLOBE
5515VL VALVE-DIAPHRAGM CONTROL
5515VJ VALVE-CHECK
5515ZZ TANK-AIR STOWAGE
5515V5 MANIFOLD-VALVE ASSEMBLY
5515V6 VALVE-SOLENOID, THREE WAY
5515ZY STRAINER-Y
5515ZZ BREATHER-CRANKCASE
551504 COMPRESSOR-RECIPROCATING, AIR, L.P.
55157Z SWITCH-THERMOSTATIC/PRESSURE
55153L SEPARATOR-MOISTURE
551547 CONTROLLER-AC
55157Z SWITCH-PRESSURE
55159M MUFFLER
DDG-2 CLASS
PREPARED 10-14-76

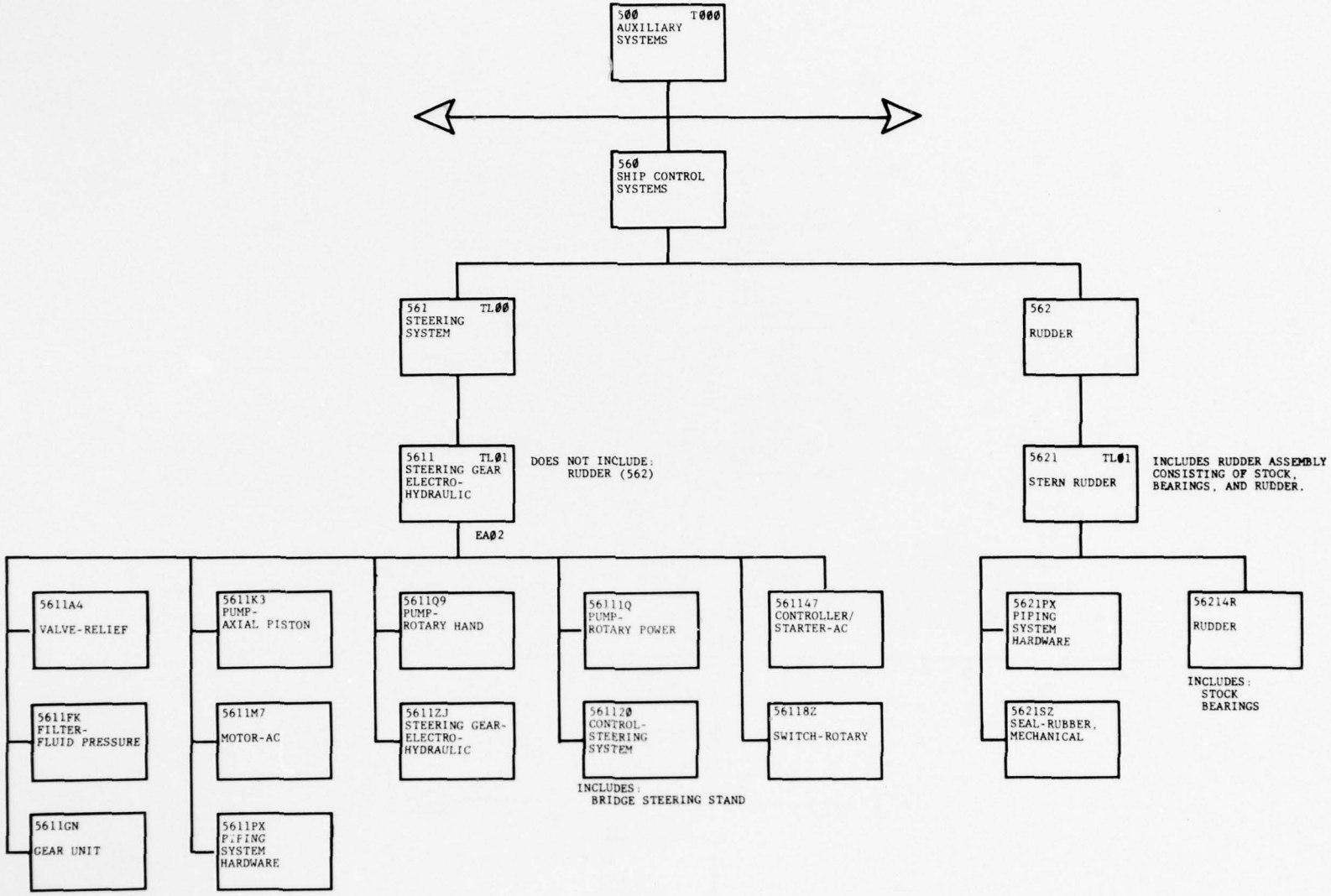


DDG-2 CLASS
PREPARED 10-14-76

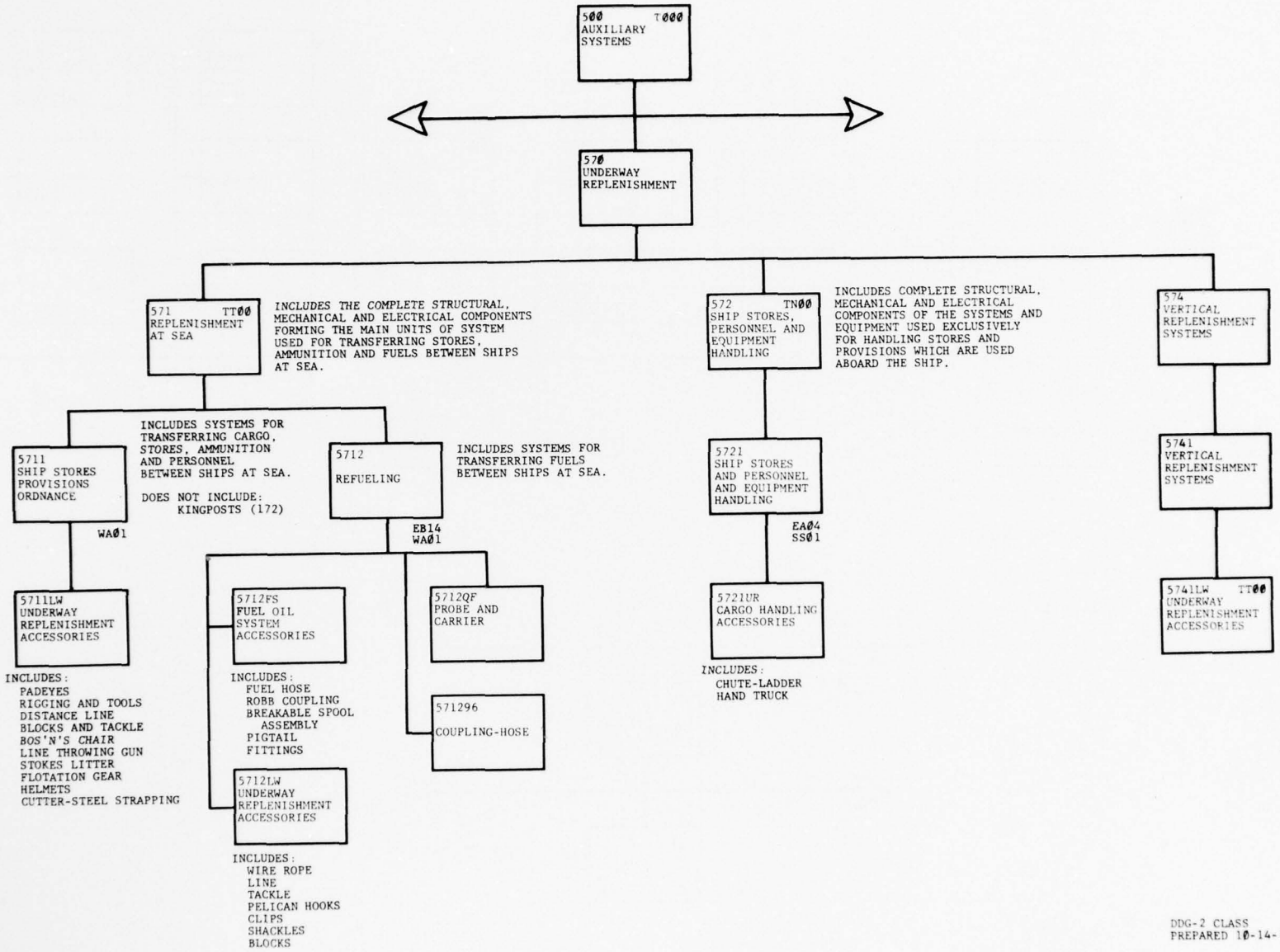

500 T000
AUXILIARY SYSTEMS
550
AIR, GAS, AND MISCELLANEOUS SYSTEMS
555 T900
FIRE EXTINGUISHING SYSTEMS
5551 T903
FOAM SYSTEMS
ER01
INCLUDES ALL COMPONENTS MAKING UP THE INDEPENDENT FOAM PROPORTIONER STATIONS
DOES NOT INCLUDE:
FIRE MAIN SYSTEM (521)
DRY CHENICAL SYSTEM (5552)
CO_2 SYSTEMS (5553,5554)
5552 T901
DRY CHEMICAL SYSTEM
ER01
INCLUDES THE COMPONENTS MAKING UP THE DRY CHEMICAL SYSTEM ASSOCIATED WITH THE AFFF SYSTEM IN THE MACHINERY SPACES.
5551JS INDICATOR-SIGHT LIQUID, TUBULAR
5551N7 NOZZLE-FOAM
5551PX PIPING SYSTEM HARDWARE
5551QQ REELING MACHINE-HOSE
5551QT T905 PROPORTIONER-FOAM, LIQUID
5551RU DAMAGE CONTROL ACCESSORIES
5551TE TANK-LIQUID STORAGE
INCLUDES:
AFFF CONCENTRATE SERVICE TANK
5551T9 TEST EQUIPMENT-REFRACTOMETER
5551VE VALVE-BALL
5551VG VALVE-BUTTERFLY
5551VI VALVE-GLOBE
5551VR VALVE-GATE
5551VØ VALVE-ROTARY DIRECTIONAL CONTROL
INCLUDES:
SEA WATER CONTROL, POWERTROL AND HYTROL
VALVE CONTROL, 2 WAY AND 3 WAY
5551YØ AFFF STORAGE RACK
5551ZY STRAINER-Y
5551ZR STRAINER-PRESSURE, FIRE HOSE
5552KW TANK-LIQUID NITROGEN
5552QQ TWINNED AGENT HOSE/REEL
5552RU DAMAGE CONTROL ACCESSORIES
5552VE VALVE-BALL
5552YØ NITROGEN STOWAGE RACK
5552ZW TWINNED AGENT NOZZLE
5552ZZ TANK-DRY CHEMICAL
555225 CONTROL-REMOTE ACTIVATOR
DDG-2 CLASS
PREPARED 1Ø-19-76



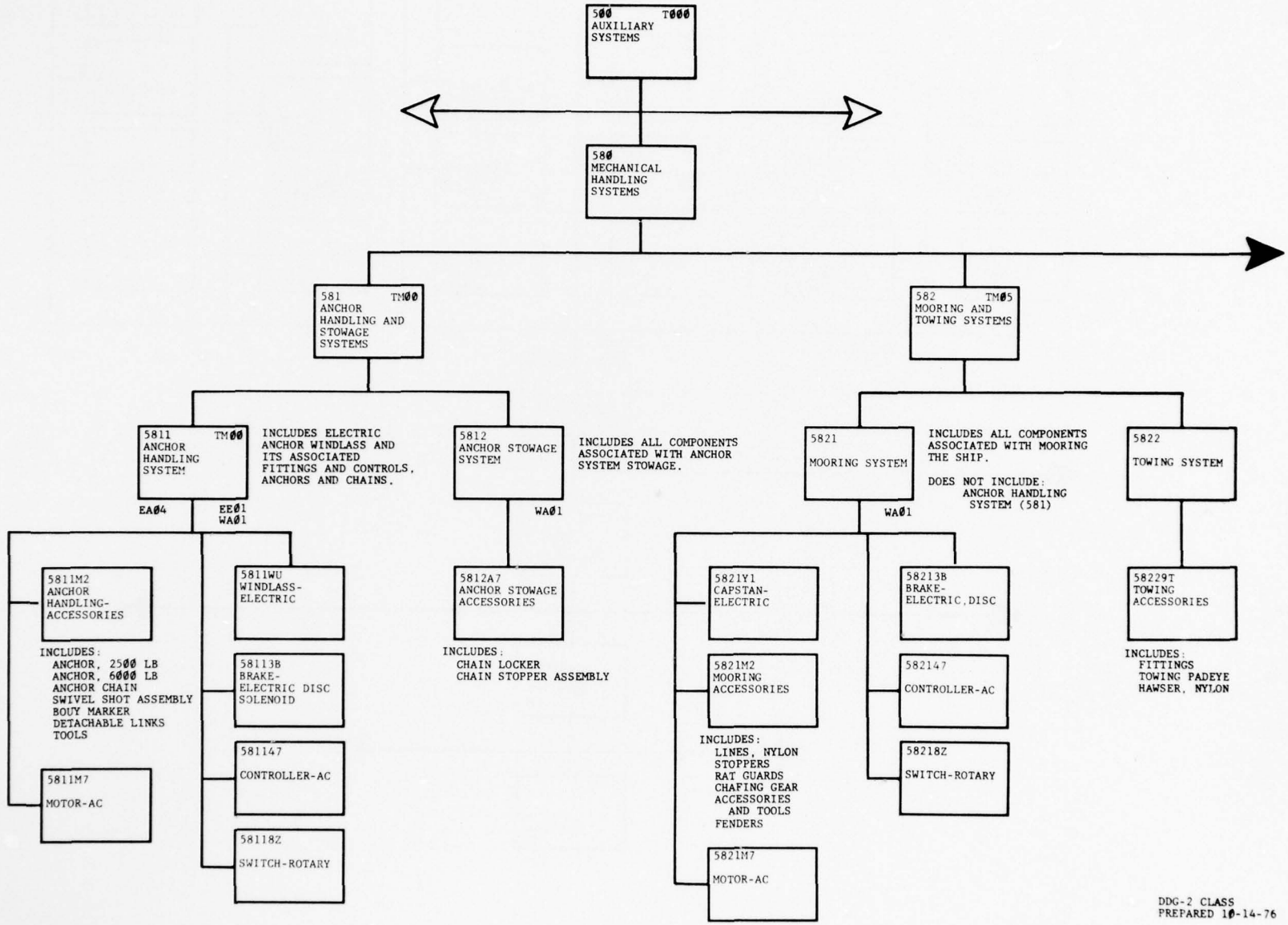
DDG-2 CLASS
PREPARED 10-14-76



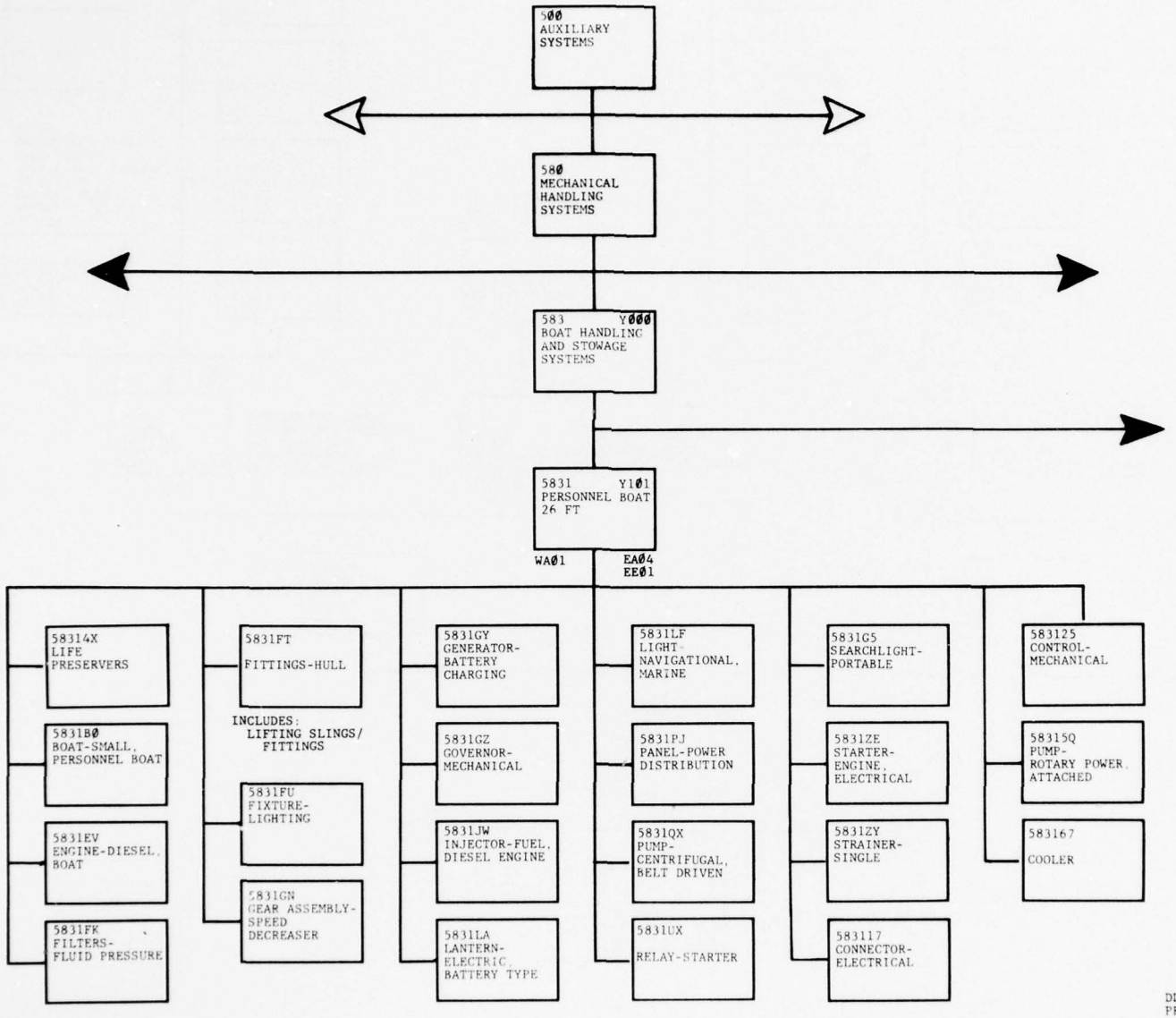
DDG-2 CLASS
PREPARED 10-14-76



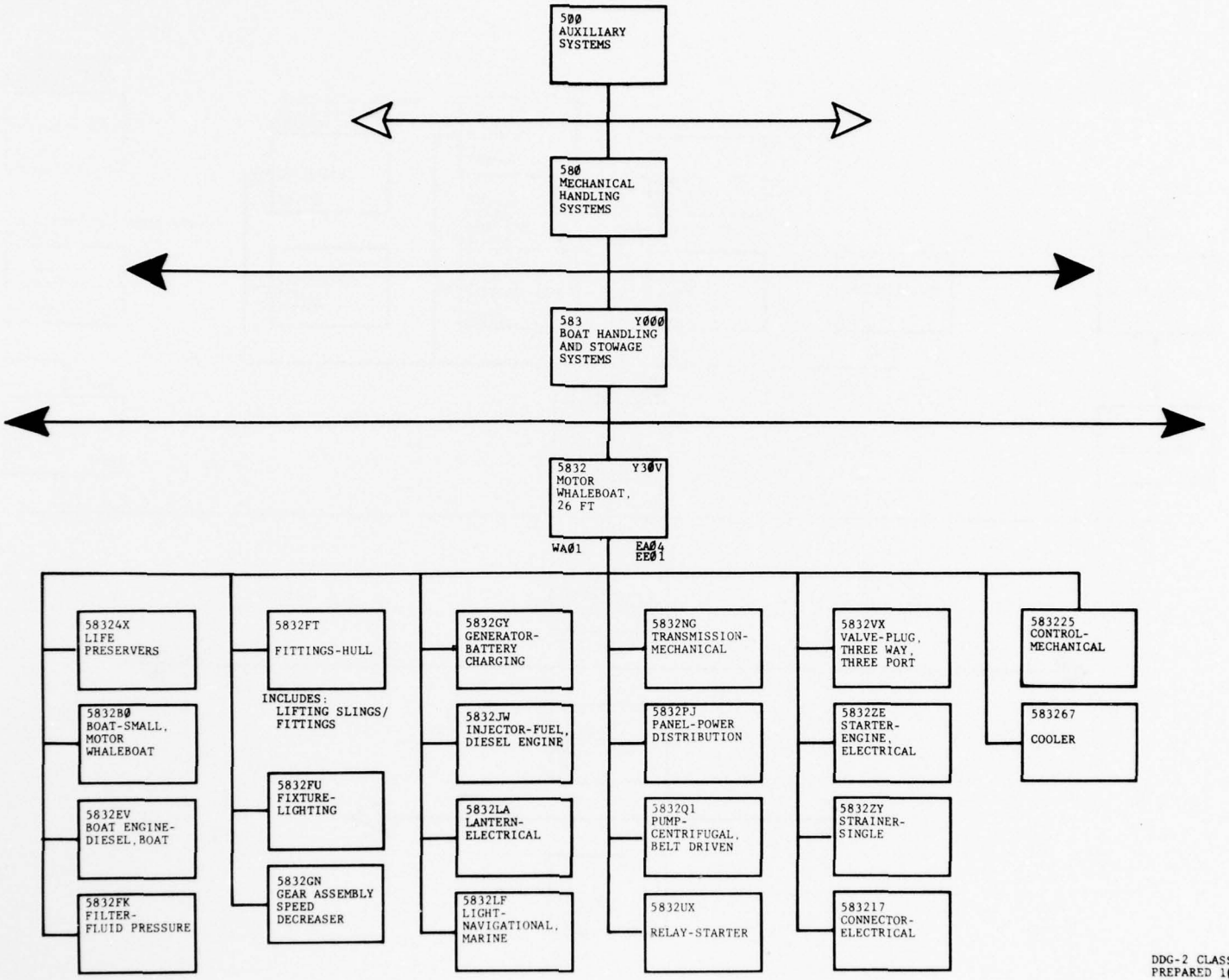
DDG-2 CLASS
PREPARED 10-14-76



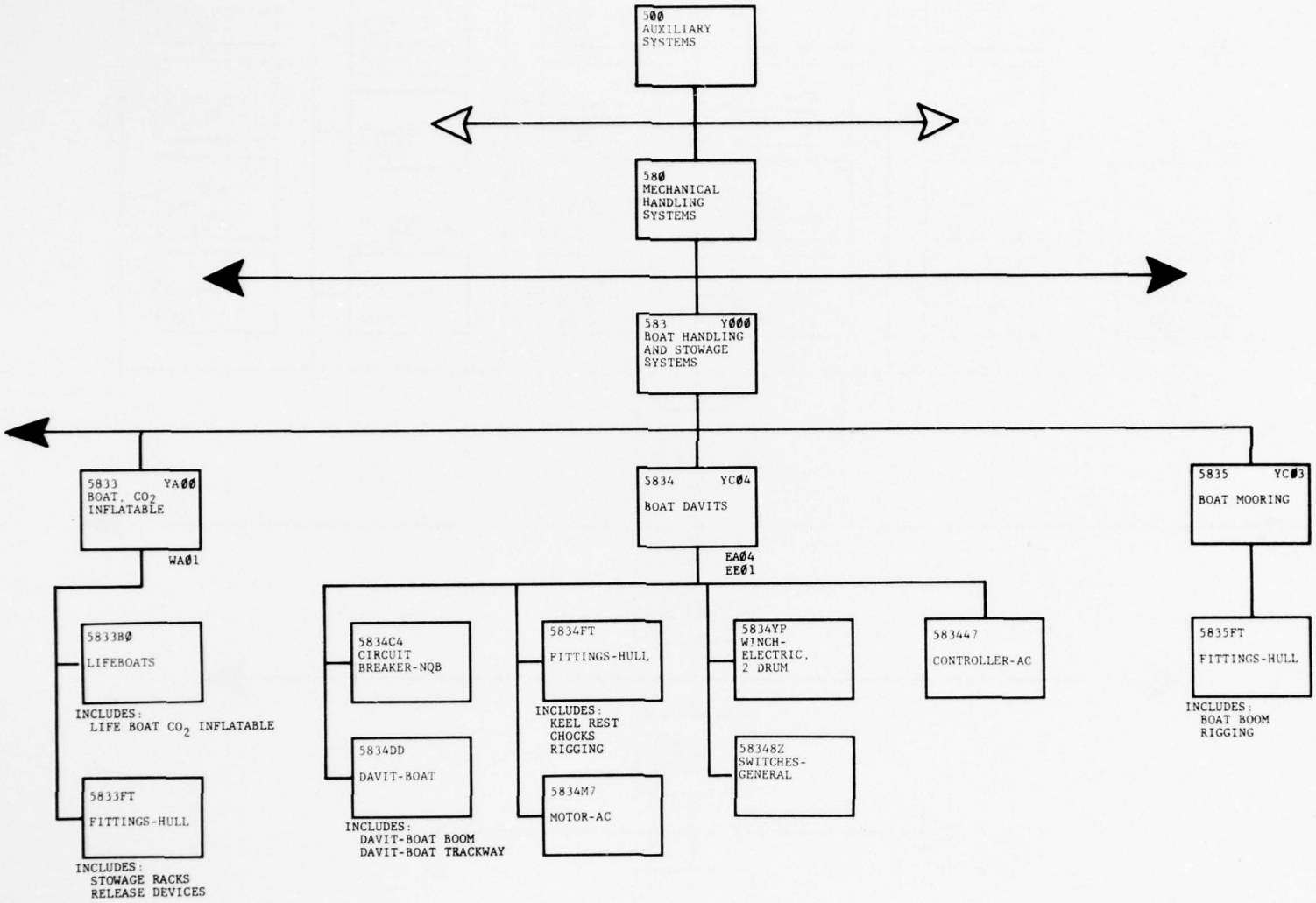
DDG-2 CLASS
PREPARED 10-14-76



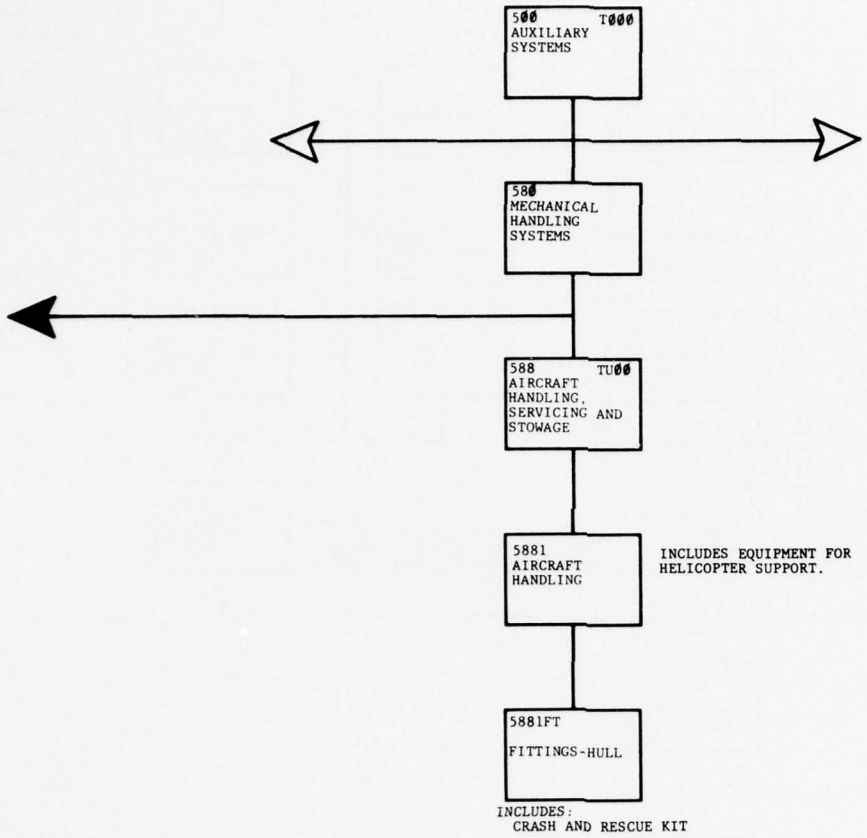
DDG-2 CLASS
PREPARED 10-14-76



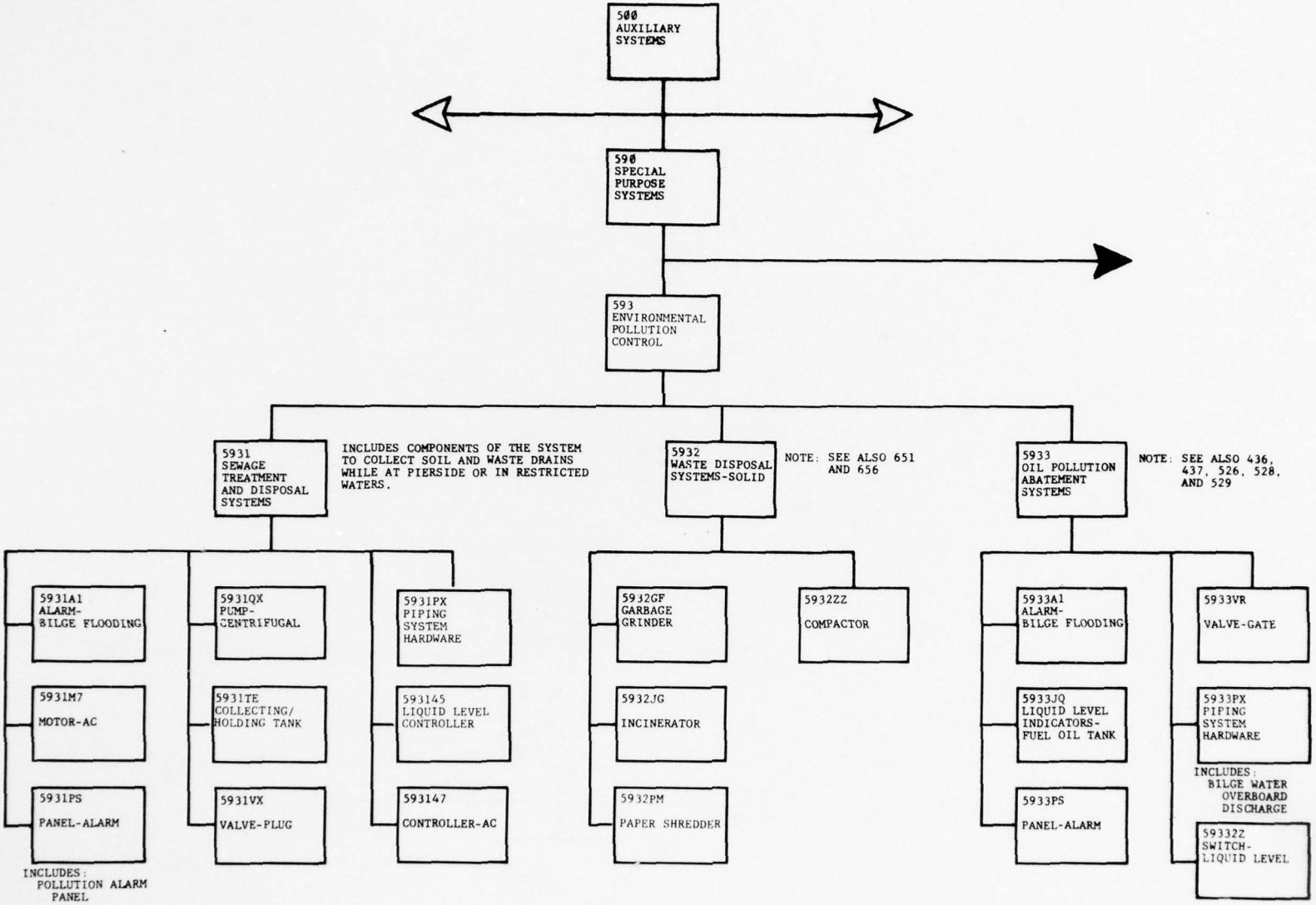
DDG-2 CLASS
PREPARED 10-14-76



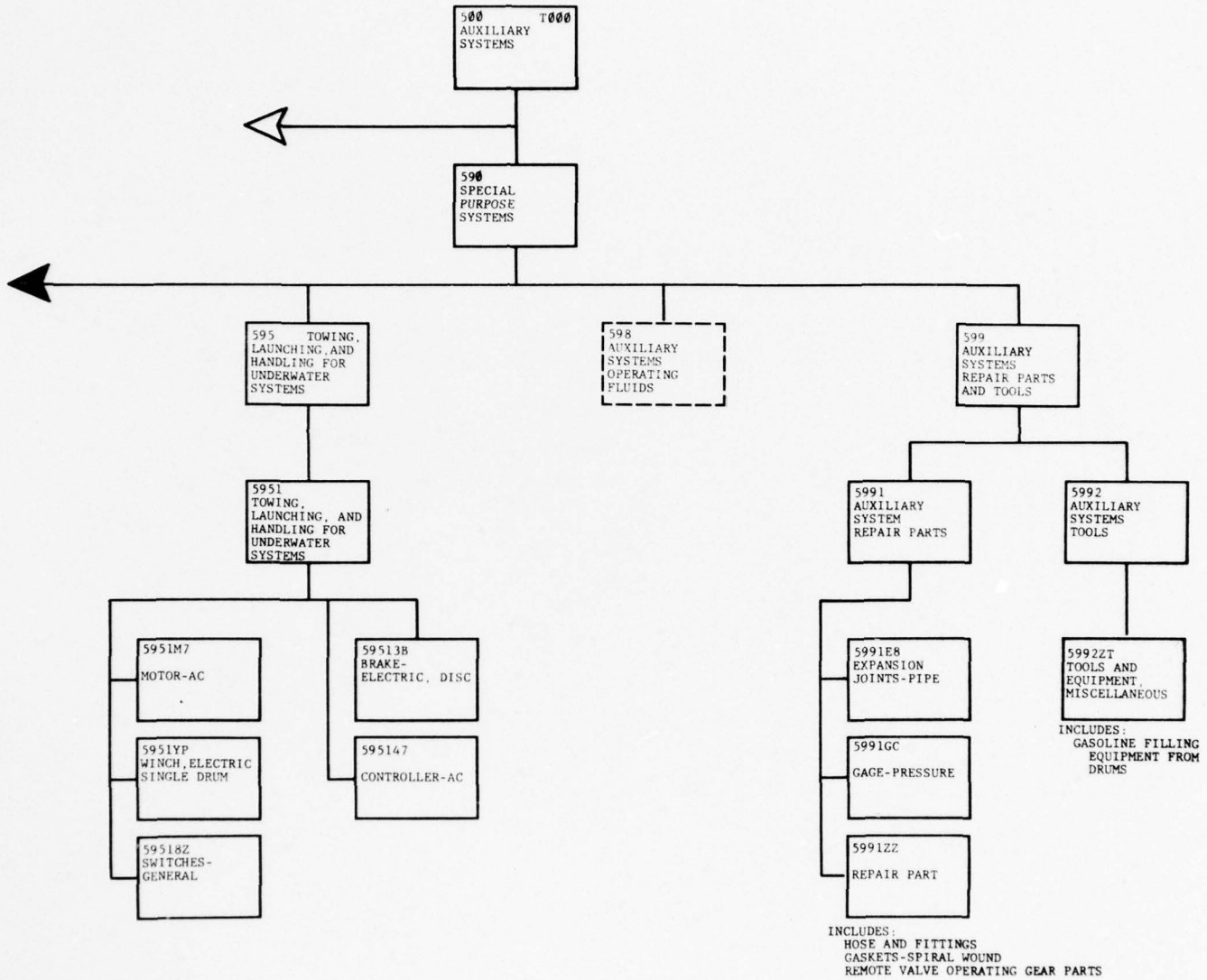
DDG-2 CLASS
PREPARED 10-14-76



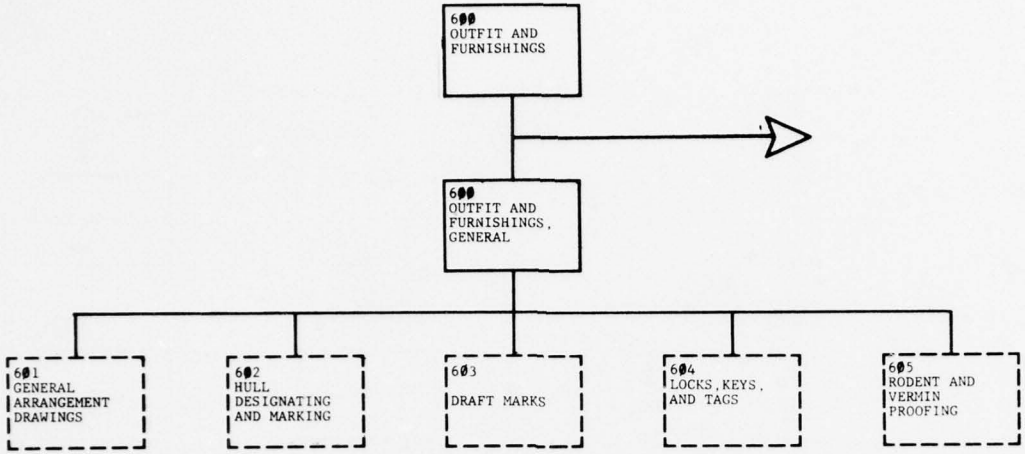
DDG-2 CLASS
PREPARED 10-14-76



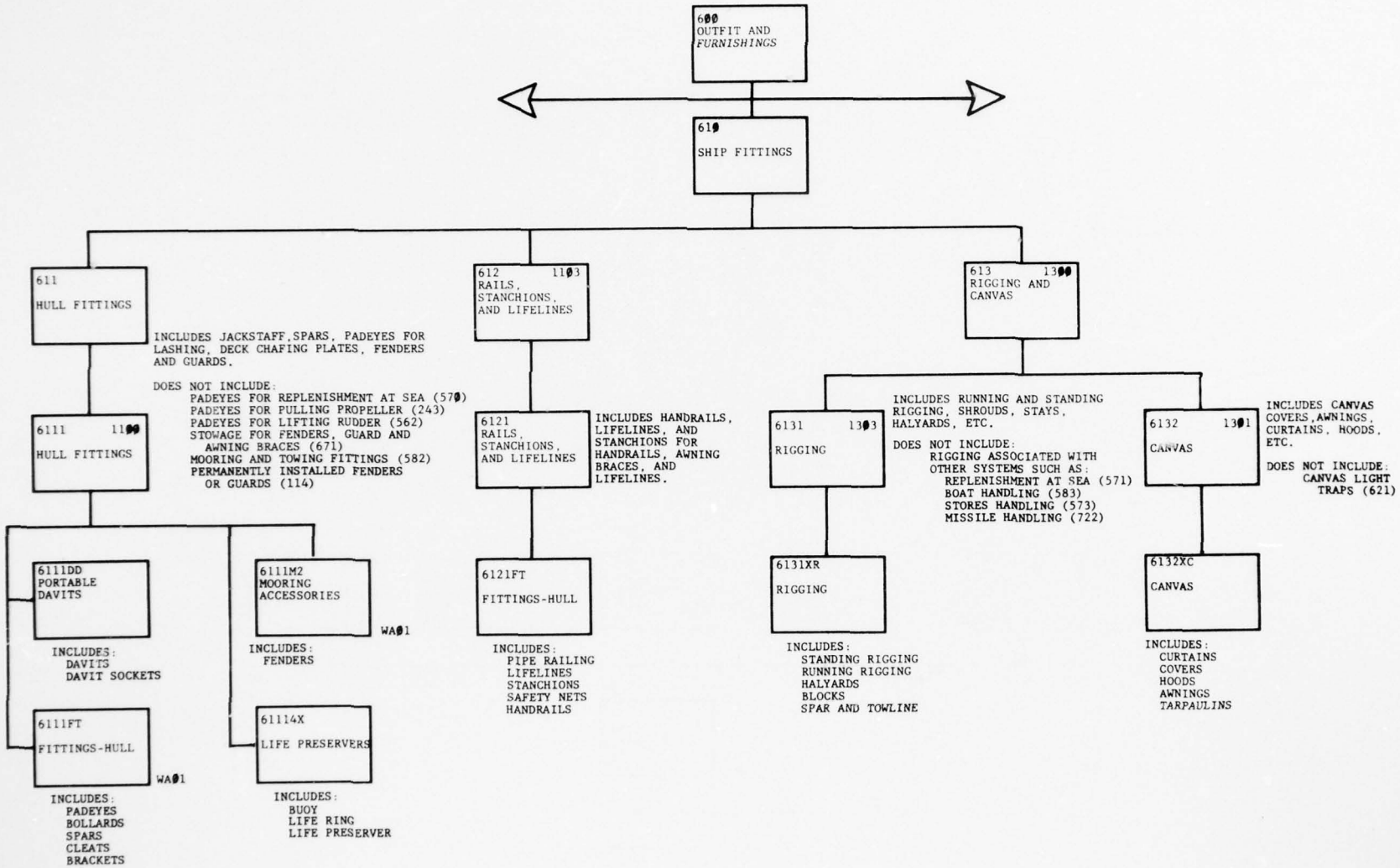
DDG-2 CLASS
PREPARED 10-14-76



DDG-2 CLASS
PREPARED 10-14-76



DDG-2 CLASS
PREPARED 10-26-76



DDG-2 CLASS
PREPARED 10-26-76

AD-A051 777 ARINC RESEARCH CORP ANNAPOLIS MD F/G 13/10
SHIP SYSTEMS DEFINITION AND INDEX (SWBS STAGING DIAGRAMS) FOR D--ETC(U)
NOV 76 N00140-74-D-0090
UNCLASSIFIED 1237-01-1-1472 NL

3 OF 3
AD
A051 777

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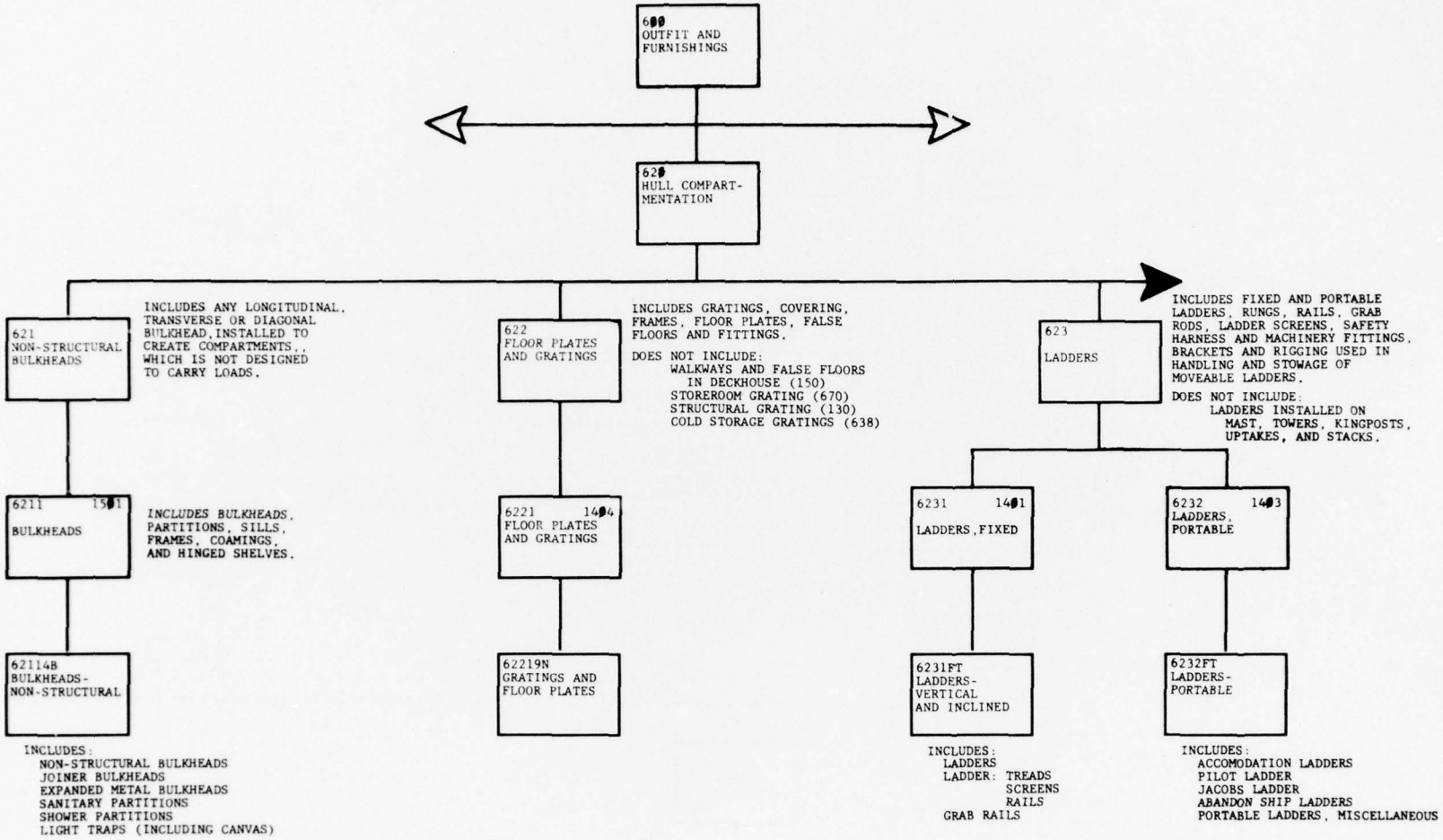

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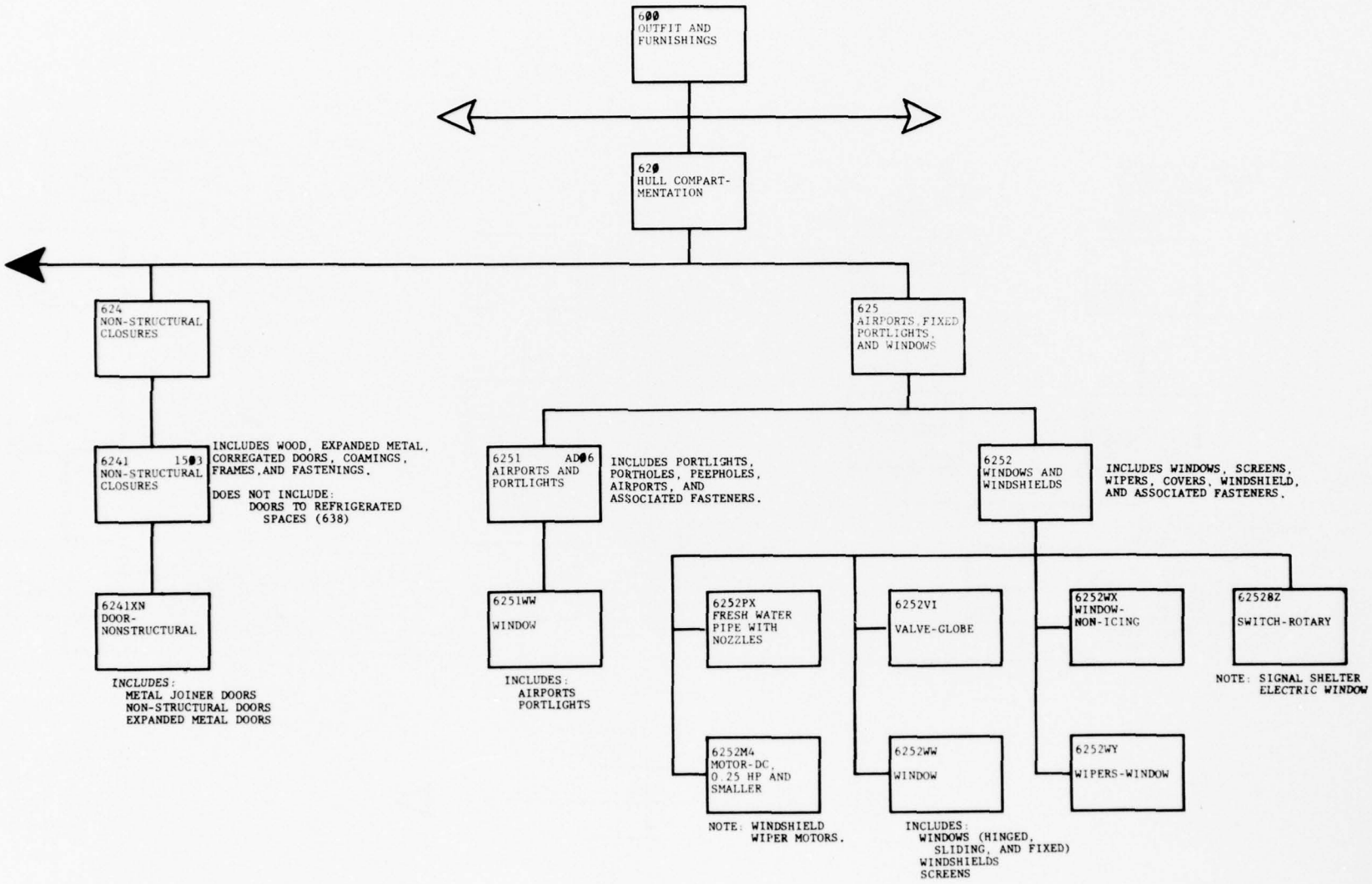
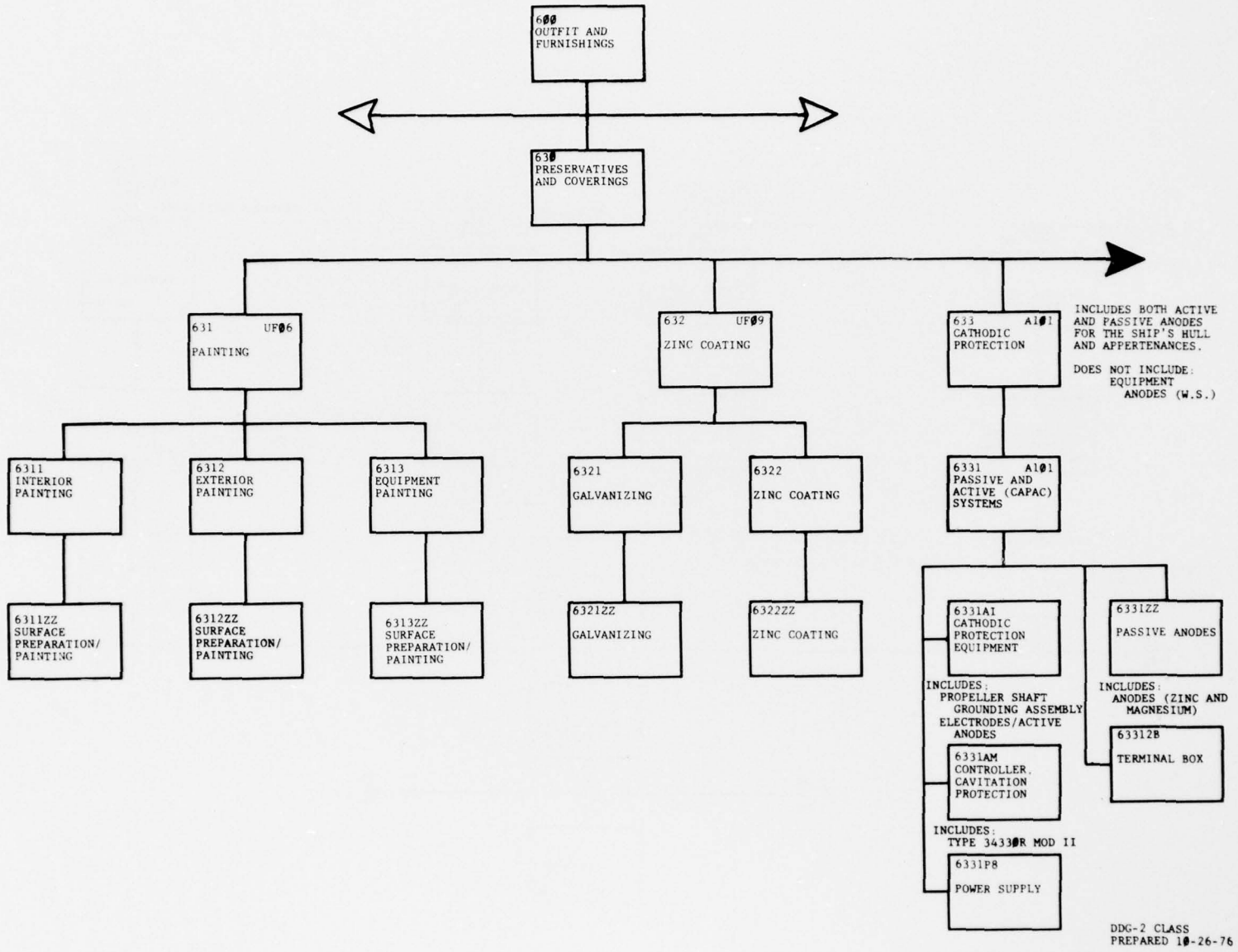
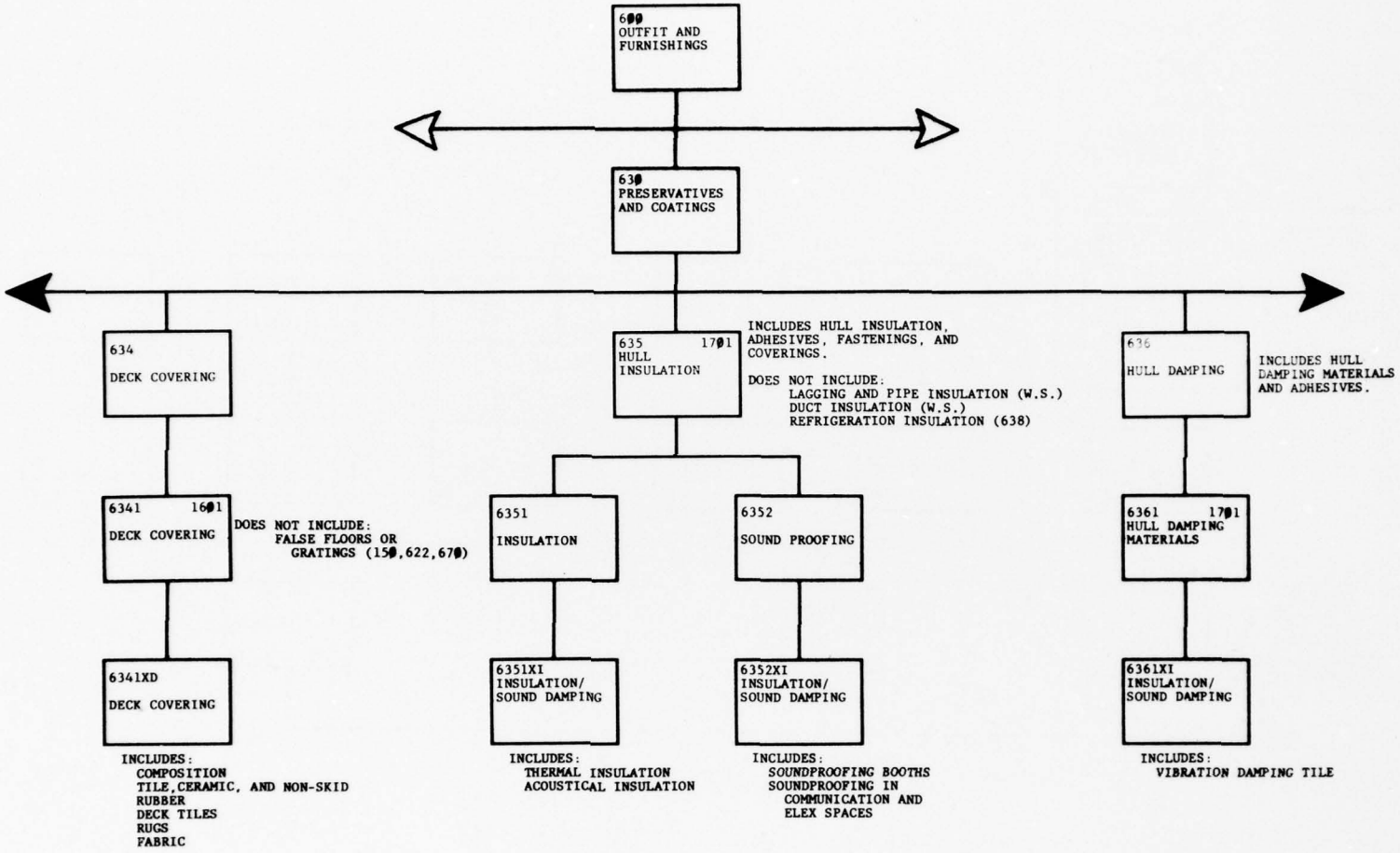
PREPARED 10-26-76

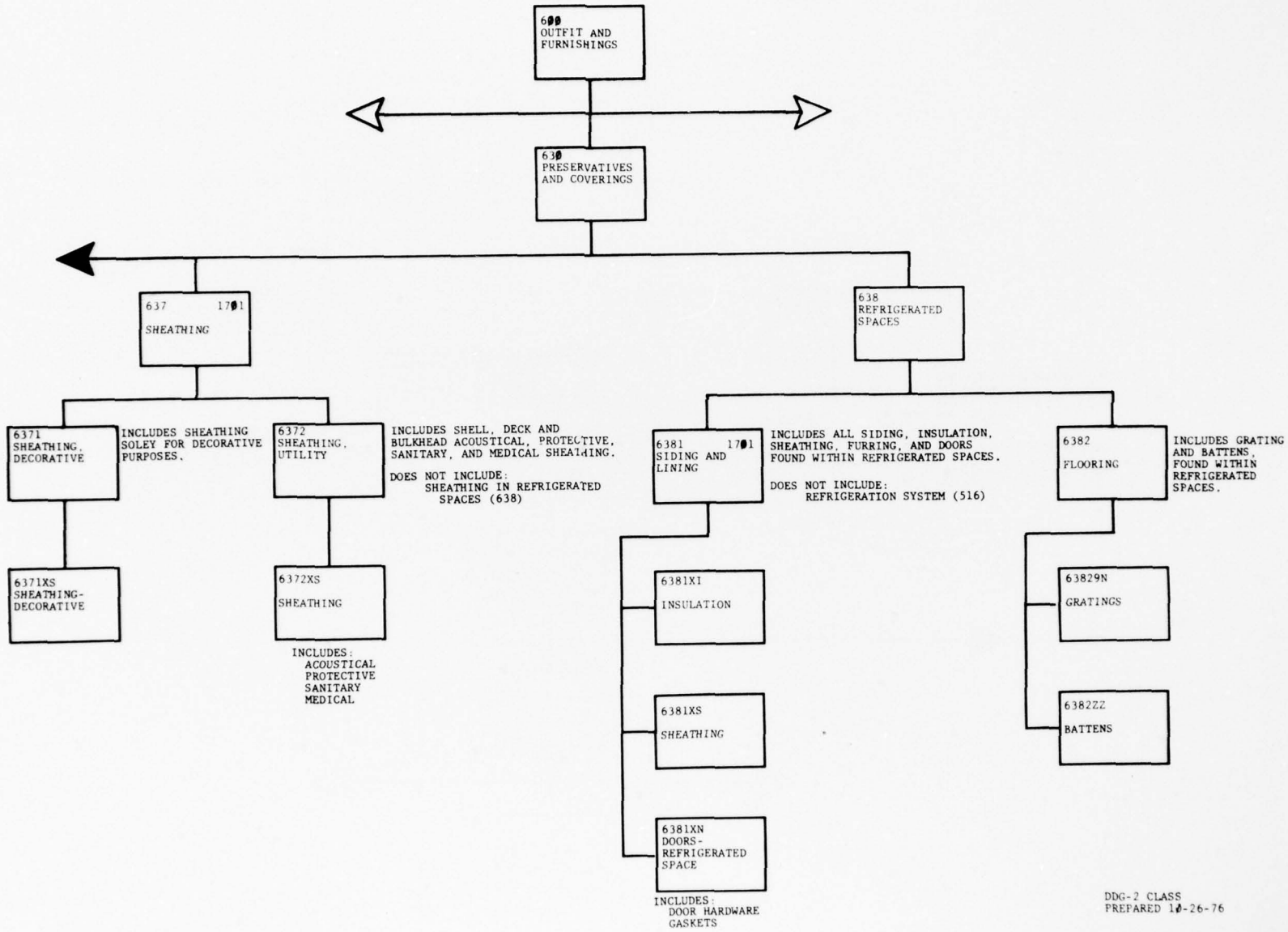


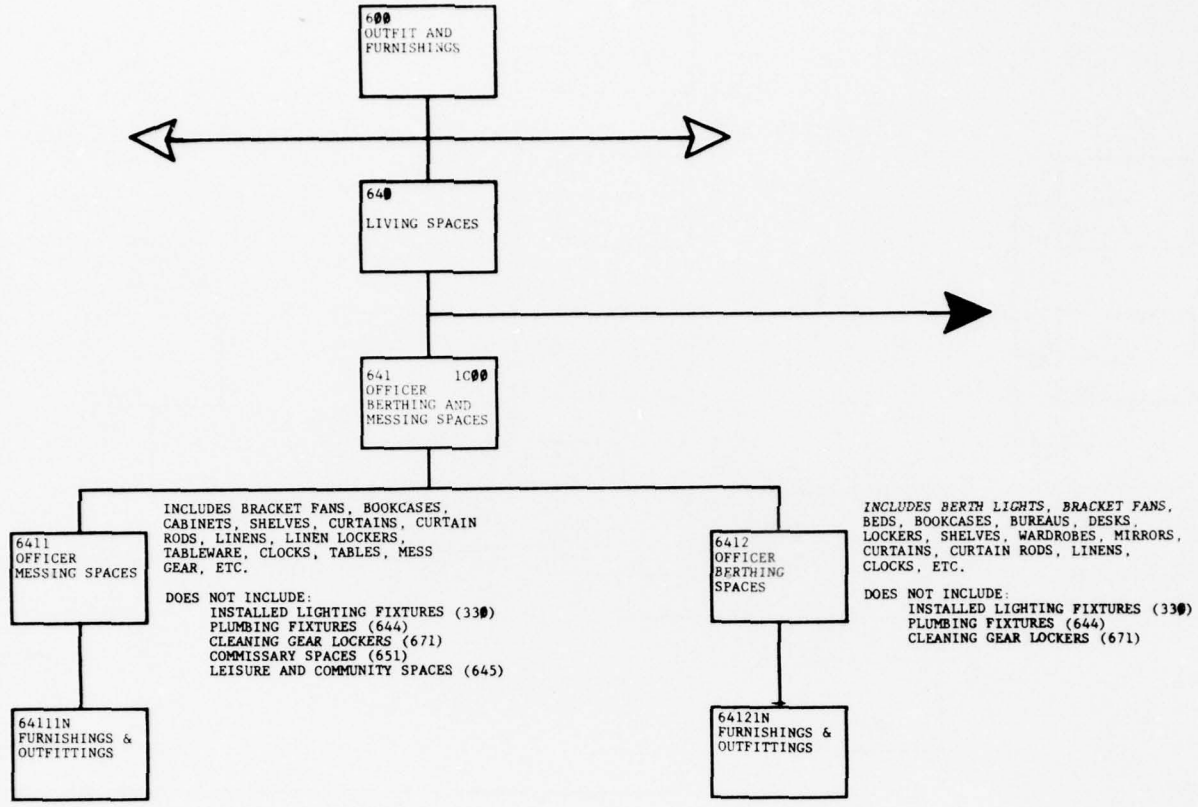
DDG-2 CLASS
PREPARED 10-26-76


600
OUTFIT AND FURNISHINGS
630
PRESERVATIVES AND COVERINGS
631 UF06
PAINTING
632 UF09
ZINC COATING
633 A101
CATHODIC PROTECTION
INCLUDES BOTH ACTIVE AND PASSIVE ANODES FOR THE SHIP'S HULL AND APPERTENANCES.
DOES NOT INCLUDE: EQUIPMENT ANODES (W.S.)
6311
INTERIOR PAINTING
6312
EXTERIOR PAINTING
6313
EQUIPMENT PAINTING
6321
GALVANIZING
6322
ZINC COATING
6331 A101
PASSIVE AND ACTIVE (CAPAC) SYSTEMS
6311ZZ
SURFACE PREPARATION/ PAINTING
6312ZZ
SURFACE PREPARATION/ PAINTING
6313ZZ
SURFACE PREPARATION/ PAINTING
6321ZZ
GALVANIZING
6322ZZ
ZINC COATING
6331AI
CATHODIC PROTECTION EQUIPMENT
INCLUDES:
PROPELLER SHAFT GROUNDING ASSEMBLY
ELECTRODES/ACTIVE ANODES
6331AM
CONTROLLER, CAVITATION PROTECTION
INCLUDES:
TYPE 34330R MOD II
6331P8
POWER SUPPLY
6331ZZ
PASSIVE ANODES
INCLUDES:
ANODES (ZINC AND MAGNESIUM)
63312B
TERMINAL BOX
DDG-2 CLASS
PREPARED 10-26-76

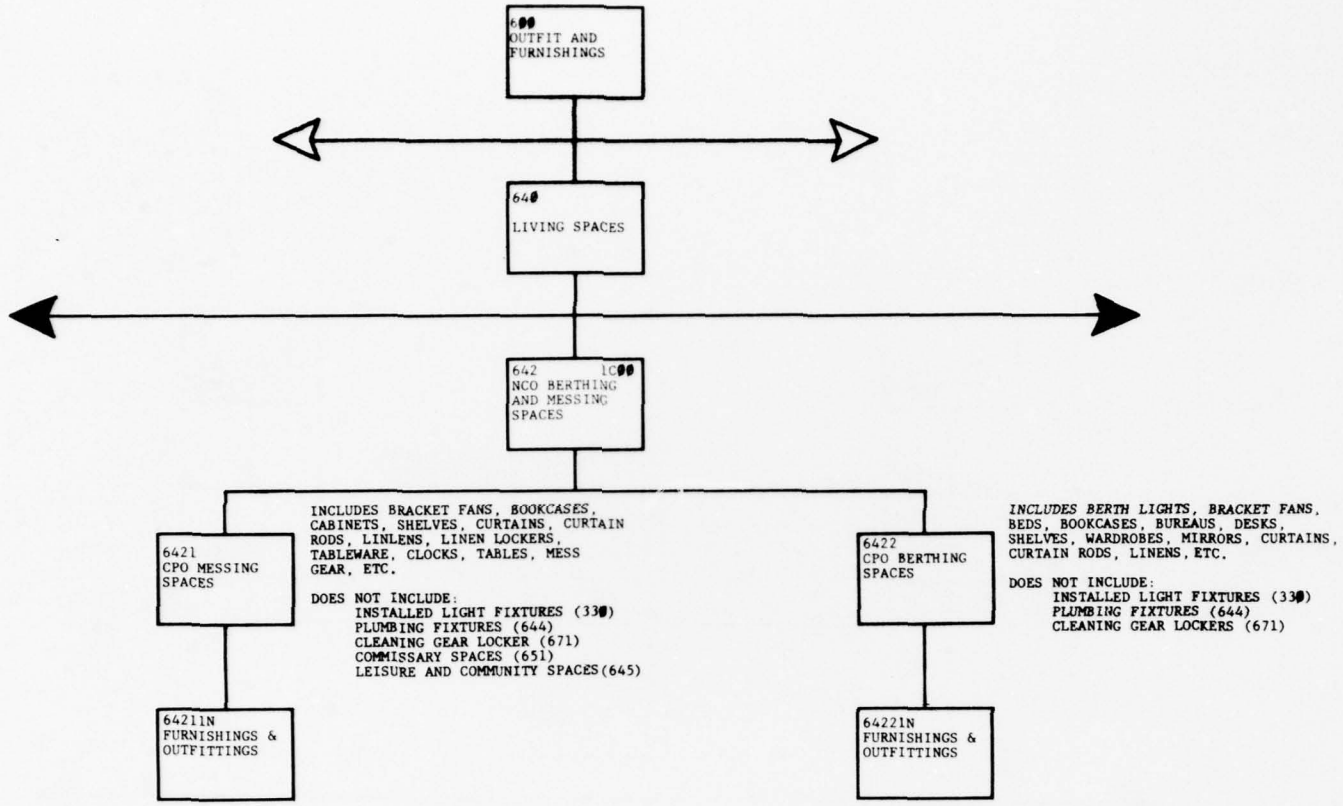


DDG-2 CLASS
PREPARED 10-26-76

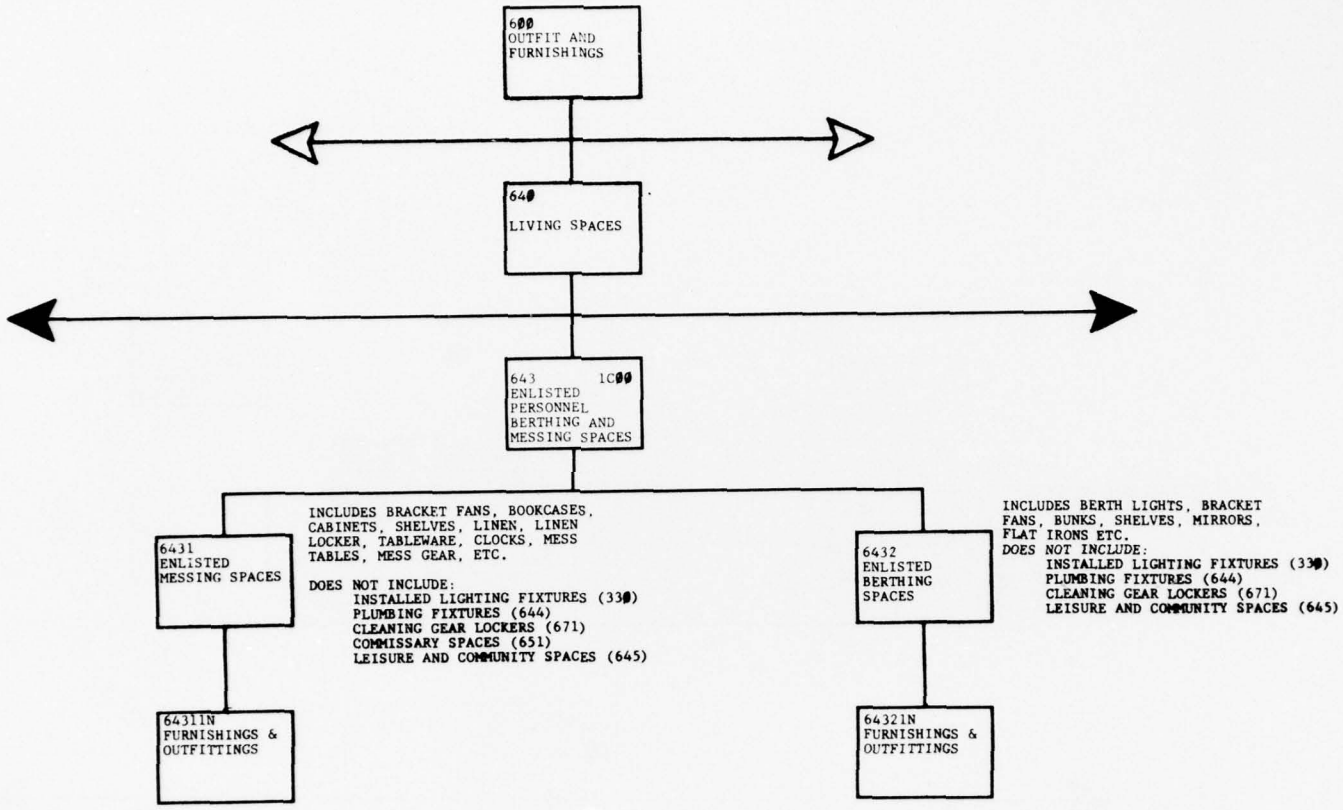

600
OUTFIT AND FURNISHINGS
630
PRESERVATIVES AND COVERINGS
637 1701
SHEATHING
638
REFRIGERATED SPACES
6371
SHEATHING, DECORATIVE
INCLUDES SHEATHING SOLEY FOR DECORATIVE PURPOSES.
6372
SHEATHING, UTILITY
INCLUDES SHELL, DECK AND BULKHEAD ACOUSTICAL, PROTECTIVE, SANITARY, AND MEDICAL SHEATHING.
DOES NOT INCLUDE: SHEATHING IN REFRIGERATED SPACES (638)
6381 1701
SIDING AND LINING
INCLUDES ALL SIDING, INSULATION, SHEATHING, FURRING, AND DOORS FOUND WITHIN REFRIGERATED SPACES.
DOES NOT INCLUDE: REFRIGERATION SYSTEM (516)
6382
FLOORING
INCLUDES GRATING AND BATTENS, FOUND WITHIN REFRIGERATED SPACES.
6371XS
SHEATHING-DECORATIVE
6372XS
SHEATHING
INCLUDES: ACOUSTICAL PROTECTIVE SANITARY MEDICAL
6381XI
INSULATION
6381XS
SHEATHING
6381XN
DOORS-REFRIGERATED SPACE
INCLUDES: DOOR HARDWARE GASKETS
63829N
GRATINGS
6382ZZ
BATTENS
DDG-2 CLASS
PREPARED 10-26-76



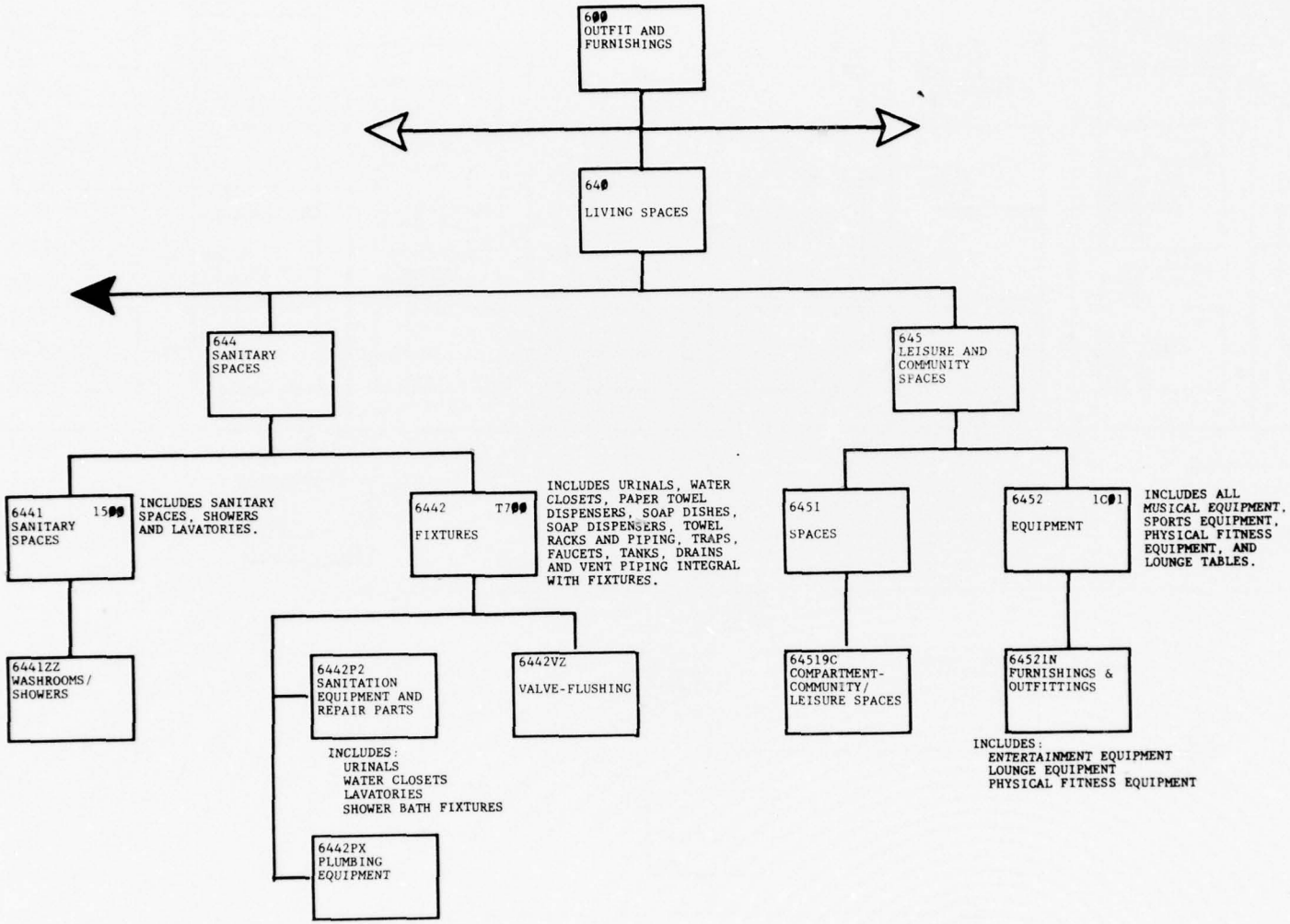
DDG-2 CLASS
PREPARED 10-26-76



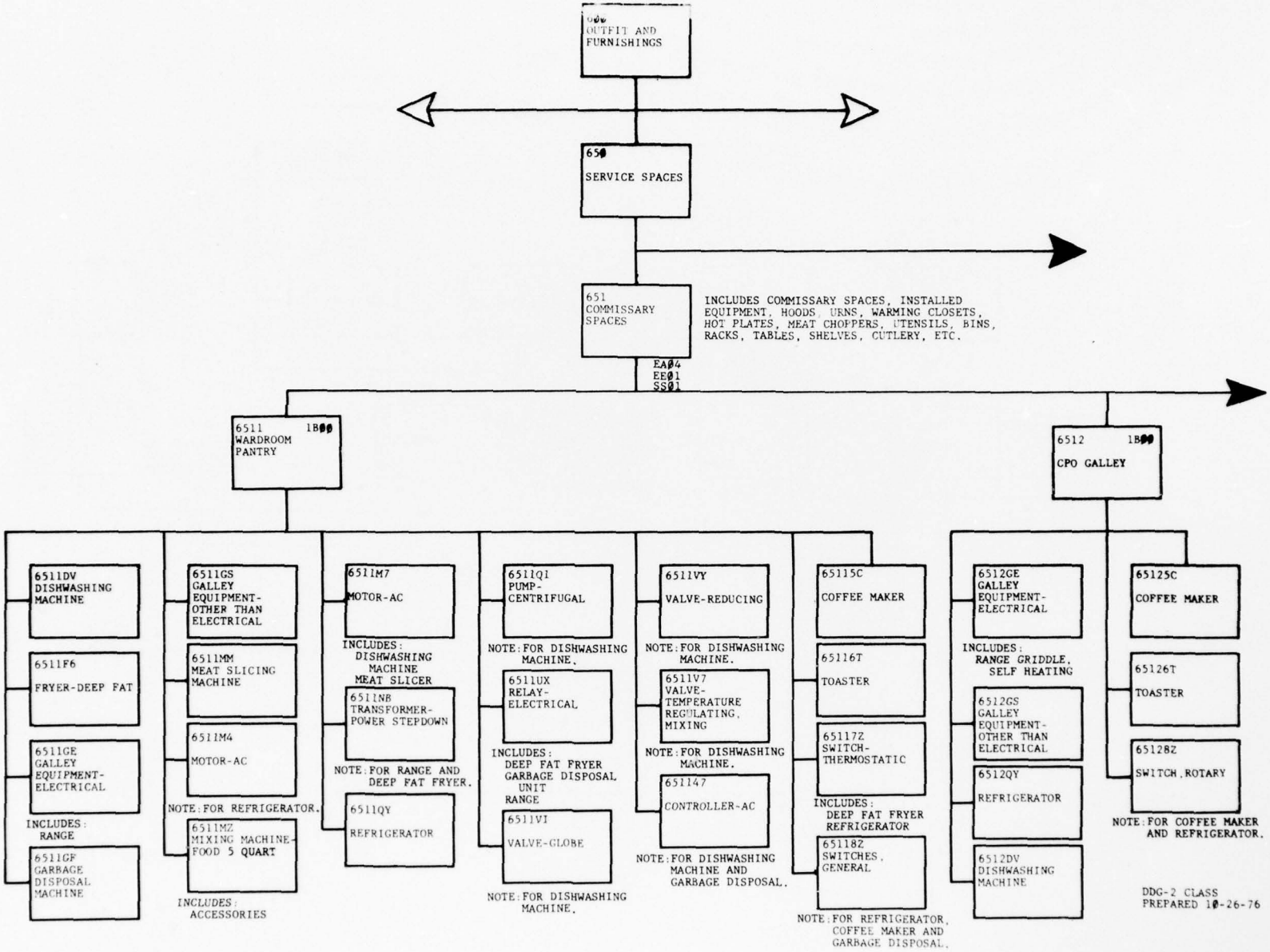
DDG-2 CLASS
PREPARED 10-26-76

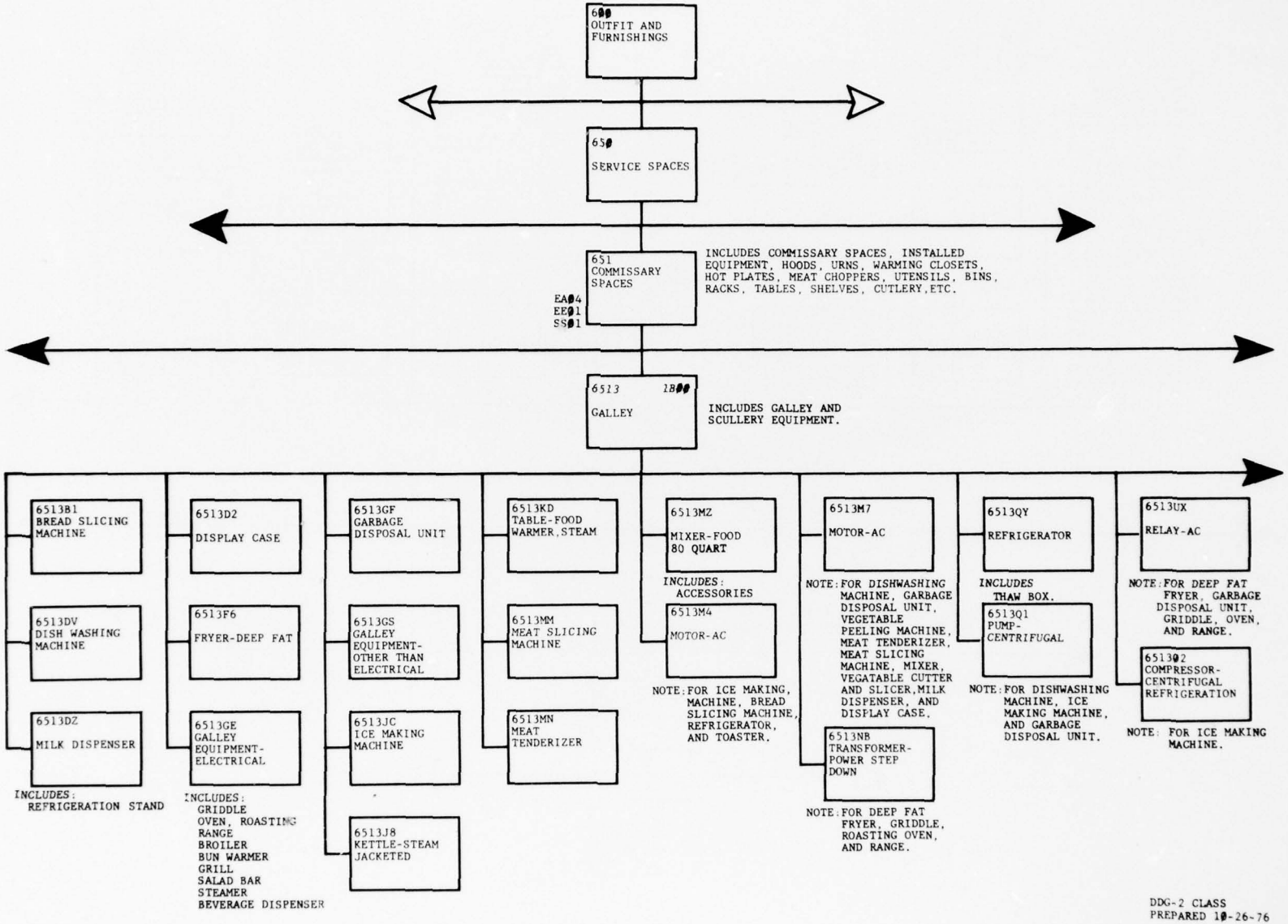


DDG-2 CLASS
PREPARED 10-26-76

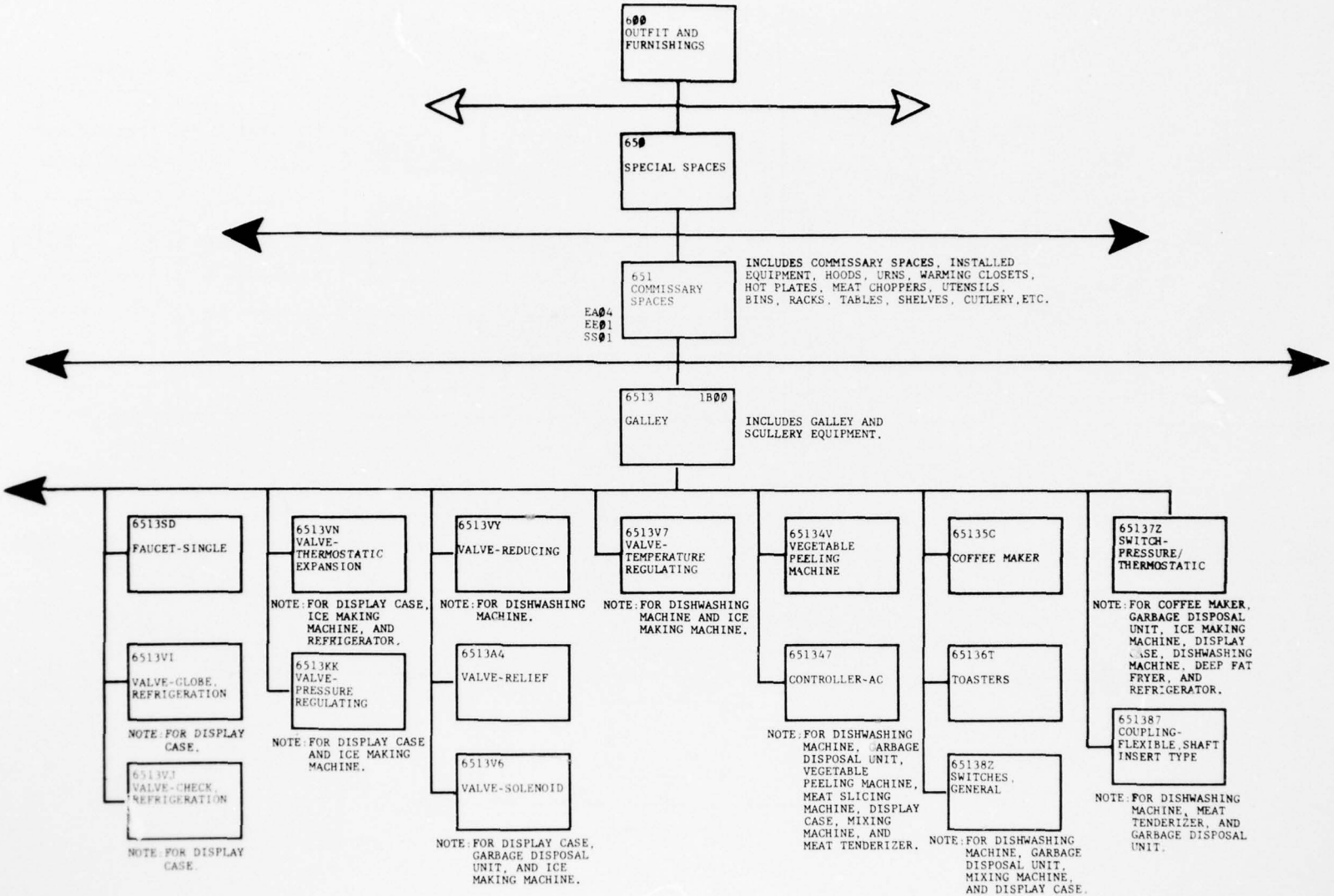


DDG-2 CLASS
PREPARED 10-26-76

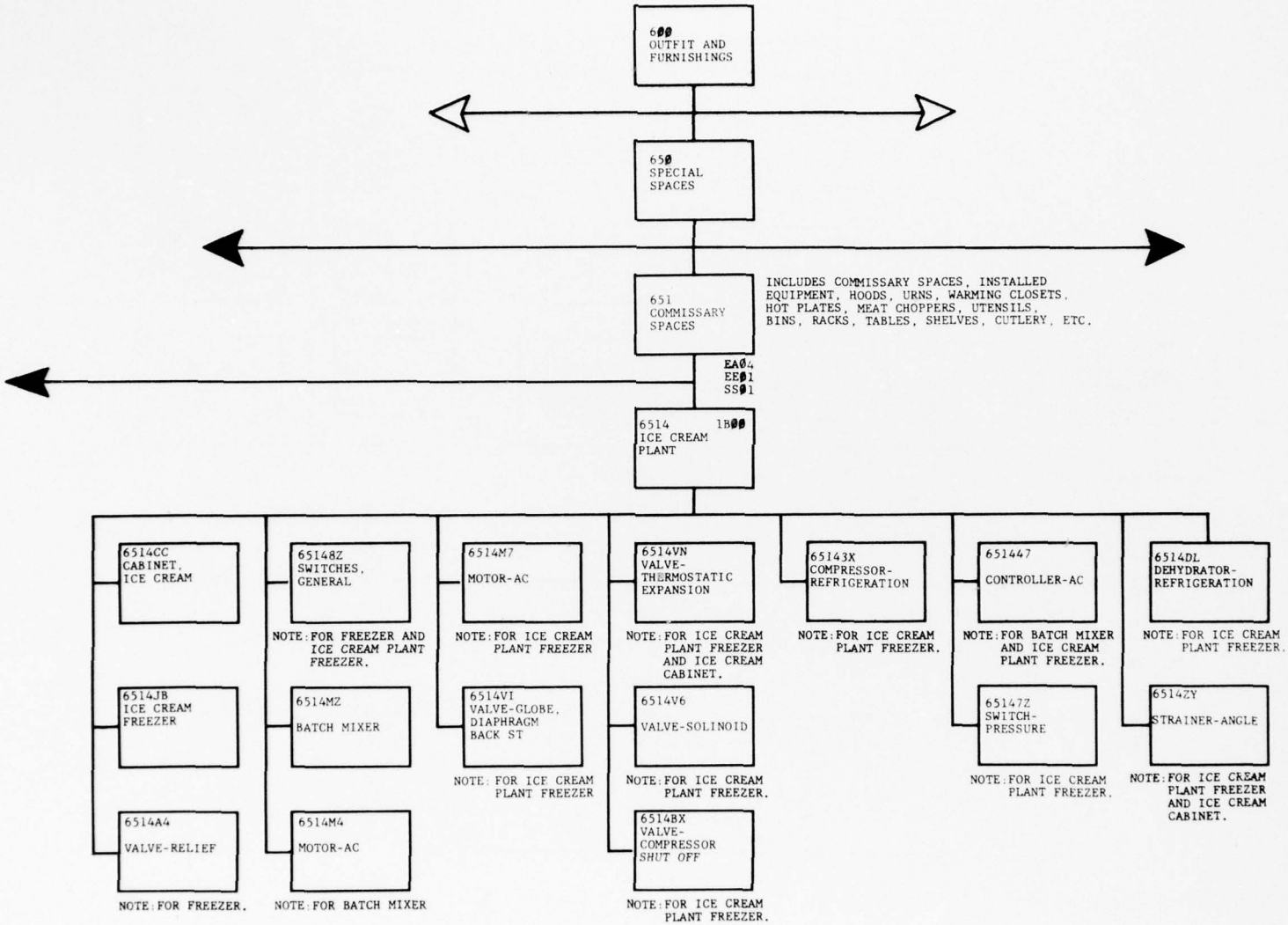

OUTFIT AND FURNISHINGS
SERVICE SPACES
651 COMMISSARY SPACES
INCLUDES COMMISSARY SPACES, INSTALLED EQUIPMENT, HOODS, URNS, WARMING CLOSETS, HOT PLATES, MEAT CHOPPERS, UTENSILS, BINS, RACKS, TABLES, SHELVES, CUTLERY, ETC.
EA04
EE01
SS01
6511 WARDROOM PANTRY
1B00
6512 CPO GALLEY
1B00
6511DV DISHWASHING MACHINE
6511F6 FRYER-DEEP FAT
6511GE GALLEY EQUIPMENT-ELECTRICAL
INCLUDES: RANGE
6511GF GARBAGE DISPOSAL MACHINE
6511GS GALLEY EQUIPMENT-OTHER THAN ELECTRICAL
6511MM MEAT SLICING MACHINE
6511M4 MOTOR-AC
NOTE: FOR REFRIGERATOR.
6511MZ MIXING MACHINE-FOOD 5 QUART
INCLUDES: ACCESSORIES
6511M7 MOTOR-AC
INCLUDES: DISHWASHING MACHINE MEAT SLICER
6511NB TRANSFORMER-POWER STEPDOWN
NOTE: FOR RANGE AND DEEP FAT FRYER.
6511QY REFRIGERATOR
6511Q1 PUMP-CENTRIFUGAL
NOTE: FOR DISHWASHING MACHINE.
6511UX RELAY-ELECTRICAL
INCLUDES: DEEP FAT FRYER GARBAGE DISPOSAL UNIT RANGE
6511VI VALVE-GLOBE
NOTE: FOR DISHWASHING MACHINE.
6511VY VALVE-REDUCING
NOTE: FOR DISHWASHING MACHINE.
6511V7 VALVE-TEMPERATURE REGULATING, MIXING
NOTE: FOR DISHWASHING MACHINE.
651147 CONTROLLER-AC
NOTE: FOR DISHWASHING MACHINE AND GARBAGE DISPOSAL.
65115C COFFEE MAKER
65116T TOASTER
65117Z SWITCH-THERMOSTATIC
INCLUDES: DEEP FAT FRYER REFRIGERATOR
65118Z SWITCHES, GENERAL
NOTE: FOR REFRIGERATOR, COFFEE MAKER AND GARBAGE DISPOSAL.
6512GE GALLEY EQUIPMENT-ELECTRICAL
INCLUDES: RANGE GRIDDLE, SELF HEATING
6512GS GALLEY EQUIPMENT-OTHER THAN ELECTRICAL
6512QY REFRIGERATOR
6512DV DISHWASHING MACHINE
65125C COFFEE MAKER
65126T TOASTER
65128Z SWITCH, ROTARY
NOTE: FOR COFFEE MAKER AND REFRIGERATOR.
DDG-2 CLASS
PREPARED 10-26-76



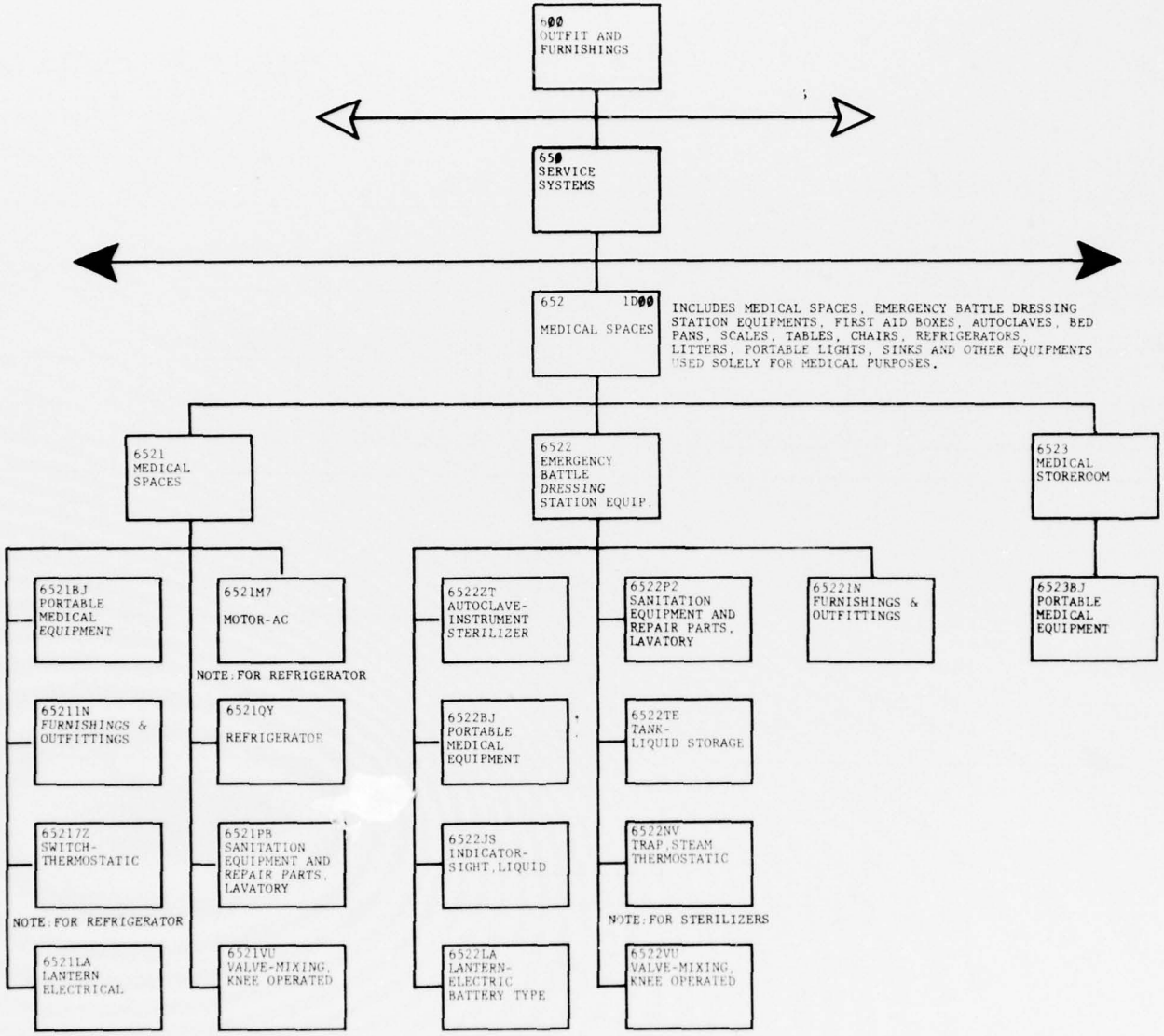
DDG-2 CLASS
PREPARED 10-26-76



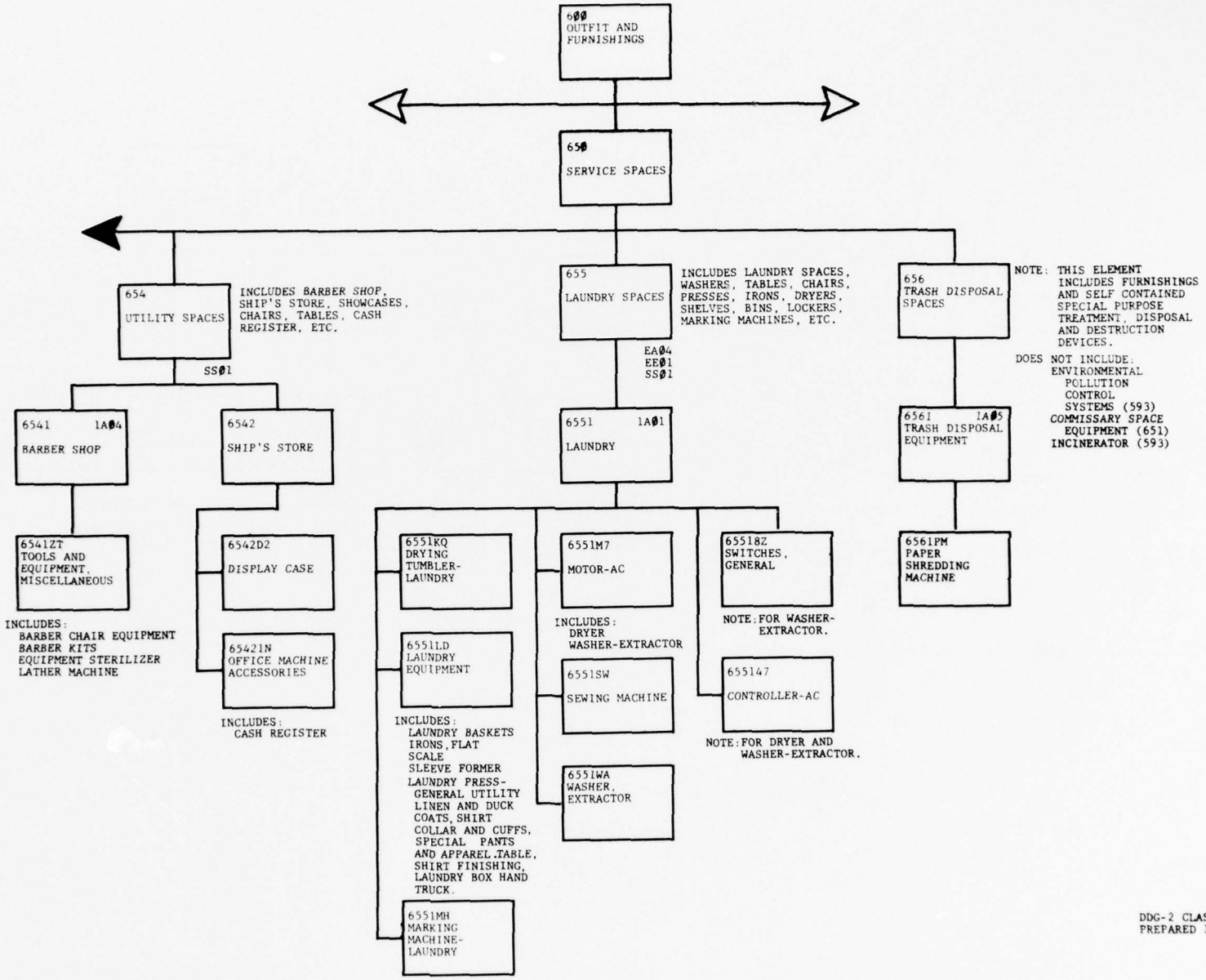
DDG-2 CLASS
PREPARED 10-26-76



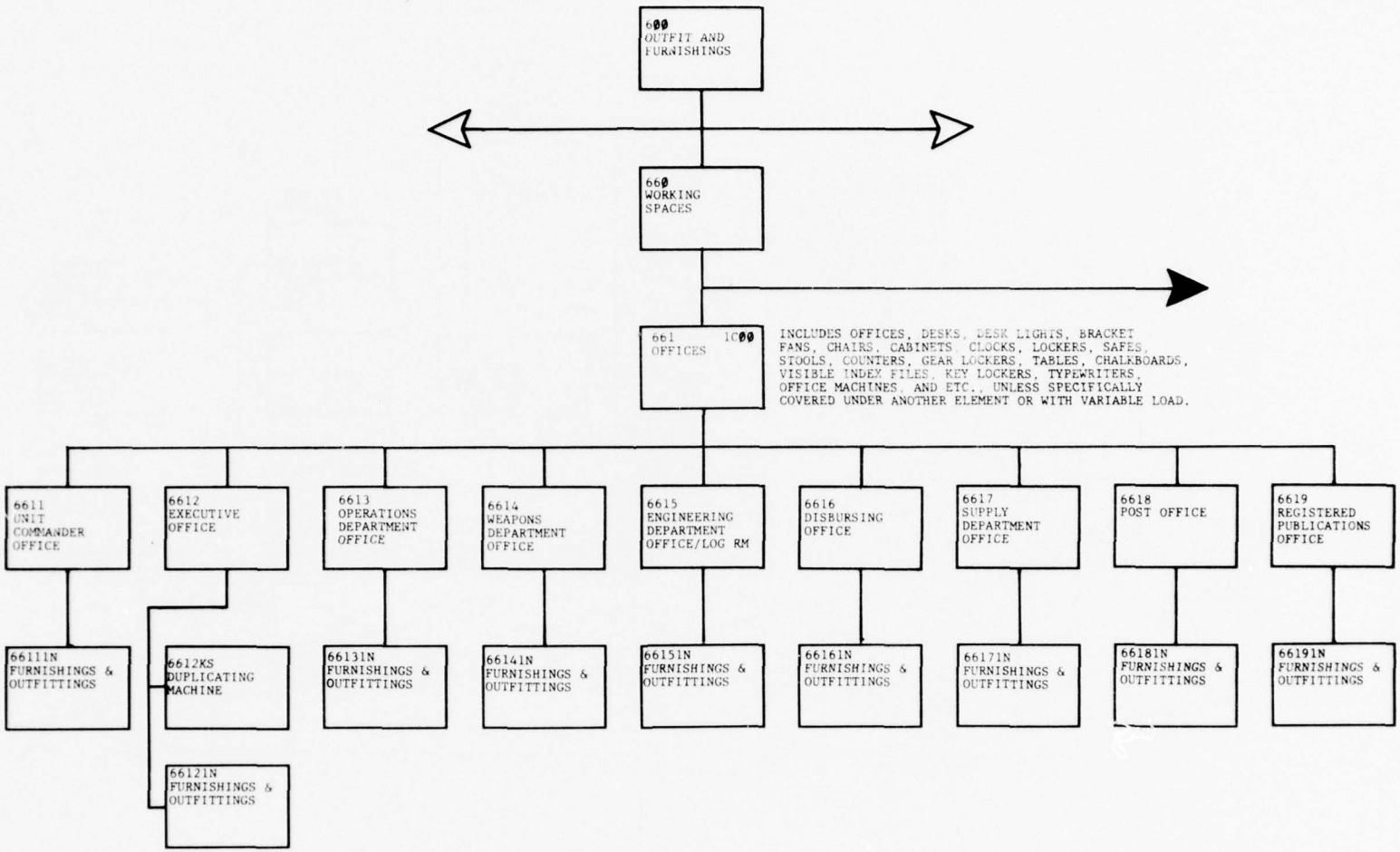
DDG-2 CLASS
PREPARED 1Ø-26-76



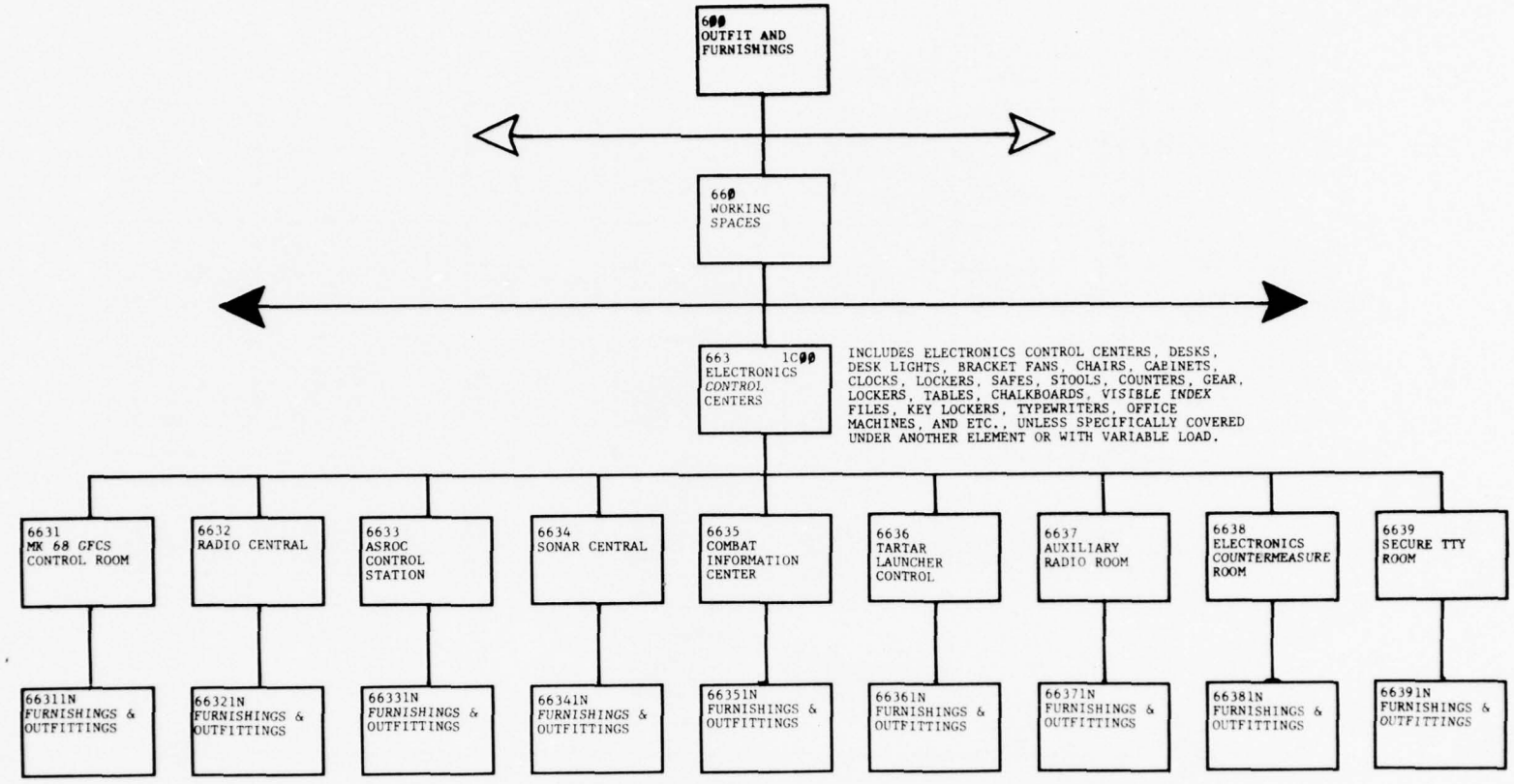
DDG-2 CLASS
PREPARED 10-26-76



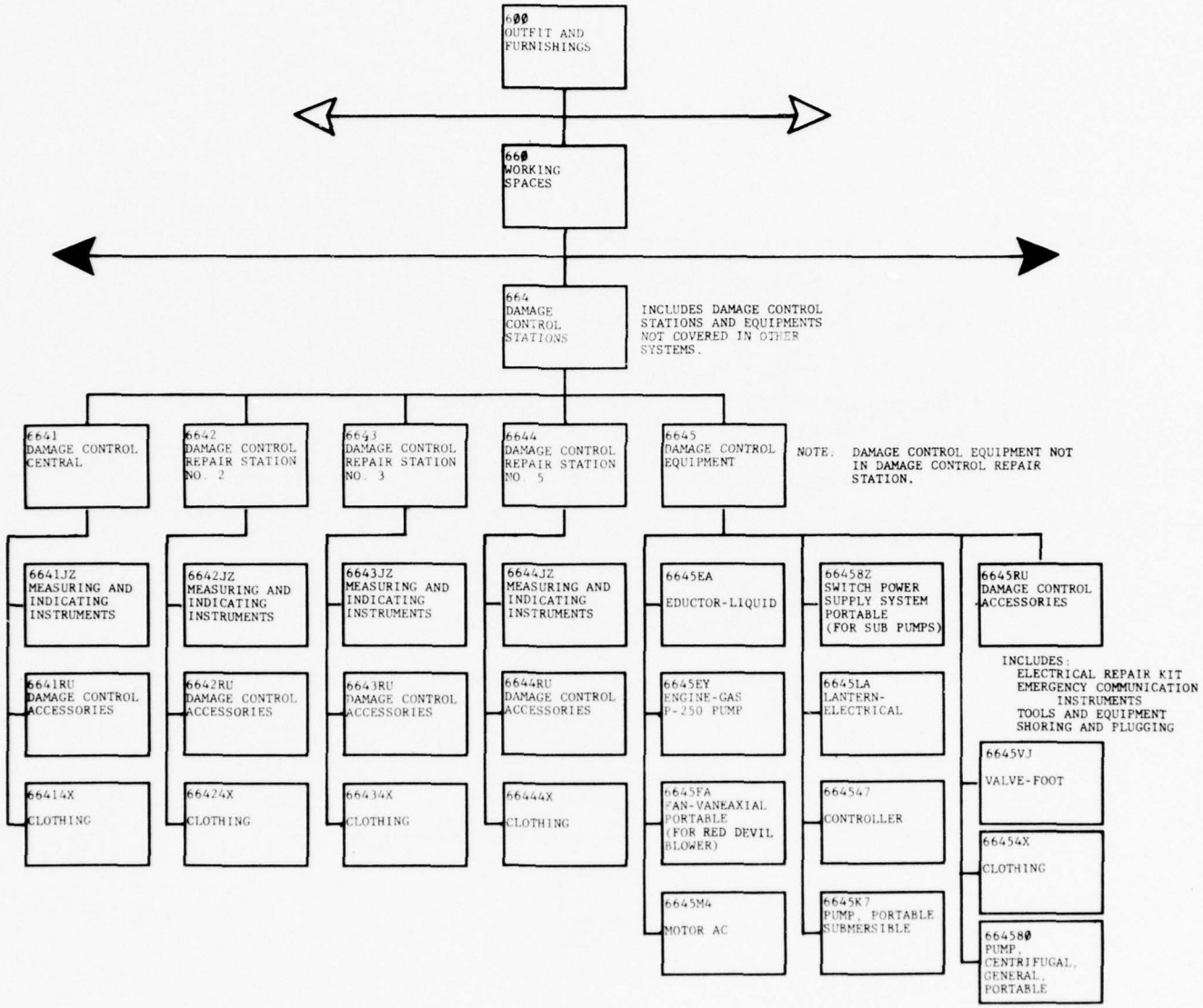
DDG-2 CLASS
PREPARED 10-26-76



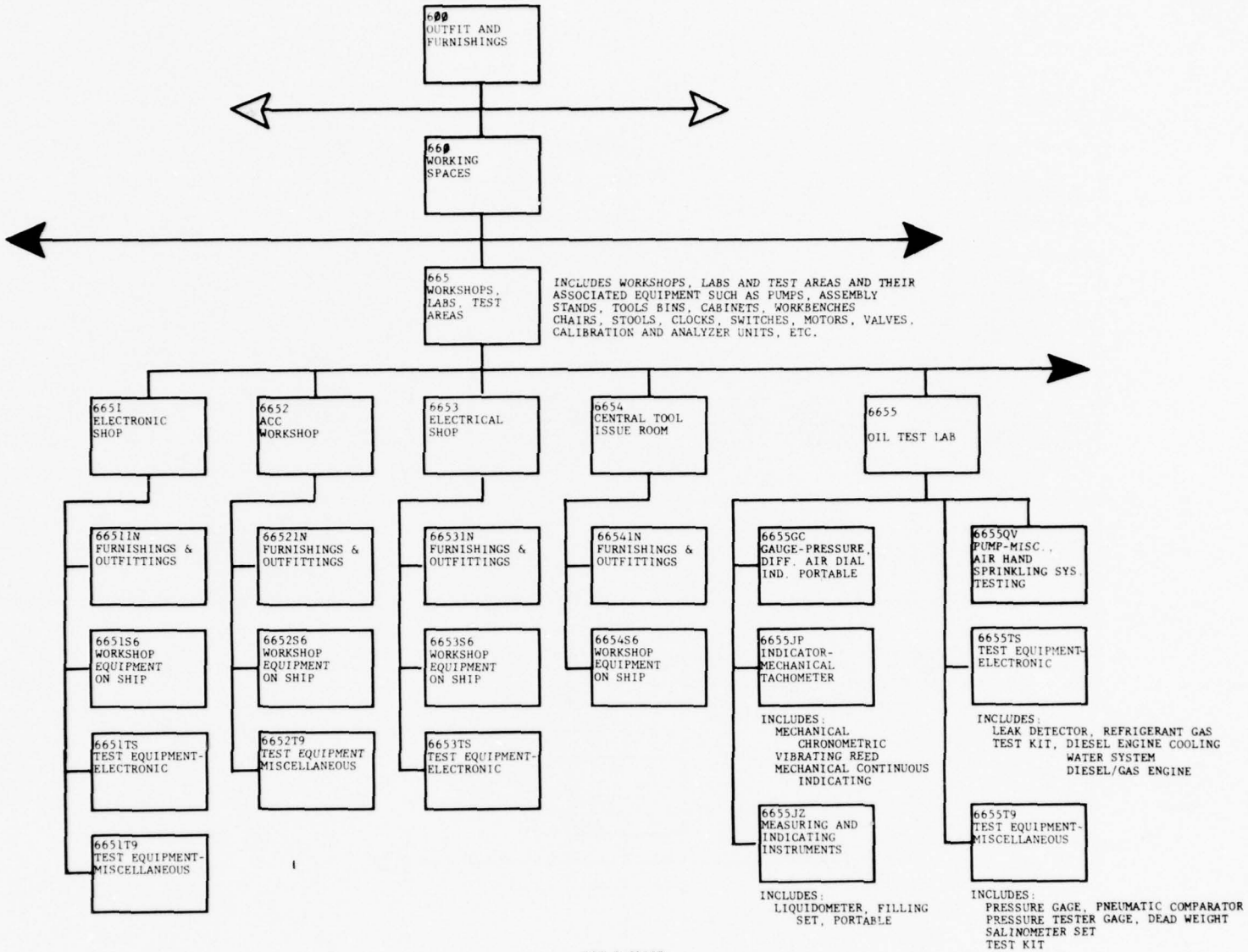
DDG-2 CLASS
PREPARED 10-26-76



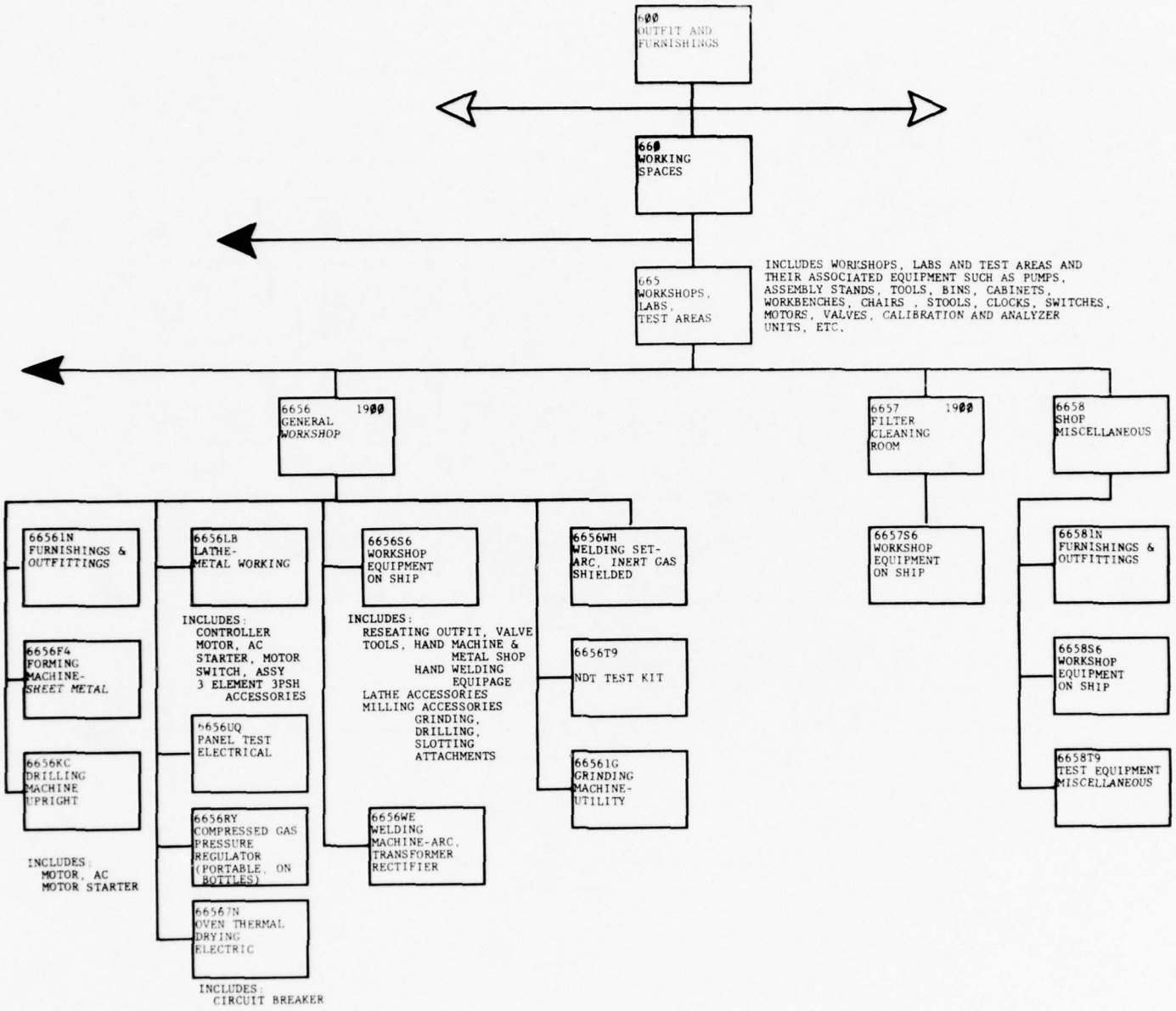
DDG-2 CLASS
PREPARED 10-26-76



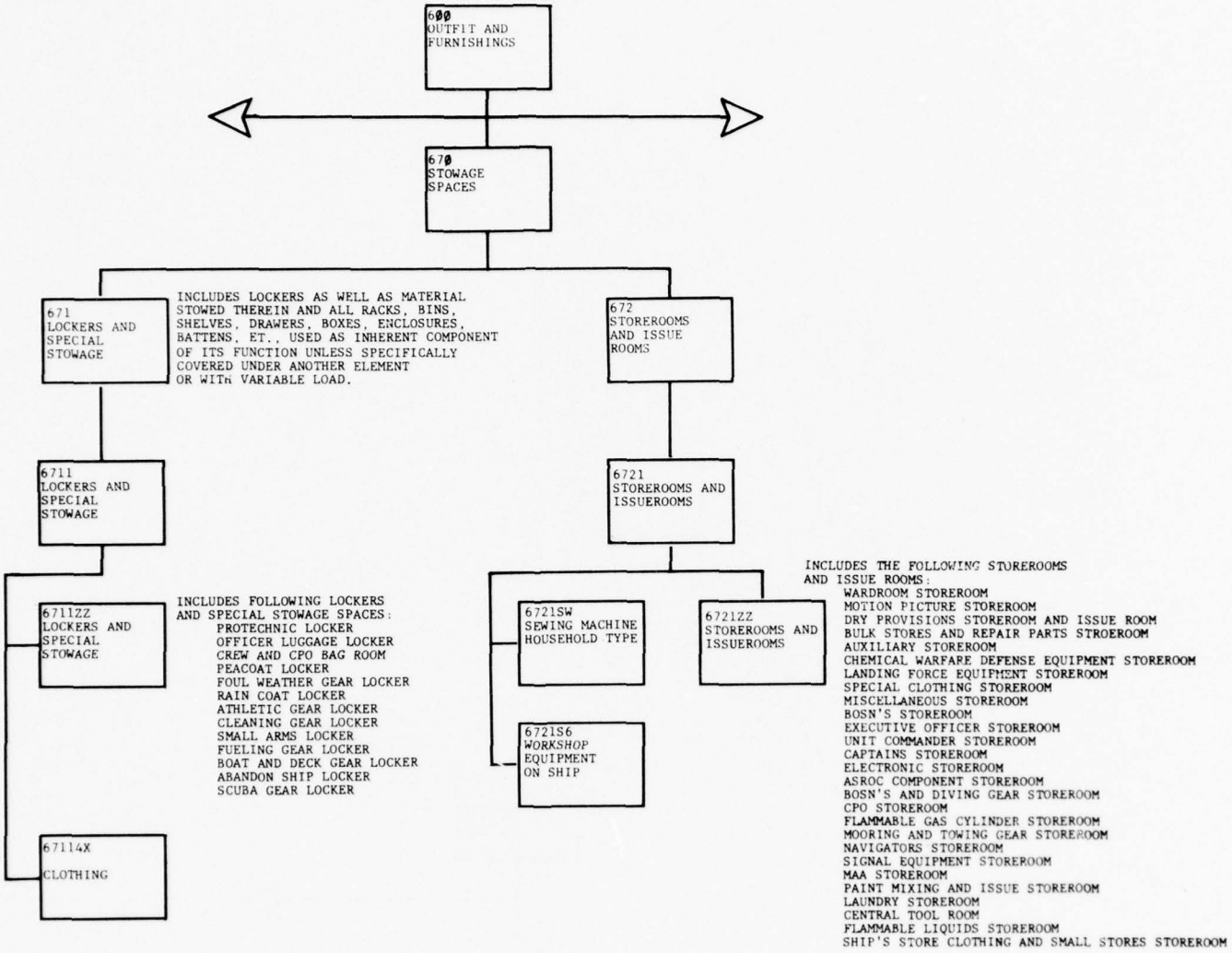
DDG-2 CLASS
PREPARED 10-26-76



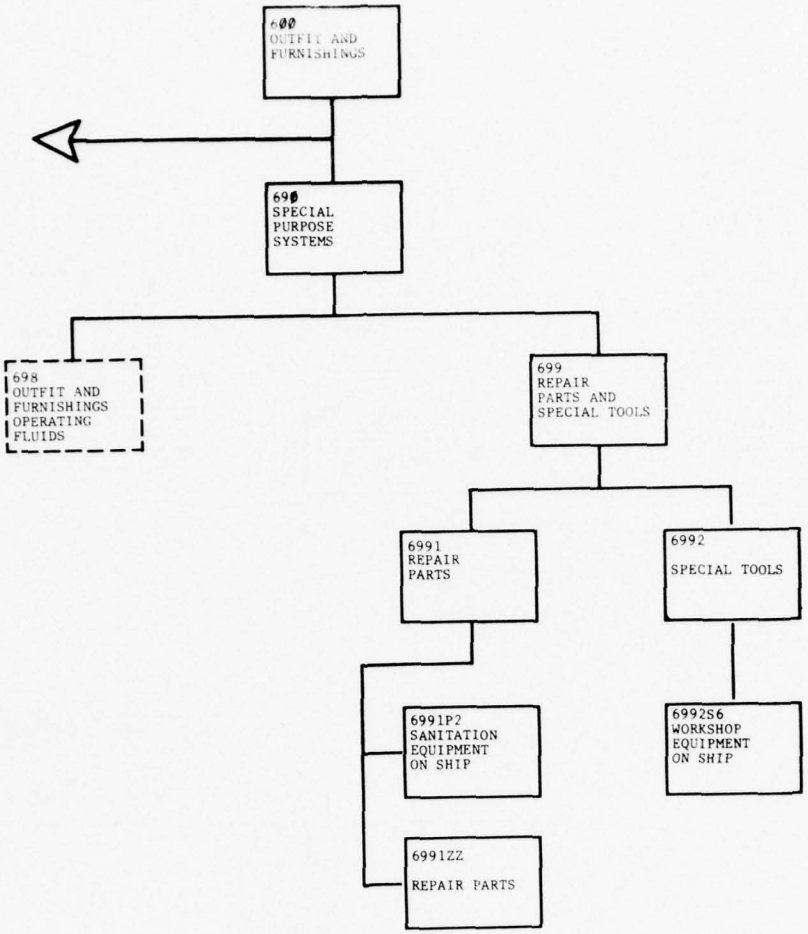
DDG-2 CLASS
PREPARED 10-26-76



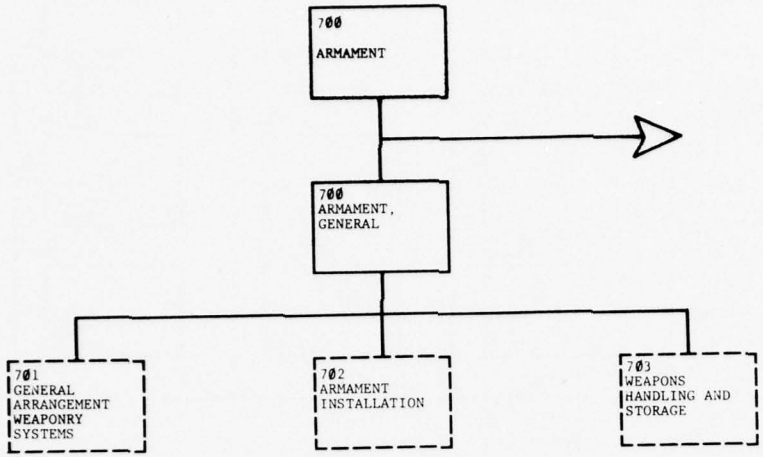
DDG-2 CLASS
PREPARED 10-26-76

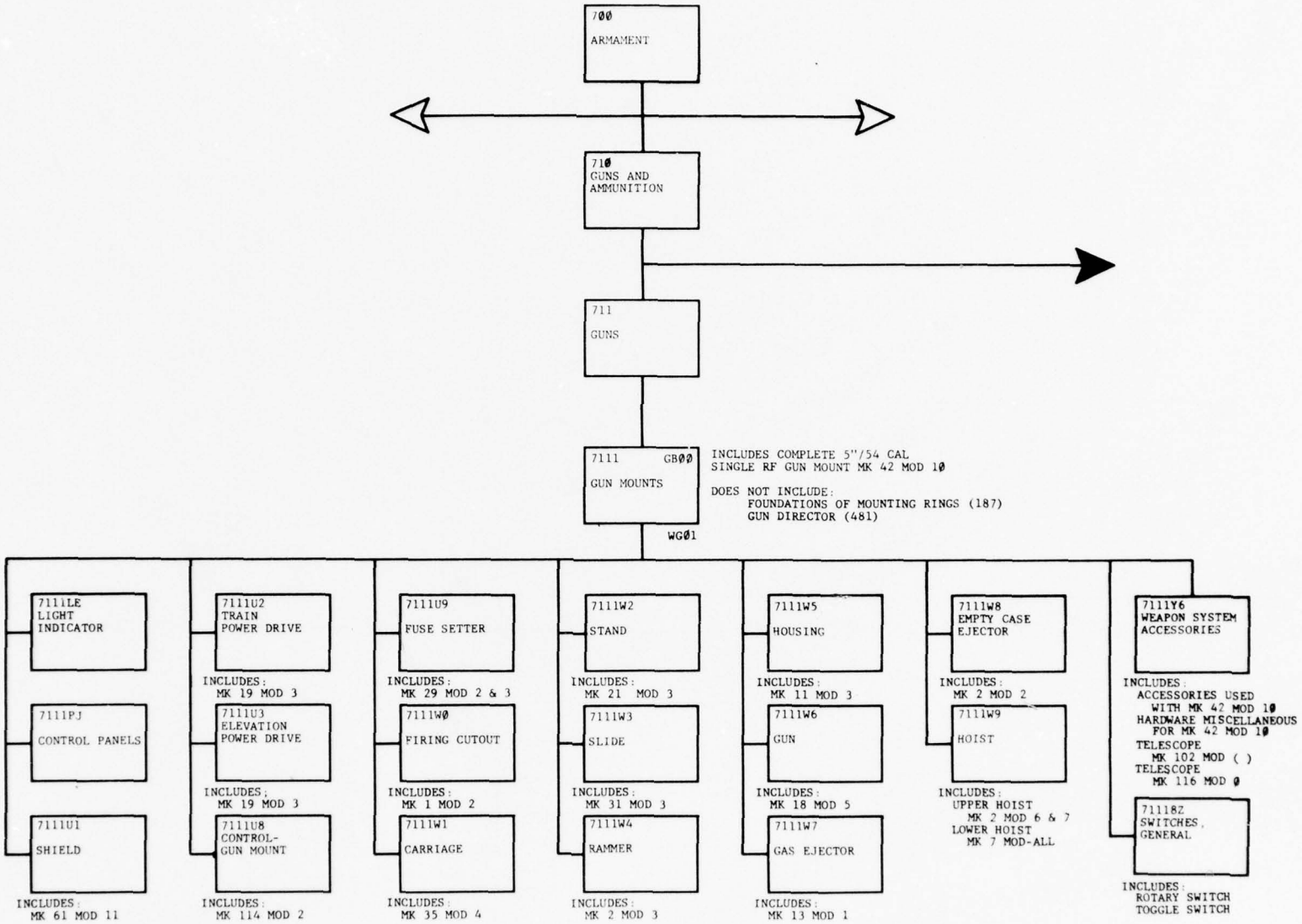


DDG-2 CLASS
PREPARED 10-26-76

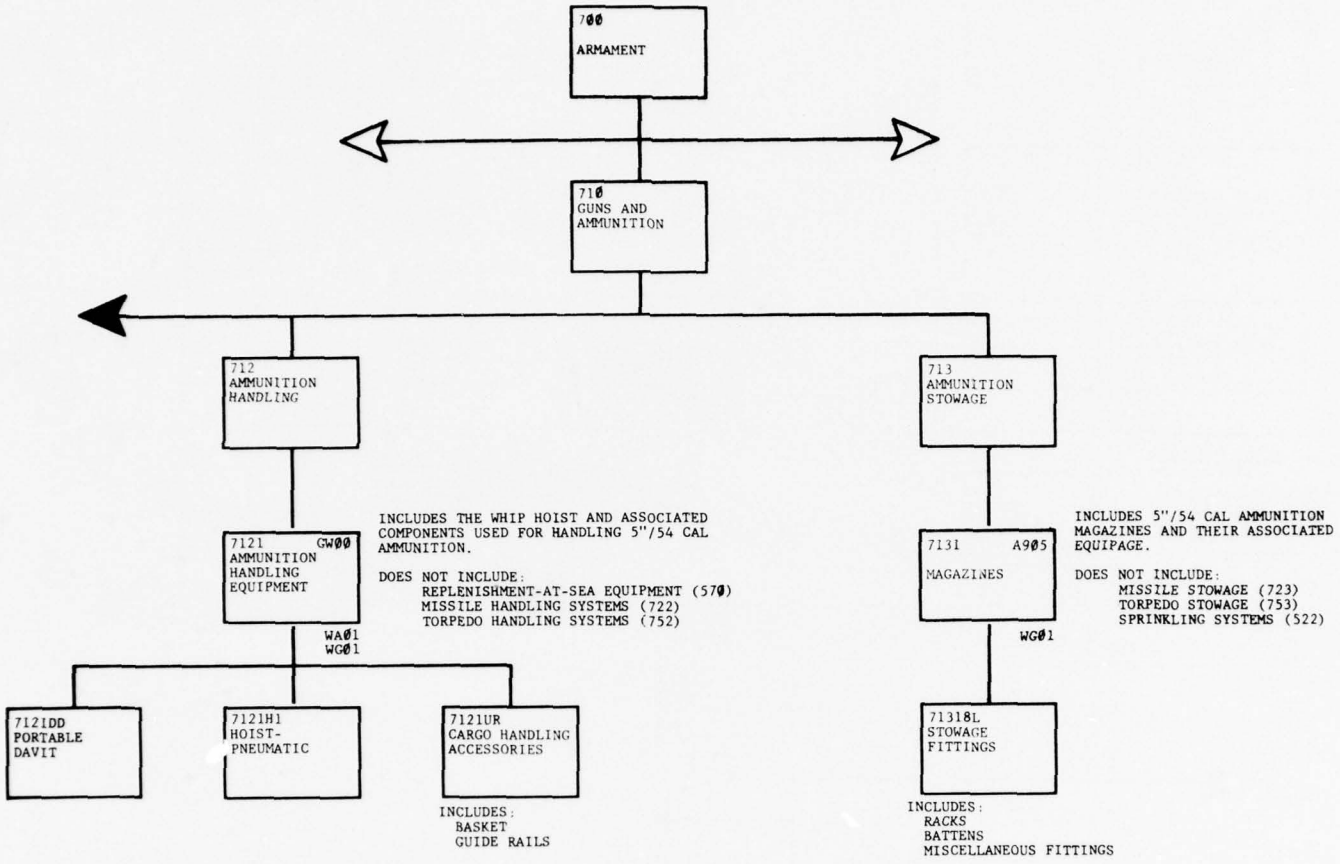


DDG-2 CLASS
PREPARED 10-26-76

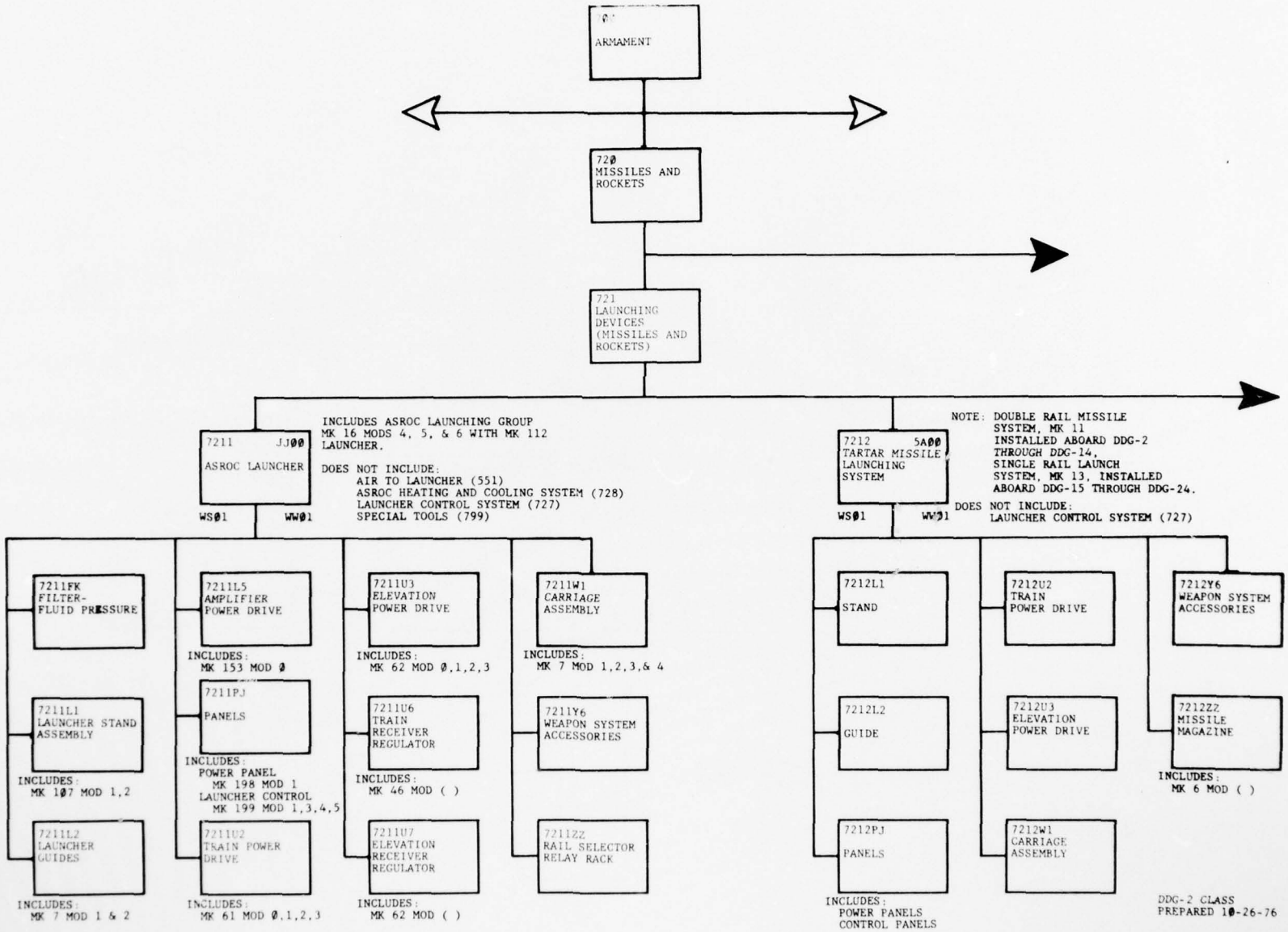

700
ARMAMENT
700
ARMAMENT, GENERAL
701
GENERAL ARRANGEMENT WEAPONRY SYSTEMS
702
ARMAMENT INSTALLATION
703
WEAPONS HANDLING AND STORAGE

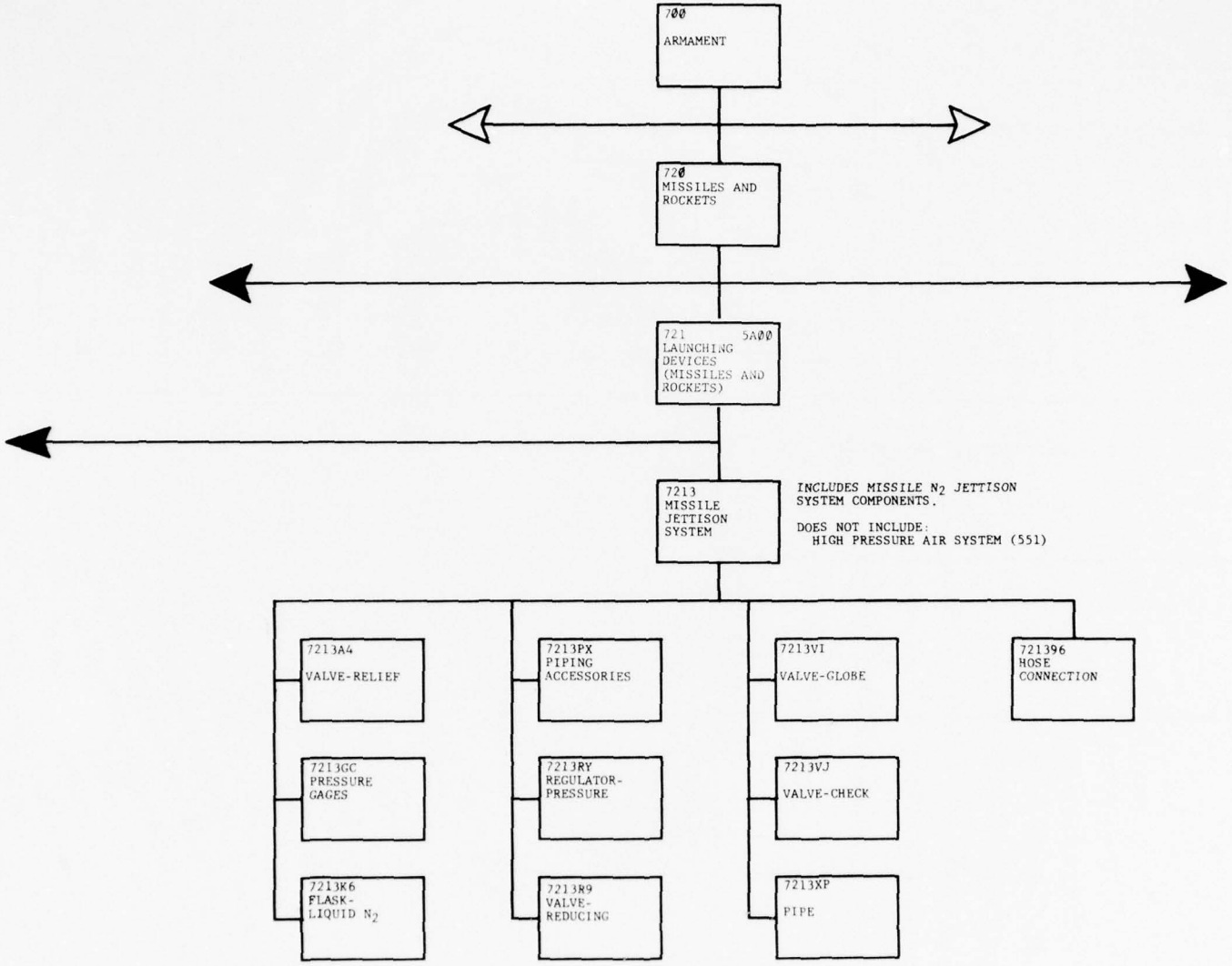


DDG-2 CLASS
PREPARED 8-13-76

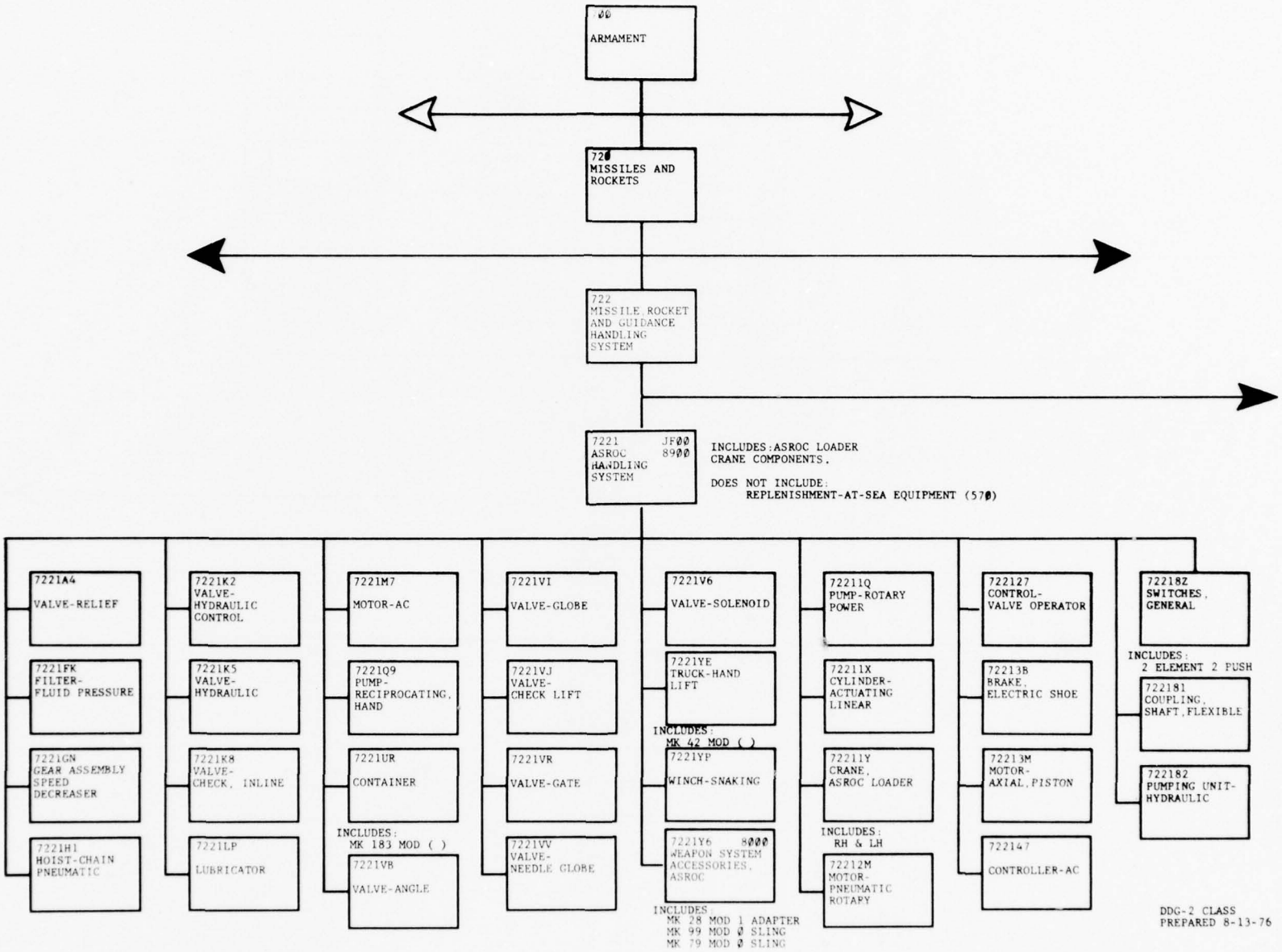


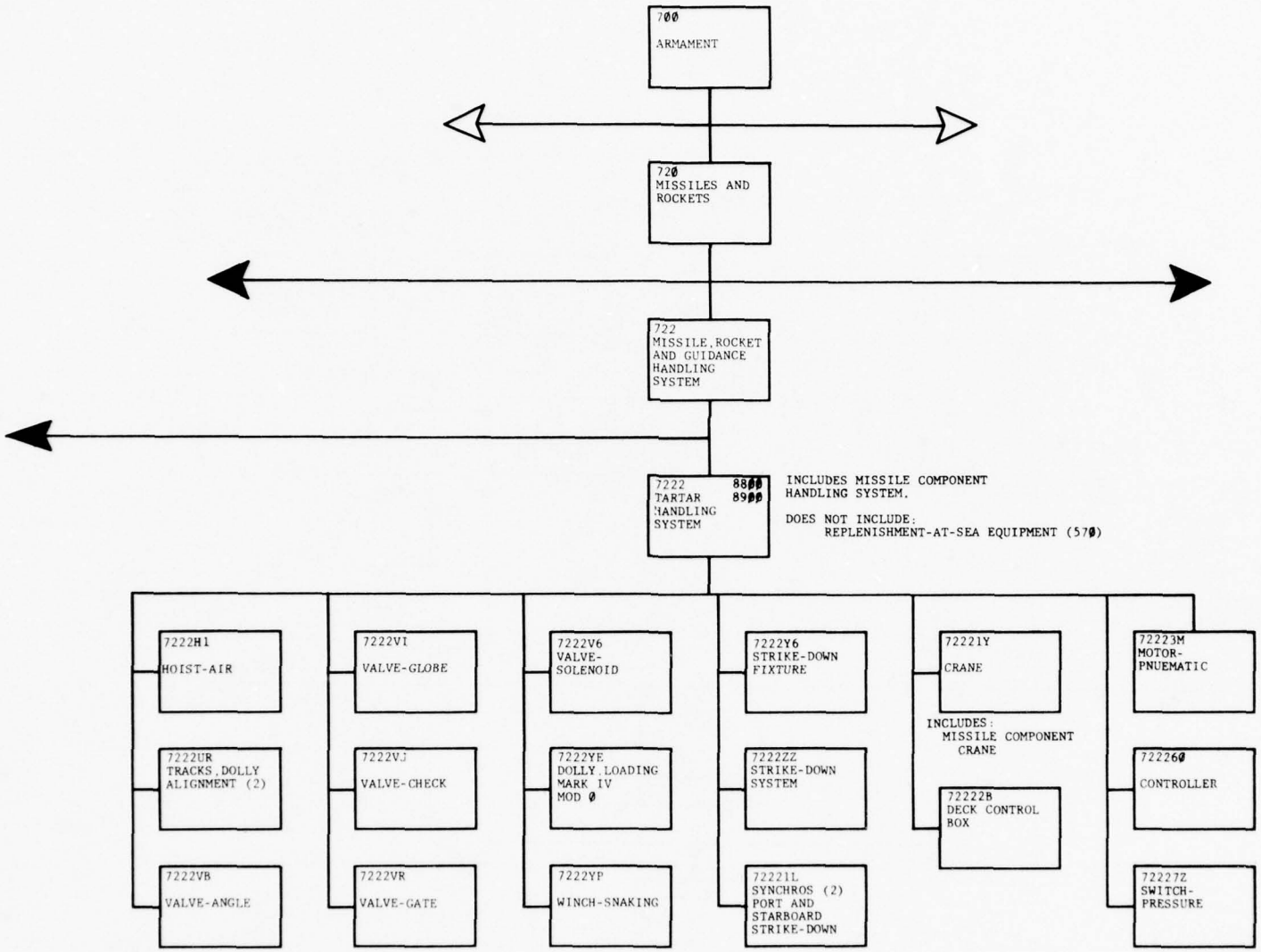
DDG-2 CLASS
PREPARED 8-13-76


ARMAMENT
720
MISSILES AND ROCKETS
721
LAUNCHING DEVICES (MISSILES AND ROCKETS)
7211 JJ00
ASROC LAUNCHER
WS01 WW01
INCLUDES ASROC LAUNCHING GROUP MK 16 MODS 4, 5, & 6 WITH MK 112 LAUNCHER.
DOES NOT INCLUDE:
AIR TO LAUNCHER (551)
ASROC HEATING AND COOLING SYSTEM (728)
LAUNCHER CONTROL SYSTEM (727)
SPECIAL TOOLS (799)
7211FK
FILTER-FLUID PRESSURE
7211L1
LAUNCHER STAND ASSEMBLY
INCLUDES:
MK 107 MOD 1,2
7211L2
LAUNCHER GUIDES
INCLUDES:
MK 7 MOD 1 & 2
7211L5
AMPLIFIER POWER DRIVE
INCLUDES:
MK 153 MOD 0
7211PJ
PANELS
INCLUDES:
POWER PANEL
MK 198 MOD 1
LAUNCHER CONTROL
MK 199 MOD 1,3,4,5
7211U2
TRAIN POWER DRIVE
INCLUDES:
MK 61 MOD 0,1,2,3
7211U3
ELEVATION POWER DRIVE
INCLUDES:
MK 62 MOD 0,1,2,3
7211U6
TRAIN RECEIVER REGULATOR
INCLUDES:
MK 46 MOD ( )
7211U7
ELEVATION RECEIVER REGULATOR
INCLUDES:
MK 62 MOD ( )
7211W1
CARRIAGE ASSEMBLY
INCLUDES:
MK 7 MOD 1,2,3,& 4
7211Y6
WEAPON SYSTEM ACCESSORIES
7211Z2
RAIL SELECTOR RELAY RACK
7212 5A00
TARTAR MISSILE LAUNCHING SYSTEM
WS01 WW01
NOTE: DOUBLE RAIL MISSILE SYSTEM, MK 11 INSTALLED ABOARD DDG-2 THROUGH DDG-14, SINGLE RAIL LAUNCH SYSTEM, MK 13, INSTALLED ABOARD DDG-15 THROUGH DDG-24.
DOES NOT INCLUDE:
LAUNCHER CONTROL SYSTEM (727)
7212L1
STAND
7212L2
GUIDE
7212PJ
PANELS
INCLUDES:
POWER PANELS
CONTROL PANELS
7212U2
TRAIN POWER DRIVE
7212U3
ELEVATION POWER DRIVE
7212W1
CARRIAGE ASSEMBLY
7212Y6
WEAPON SYSTEM ACCESSORIES
7212Z2
MISSILE MAGAZINE
INCLUDES:
MK 6 MOD ( )
DDG-2 CLASS
PREPARED 10-26-76

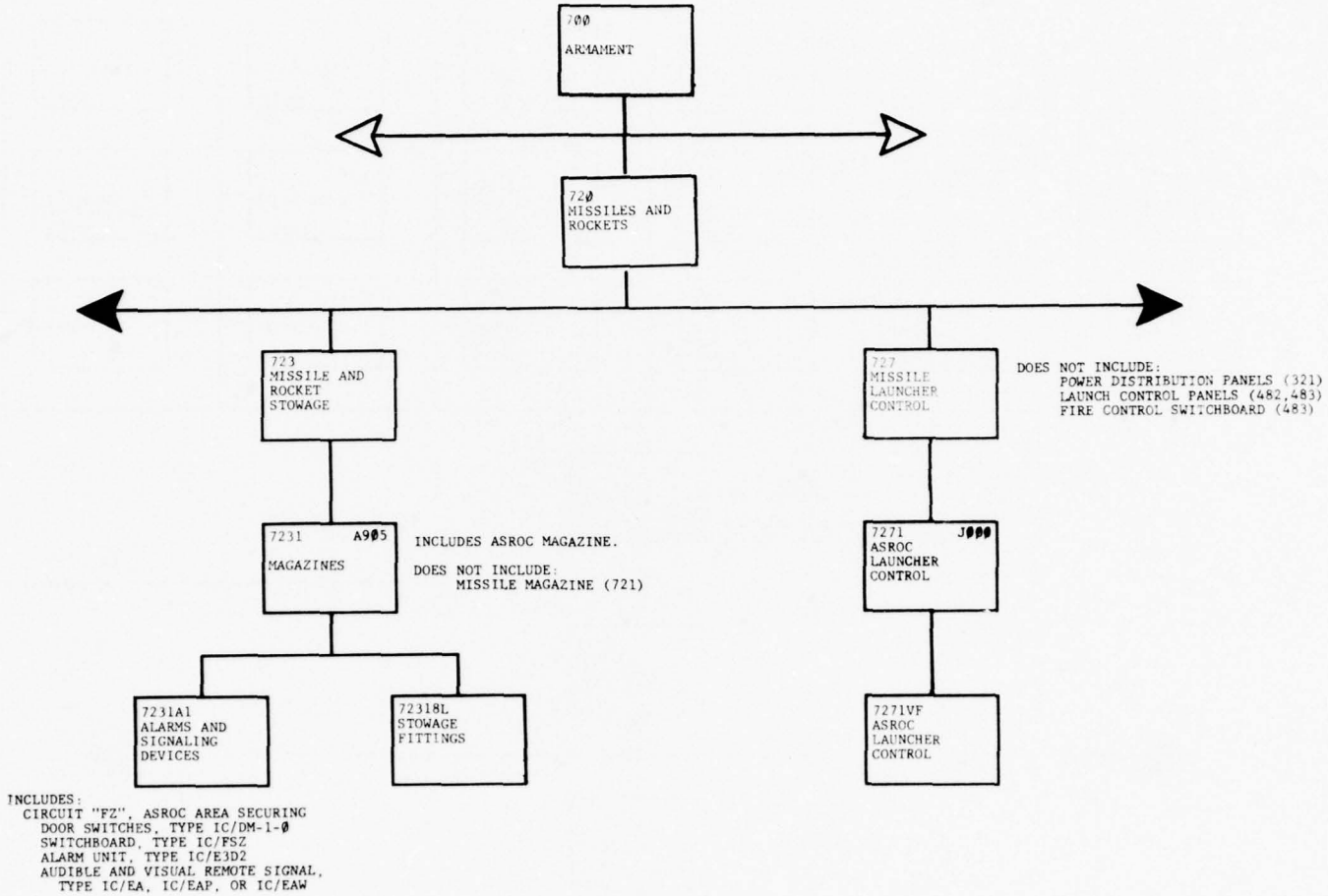


DDG-2 CLASS
PREPARED 8-13-76

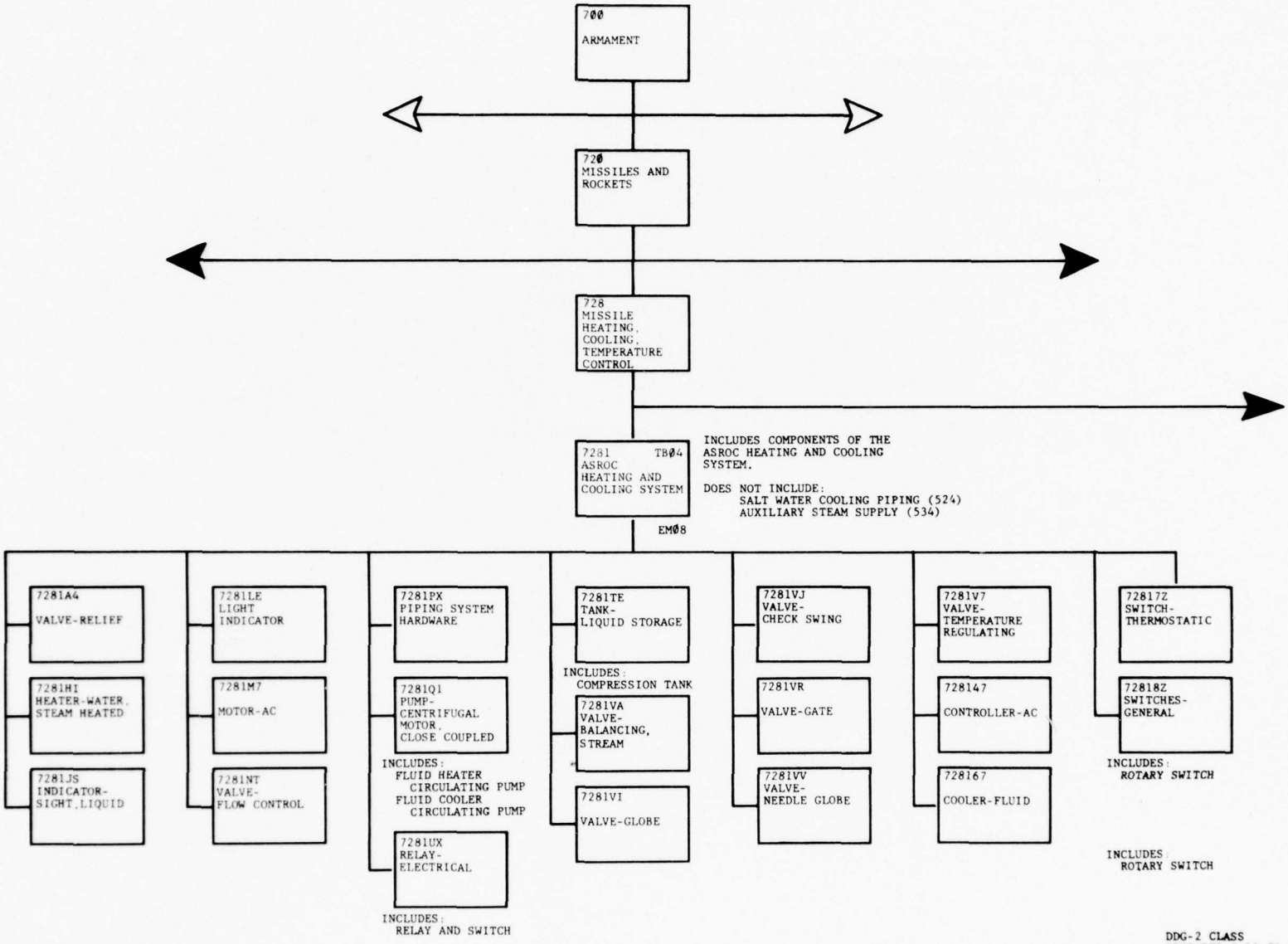

ØØ
ARMAMENT
72Ø
MISSILES AND ROCKETS
722
MISSILE, ROCKET AND GUIDANCE HANDLING SYSTEM
7221 JFØØ
ASROC 89ØØ
HANDLING SYSTEM
INCLUDES: ASROC LOADER CRANE COMPONENTS.
DOES NOT INCLUDE: REPLENISHMENT-AT-SEA EQUIPMENT (57Ø)
7221A4 VALVE-RELIEF
7221FK FILTER-FLUID PRESSURE
7221GN GEAR ASSEMBLY SPEED DECREASER
7221H1 HOIST-CHAIN PNEUMATIC
7221K2 VALVE-HYDRAULIC CONTROL
7221K5 VALVE-HYDRAULIC
7221K8 VALVE-CHECK, INLINE
7221LP LUBRICATOR
7221M7 MOTOR-AC
7221Q9 PUMP-RECIPROCATING, HAND
7221UR CONTAINER
INCLUDES: MK 183 MOD ( )
7221VB VALVE-ANGLE
7221VI VALVE-GLOBE
7221VJ VALVE-CHECK LIFT
7221VR VALVE-GATE
7221VV VALVE-NEEDLE GLOBE
7221V6 VALVE-SOLENOID
7221YE TRUCK-HAND LIFT
INCLUDES: MK 42 MOD ( )
7221YP WINCH-SNAKING
7221Y6 8ØØØ WEAPON SYSTEM ACCESSORIES, ASROC
INCLUDES: MK 28 MOD 1 ADAPTER
MK 99 MOD Ø SLING
MK 79 MOD Ø SLING
72211Q PUMP-ROTARY POWER
72211X CYLINDER-ACTUATING LINEAR
72211Y CRANE, ASROC LOADER
INCLUDES: RH & LH
72212M MOTOR-PNEUMATIC ROTARY
722127 CONTROL-VALVE OPERATOR
72213B BRAKE, ELECTRIC SHOE
72213M MOTOR-AXIAL, PISTON
722147 CONTROLLER-AC
72218Z SWITCHES, GENERAL
INCLUDES: 2 ELEMENT 2 PUSH
722181 COUPLING, SHAFT, FLEXIBLE
722182 PUMPING UNIT-HYDRAULIC
DDG-2 CLASS
PREPARED 8-13-76



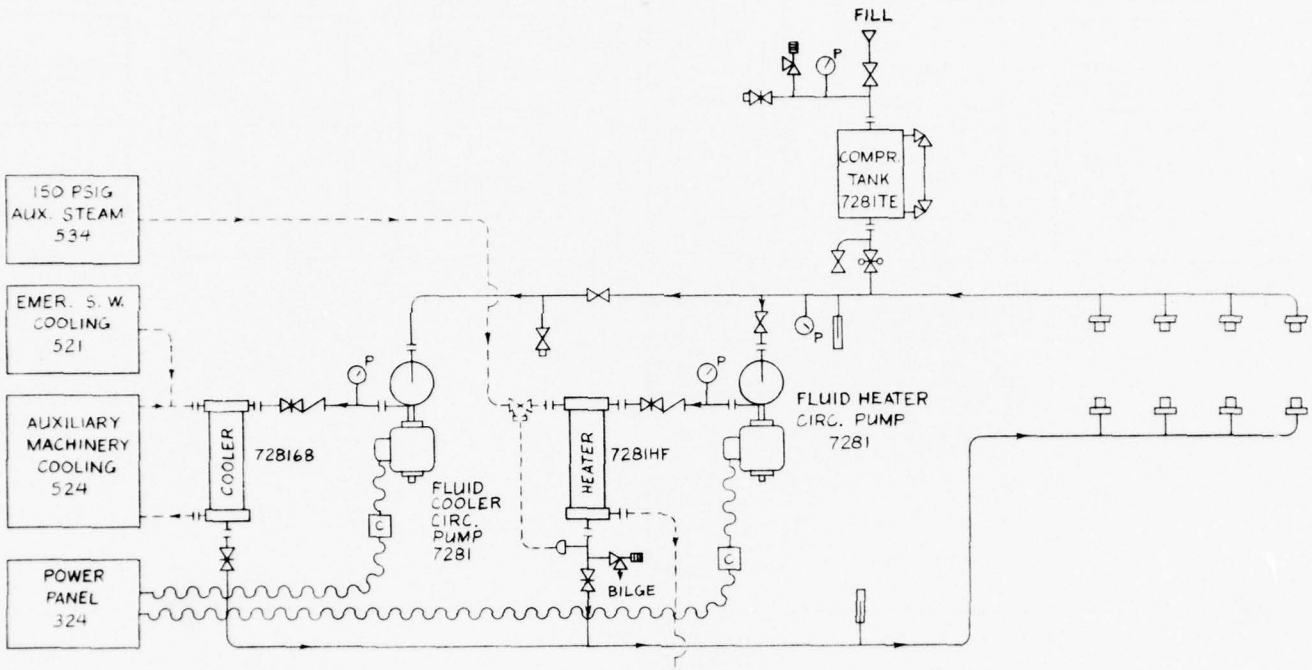
DDG-2 CLASS
PREPARED 8-13-76



DDG-2 CLASS
PREPARED 8-13-76



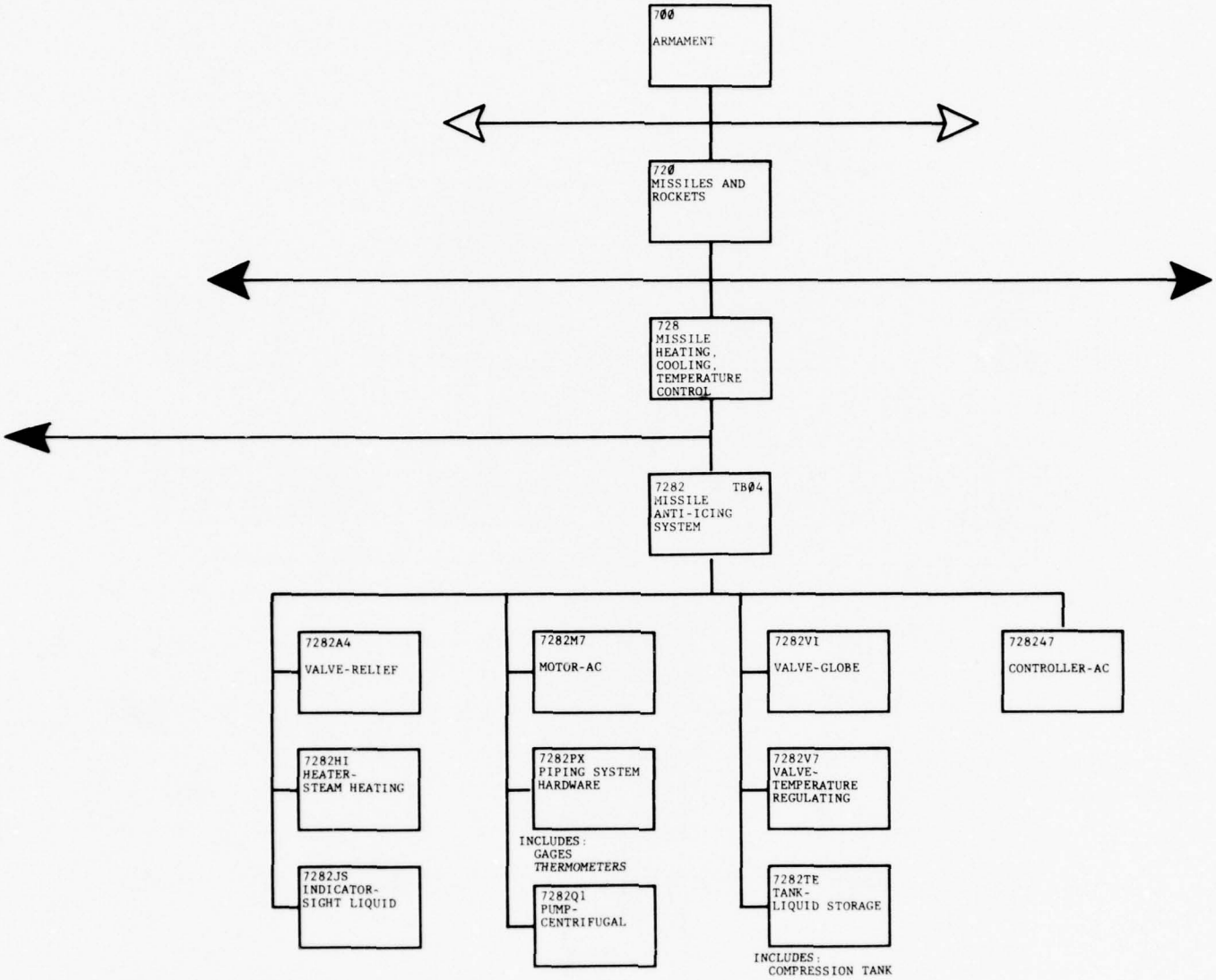
DDG-2 CLASS
PREPARED 8-13-76



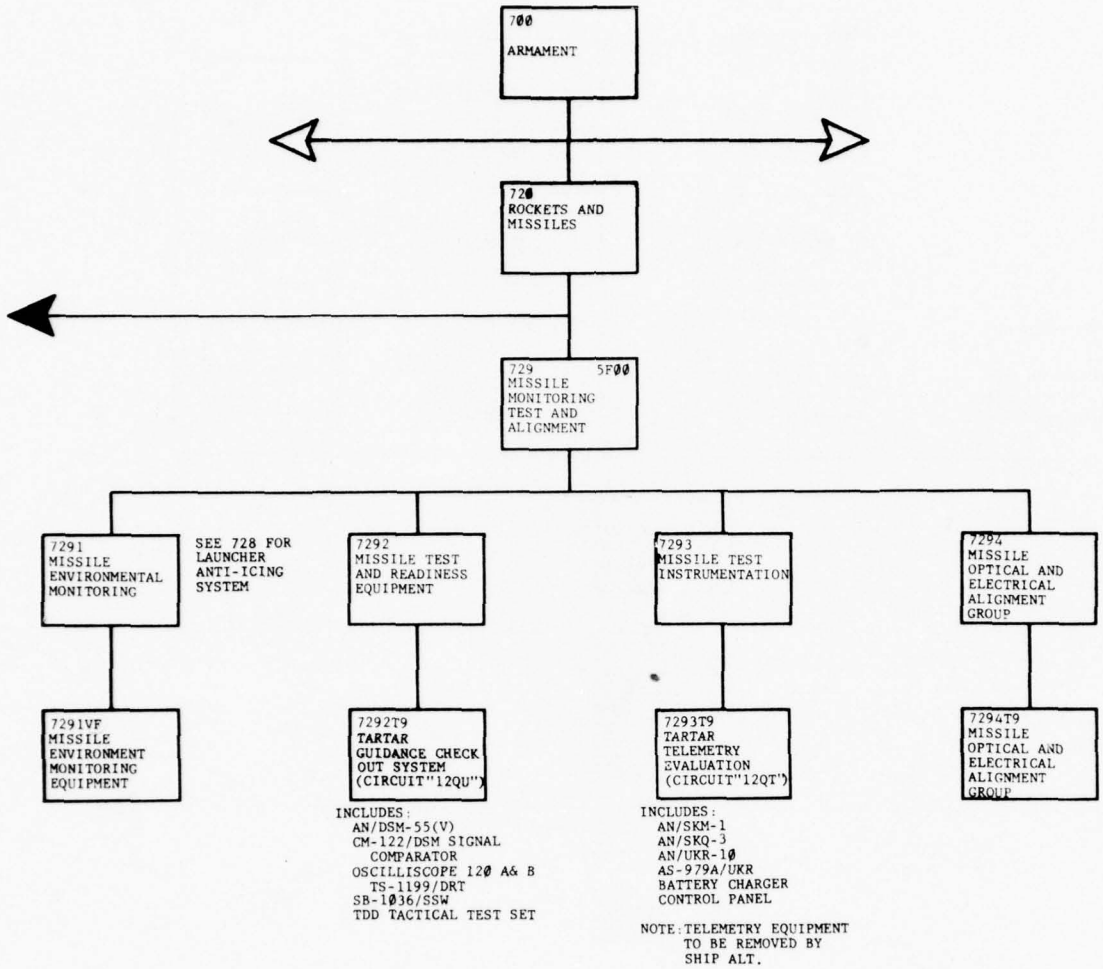
DDG-2 CLASS

SHIP WORK BREAKDOWN STRUCTURE
SWBS SHIP SYSTEM DIAGRAM

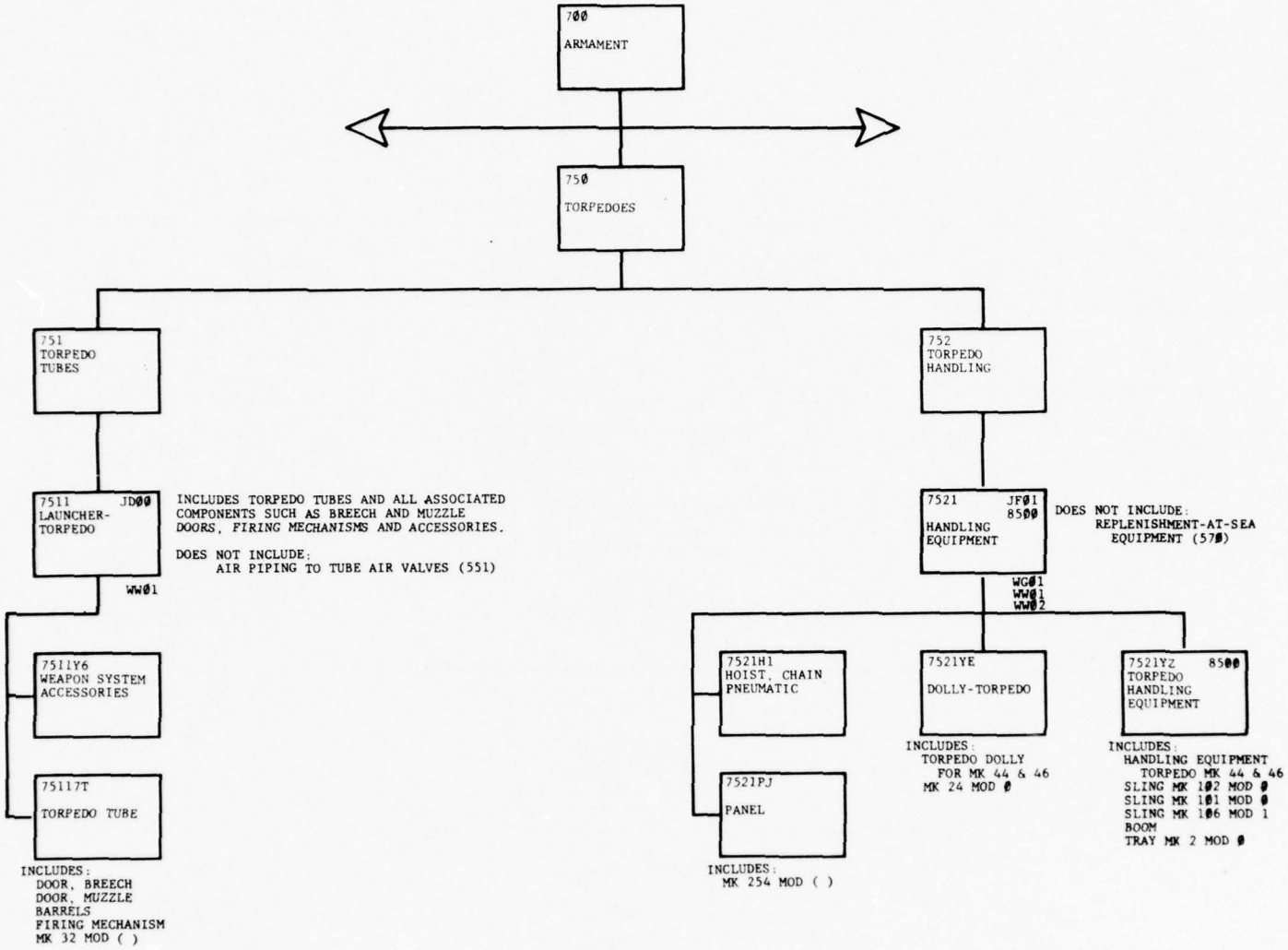
700 ARMAMENT
720 MISSILES AND ROCKETS
728 ASROC HEATING AND COOLING SYSTEM



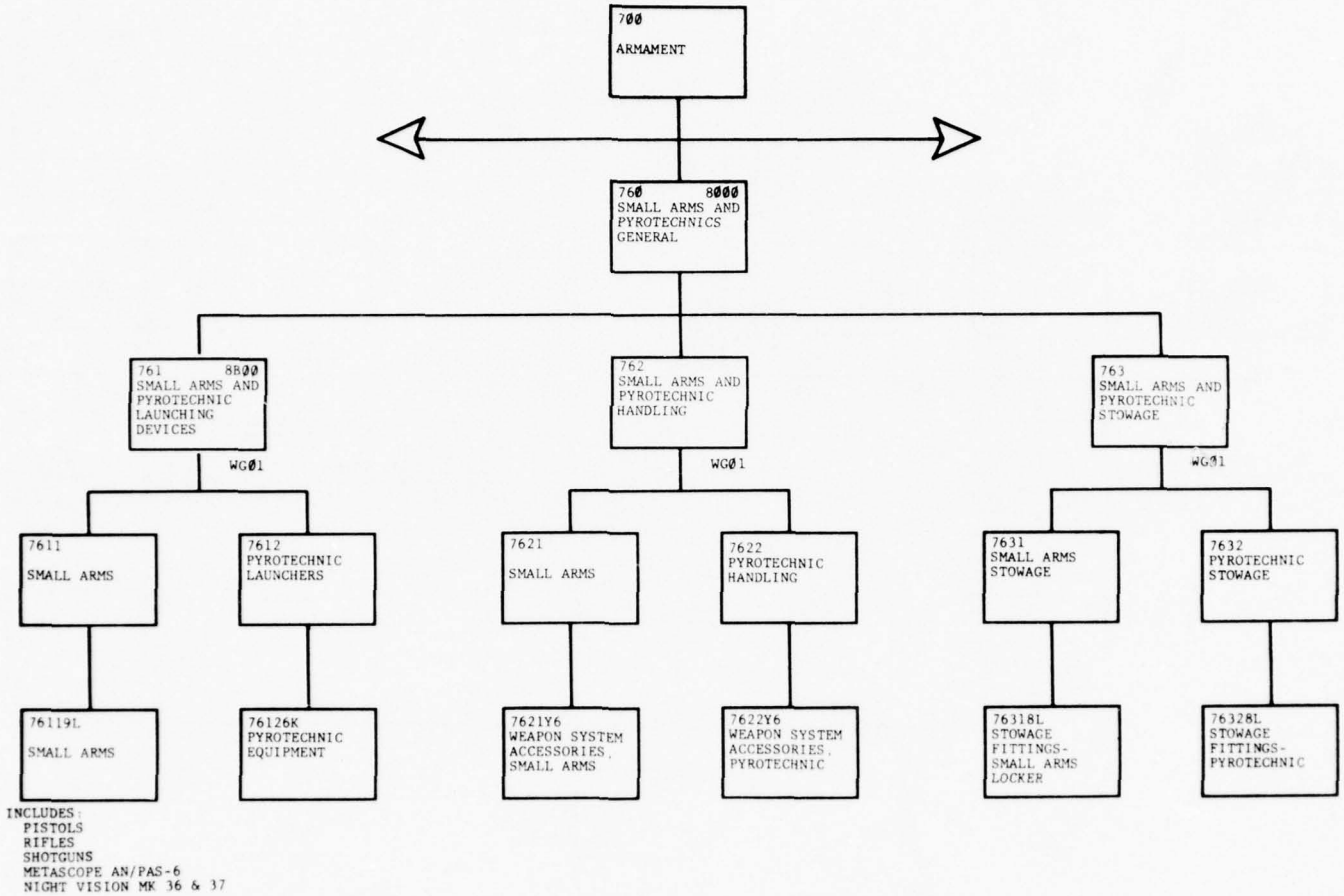
DDG-2 CLASS
PREPARED 8-13-76



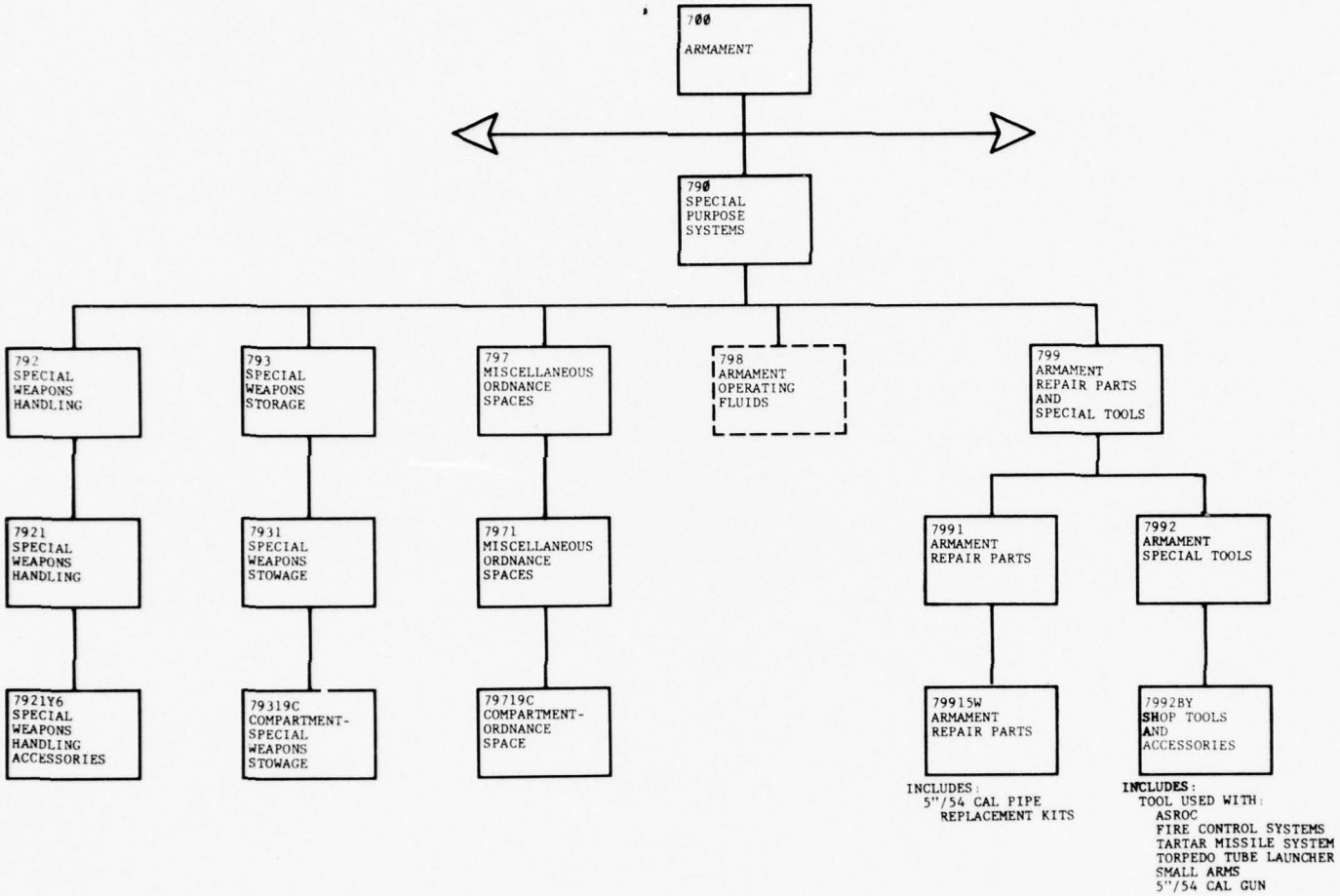
DDG-2 CLASS
PREPARED 8-13-76

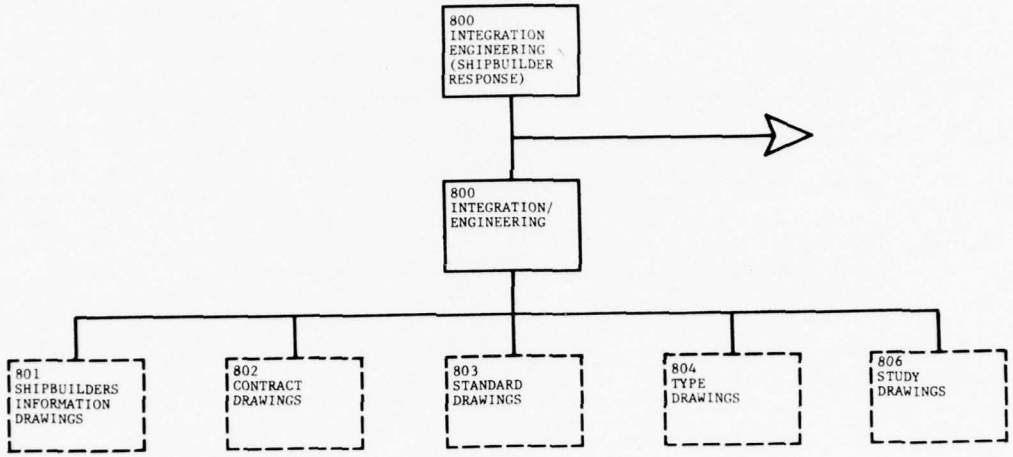


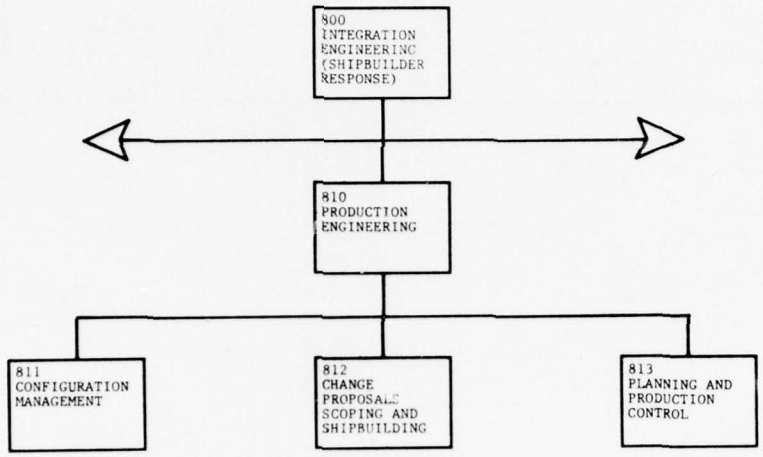
DDG-2 CLASS
PREPARED 8-13-76

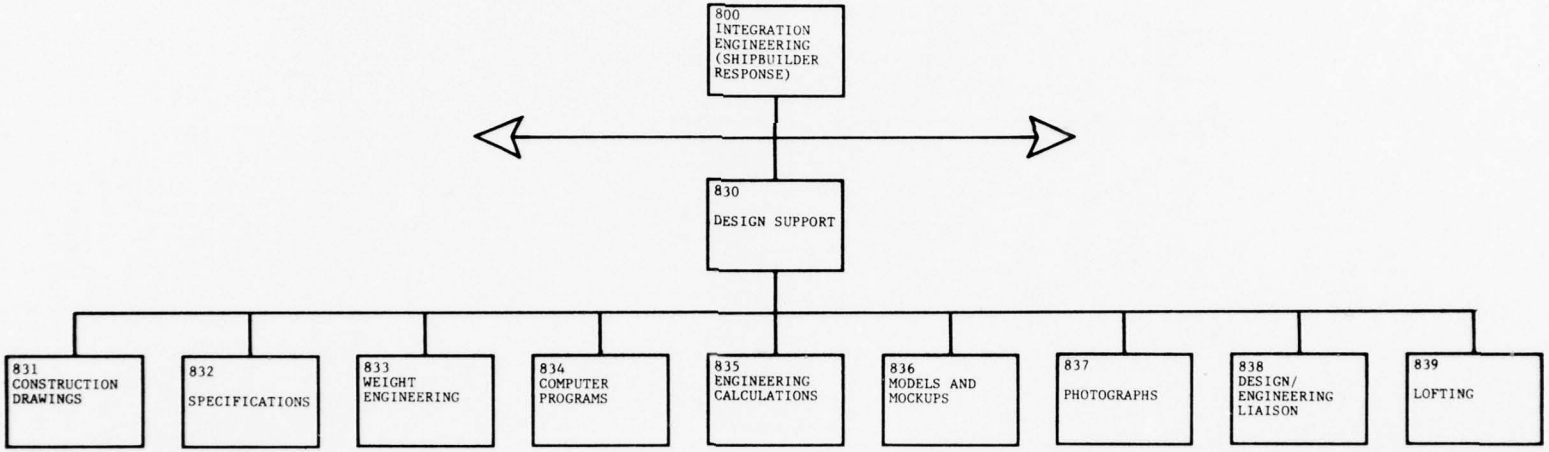


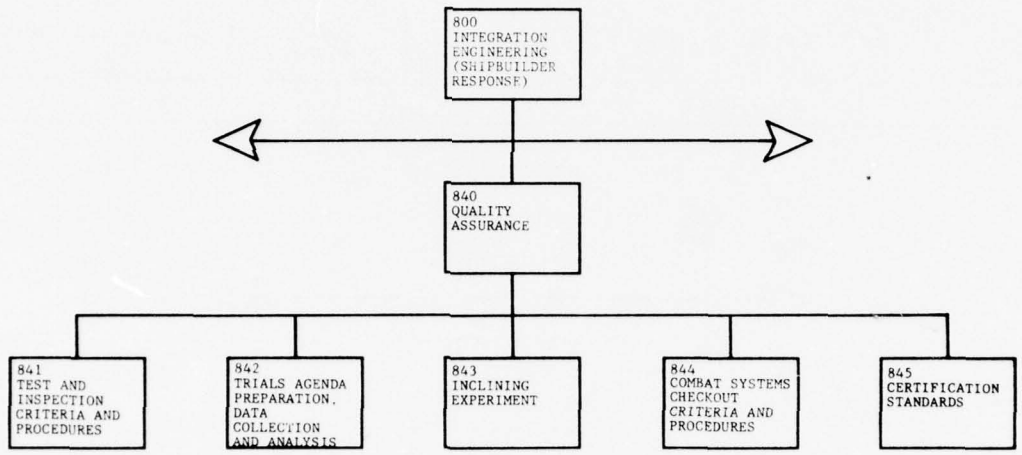
DDG-2 CLASS
PREPARED 8-13-76

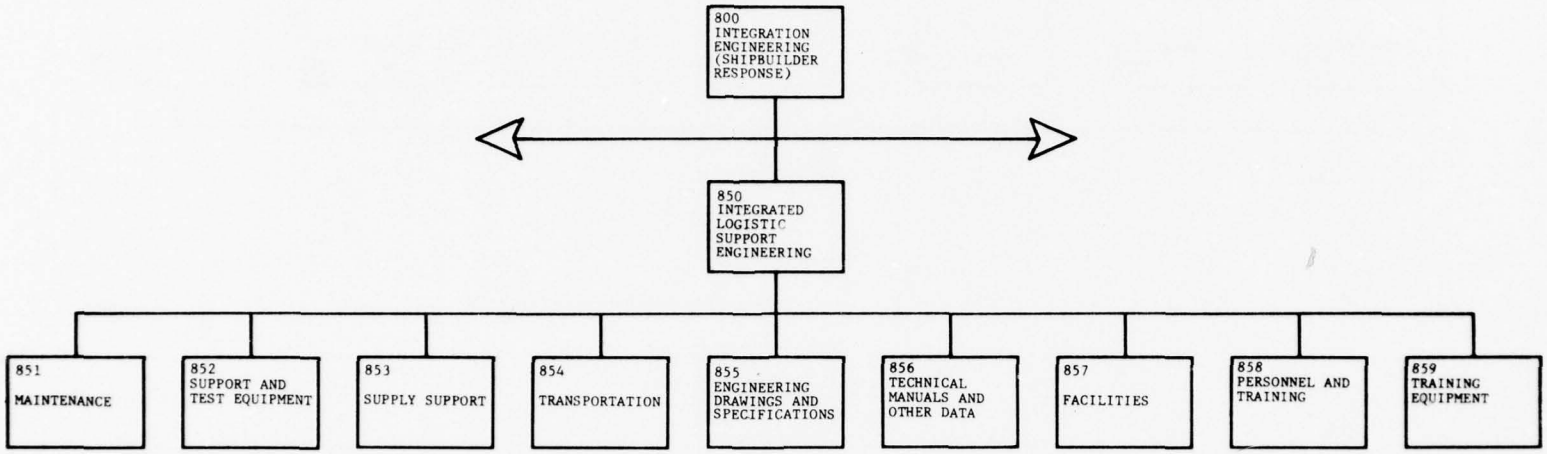

700
ARMAMENT
790
SPECIAL PURPOSE SYSTEMS
792
SPECIAL WEAPONS HANDLING
793
SPECIAL WEAPONS STORAGE
797
MISCELLANEOUS ORDNANCE SPACES
798
ARMAMENT OPERATING FLUIDS
799
ARMAMENT REPAIR PARTS AND SPECIAL TOOLS
7921
SPECIAL WEAPONS HANDLING
7931
SPECIAL WEAPONS STOWAGE
7971
MISCELLANEOUS ORDNANCE SPACES
7991
ARMAMENT REPAIR PARTS
7992
ARMAMENT SPECIAL TOOLS
7921Y6
SPECIAL WEAPONS HANDLING ACCESSORIES
79319C
COMPARTMENT-SPECIAL WEAPONS STOWAGE
79719C
COMPARTMENT-ORDNANCE SPACE
79915W
ARMAMENT REPAIR PARTS
INCLUDES:
5"/54 CAL PIPE REPLACEMENT KITS
7992BY
SHOP TOOLS AND ACCESSORIES
INCLUDES:
TOOL USED WITH:
ASROC
FIRE CONTROL SYSTEMS
TARTAR MISSILE SYSTEM
TORPEDO TUBE LAUNCHER
SMALL ARMS
5"/54 CAL GUN

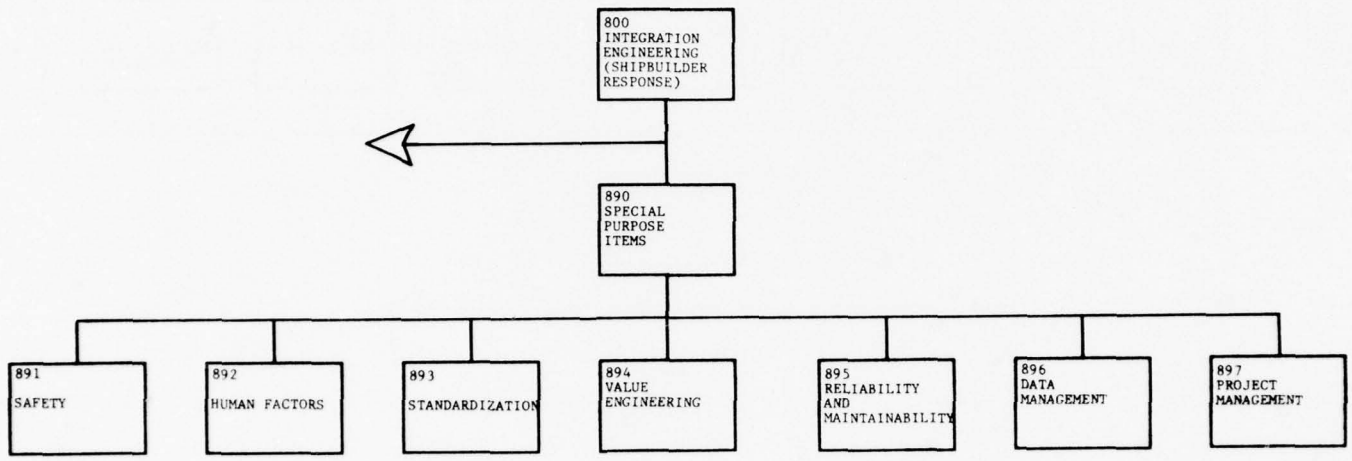

800
INTEGRATION
ENGINEERING
(SHIPBUILDER
RESPONSE)
800
INTEGRATION/
ENGINEERING
801
SHIPBUILDERS
INFORMATION
DRAWINGS
802
CONTRACT
DRAWINGS
803
STANDARD
DRAWINGS
804
TYPE
DRAWINGS
806
STUDY
DRAWINGS


800
INTEGRATION
ENGINEERING
(SHIPBUILDER
RESPONSE)
810
PRODUCTION
ENGINEERING
811
CONFIGURATION
MANAGEMENT
812
CHANGE
PROPOSALS
SCOPING AND
SHIPBUILDING
813
PLANNING AND
PRODUCTION
CONTROL


800
INTEGRATION
ENGINEERING
(SHIPBUILDER
RESPONSE)
830
DESIGN SUPPORT
831
CONSTRUCTION
DRAWINGS
832
SPECIFICATIONS
833
WEIGHT
ENGINEERING
834
COMPUTER
PROGRAMS
835
ENGINEERING
CALCULATIONS
836
MODELS AND
MOCKUPS
837
PHOTOGRAPHS
838
DESIGN/
ENGINEERING
LIAISON
839
LOFTING


800
INTEGRATION
ENGINEERING
(SHIPBUILDER
RESPONSE)
840
QUALITY
ASSURANCE
841
TEST AND
INSPECTION
CRITERIA AND
PROCEDURES
842
TRIALS AGENDA
PREPARATION,
DATA
COLLECTION
AND ANALYSIS
843
INCLINING
EXPERIMENT
844
COMBAT SYSTEMS
CHECKOUT
CRITERIA AND
PROCEDURES
845
CERTIFICATION
STANDARDS


800
INTEGRATION
ENGINEERING
(SHIPBUILDER
RESPONSE)
850
INTEGRATED
LOGISTIC
SUPPORT
ENGINEERING
851
MAINTENANCE
852
SUPPORT AND
TEST EQUIPMENT
853
SUPPLY SUPPORT
854
TRANSPORTATION
855
ENGINEERING
DRAWINGS AND
SPECIFICATIONS
856
TECHNICAL
MANUALS AND
OTHER DATA
857
FACILITIES
858
PERSONNEL AND
TRAINING
859
TRAINING
EQUIPMENT


800
INTEGRATION
ENGINEERING
(SHIPBUILDER
RESPONSE)
890
SPECIAL
PURPOSE
ITEMS
891
SAFETY
892
HUMAN FACTORS
893
STANDARDIZATION
894
VALUE
ENGINEERING
895
RELIABILITY
AND
MAINTAINABILITY
896
DATA
MANAGEMENT
897
PROJECT
MANAGEMENT

APPENDIX A

COMPONENT DICTIONARY CODE LIST

APPENDIX A

COMPONENT DICTIONARY CODE LIST

CDC	LAPL	
AA	C82	ABANDON SHIP ACCESSORIES AND LIFE BOATS
AB	AB-	SUPPORTS, ANTENNA (ELEX)
AC	94-003	ACOUSTIC DEVICE-SEE ALSO CONTROL ACOUSTIC DEVICE-MINESWEEPING
AD	02-006	BOILER-AUXILIARY, STEAM, WASTE HEAT
AE	10-006	METER-ELECTRICAL INDICATING, AC AND DC METERS
AF	52-013	ACTUATOR-HYDRAULIC SEE ALSO CYL-ACT LINEAR
AG	61-265	ACTUATOR-PNEUMATIC & ELECTRO-PNEUMATIC
AH	41-040	CUTTING MACHINE-OXYGEN ACETYLENE
AI	31-009	CATHODIC PROTECTION EQUIPMENT
AJ	61-273	ACTUATOR-ELECTRO MECHANICAL
AK	85-008	ADAPTER-MISSILE HANDLING, CARGO HANDLING
AL	41-122	AGITATOR-PAINT, SHAKER TYPE
AM	AM-	AMPLIFIERS (ELEX/ORD)
AM		AMPLIFIERS (ELEX/ORD)
AN	33-002	AIR CONDITIONER
AO		NOT ASSIGNED
AP	88-011	VALVE-TEMPERATURE REGULATING, STEAM CONTROL
AQ	33-012	AIR CONDITIONER-WINDOW UNIT TYPE
AR	09-001	CHARGER-BATTERY,AC
AS	97-006	ANTENNA ASSEMBLY-BICONICAL OR STUB (HM&E/ELEX)
AS	AS-	ANTENNAE-SIMPLE & COMPLEX (HM&E/ELEX)
AT	AT-	ANTENNAE-SIMPLE (ELEX)
AU	36-001	ALARMS & SIGNALING DEVICES-HORNS, SIRENS AND WHISTLES, AIR OR STEAM
AV	41-006	CHARGER-MAGNET, PORTABLE
AW	36-005	ALARMS & SIGNALING DEVICES-WHISTLE, STEAM OR AIR
AX	41-046	CENTERING MACHINE-SINGLE SPINDLE
AY	03-007	COOLER-AIR
AZ	83-001	SEAL-STERNTUBE, SUBMARINE APPLICATION
A0	88-021	VALVE-BOILER BLOW
A1	36-003	ALARMS & SIGNALING DEVICES-BELL,BUZZER, SIREN ELECTRICAL
A2	23-009	ALARMS & SIGNALING DEVICES-LIGHT, INDICATOR, ELECTRICAL
A3	61-079	AMPLIFIER-MAGNETIC
A4	88-023	VALVE-SAFETY RELIEF, INCLUDING VACUUM BREAKERS
A5	61-082	AMPLIFIER-HYDRAULIC
A6	822	STEERING AND DIVING TOOLS AND REPAIR PARTS
A7	823	TOOLS AND EQUIPMENT O2N2 PLANT
A8	23-006	ANNUNCIATOR-MECHANICAL DROP-AC
A9	824	PERISCOPES - HOUSING FITTINGS
BA	BA-	BATTERY-PRIMARY TYPE (ELEX)
BB	BB-	BATTERY-SECONDARY TYPE (ELEX)
BC	C9-005	BATTERY-STORAGE
BD	37-001	BEARING ASSEMBLY-STERN TUBE & STRUT
BE	41-001	BALANCING INSTRUMENT-PORTABLE
BF	85-037	BALL, NUT, & SCREW ASSEMBLY
BG	C4-002	CONDENSER CHILLER-REFRIGERATION
BH	37-011	BEARING ASSEMBLY-THRUST, PIVOTED SEGMENTAL, SINGLE OR DOUBLE
BI	53-001	CAPSTAN-SEE ALSO MOORING ACCESSORIES
BJ	C37	MEDICAL EQUIPMENT-PORTABLE
BK	83-011	BRAKE-PROPULSION SHAFT(REGARDLESS OF PRIME MOVER)
BL	37-013	BEARING ASSEMBLY-THRUST AND JOURNAL WITH RESONANCE CHGR
BM	C5-023	COOLING UNIT-AIR TURBINE DRIVEN
BN	37-005	BEARING ASSEMBLY-LINE SHAFT
BO		NOT ASSIGNED

CDC	LAPL	
BP	25-042	BENCH MARK-OPTICAL
BQ	41-097	BENDING MACHINE-POWER OPERATED
BR	93-003	BLENDER-AVIATION FUEL
BS	05-030	TURBOSUPERCHARGER-CENTRIFUGAL BOILER
BT	05-031	TURBINE-GAS
BU	02-001	BOILER-MAIN PROPULSION, HP STEAM
BV	02-005	BOILER-AUXILIARY, HOT WATER
BW	64-017	FIRE EXTINGUISHER-PORTABLE
BX	88-027	VALVE-COMPRESSOR SHUT OFF
BY	C92	TOOLS AND ACCESSORIES
BZ	BZ-	ALARM UNITS (ELEX)
BO		MINOR LANDING CRAFT AND SMALL BOATS (INCL ALL COMMODITY CLASS 72)
B1	43-024	BREAD SLICING MACHINE
B2	99-017	BREATHING APPARATUS
B3	89-001	BUOY-MESSENGER SEE ALSO UNDERWAY REPLEN ACC
B4	03-008	COOLER-AIR
B5	30-001	BURNER-OIL, PRESSURE ATOMIZING, BOILER SERVICE
B6	30-002	BURNER-OIL, PRESSURE ATOMIZING, GUN TYPE
B7	30-004	BURNER-OIL, VAPORIZING POT
B8	30-005	BURNER-OIL, ROTARY HORIZONTAL
B9	30-007	BURNER-CATALYTIC
CA	CA-	COMMUTATOR ASSEMBLY-SONAR (ELEX)
CB	CB-	CAPACITOR BANK (ELEX)
CC	32-019	CABINET, ICE CREAM SEE ALSO REFRIGERATOR
CD	28-005	CABINET, RESOLVER CONTROL-AUTOMATIC PLOTING
CE	41-005	CABINET, BLAST CLEANING
CF	85-038	CABLE MACHINERY-DECK
CG	CG-	CABLE ASSEMBLY-RF (ELEX)
CH	C15	GASOLINE AND JP - FUEL SYSTEMS TOOLS AND FITTINGS
CI	43-027	CABINET, DOUGH PROOFING
CJ	54-006	CAMERA-COPYING, LITHOGRAPHIC
CK	CK-	CRYSTAL KITS (ELEX)
CL	99-002	CARBON DIOXIDE
CM	CM-	COMPARATOR (ELEX)
CN	CN-	COMPENSATOR (ELEX)
CO	C-	CONTROLS (ELEX/ORD)
CO		CONTROLS (ELEX/ORD)
CP	CP-	COMPUTER (ELEX/ORD)
CP		COMPUTER (ELEX/ORD)
CQ	85-042	CARRIAGE/CAR/CART/TRACTOR/TRAILOR
CR	CR-	CRYSTALS (ELEX)
CS	05-032	BASE/ENCLOSURE-GAS TURBINE
CT	41-147	CARTON MACHINE
CU	CU-	COUPLER (ELEX)
CV	CV-	CONVERTER (ELEX/ORD)
CV		CONVERTER (ELEX/ORD)
CW	CW-	RADOMES (ELEX)
CX	CX-	CABLE ASSEMBLIES, NON RF (ELEX)
CY	CY-	CASES AND CABINETS (ELEX)
CZ	32-003	CHILLER-WATER
C0	88-029	VALVE-REGULATING, WATER FLOW, FOR REFRIGERATION SYSTEMS
C1	76-004	CHLORINATOR
C2	31-032	CHOCK-ROLLER, DECK AND STERN
C3	14-001	CIRCUIT BREAKER-NAVY TYPE AQB AND AQBLF
C4	14-002	CIRCUIT BREAKER-NAVY TYPE NQB AND NLB
C5	14-003	CIRCUIT BREAKER-NAVY TYPE ACB

CDC	LAPL	
C6	14-004	CIRCUIT BREAKER-NAVY TYPE ALB
C7	14-006	CIRCUIT BREAKER-OTHER THAN AQB, NQB, ACB,ALB TYPES
C8	41-148	CLEANING MACHINE-ALL TYPES EXCEPT BLAST CLNG CAB
C9	59-006	CLOSER-DOOR HYDRAULIC
DA	DA-	DUMMY LOAD (ELEX)
DB	33-007	DAMPER-ACTUATOR AND POSITIONER
DC	40-006	DAMPER-VENT, COMBUSTION CONTROL
DD	56-001	DAVITS, ALL TYPES
DE	28-003	DEAD RECKONING EQUIPMENT
DF	85-024	DEFLECTOR, JET BLAST
DG	46-012	DEGAUSSING MAGNETIC MEASUREMENT SYSTEM
DH	41-011	DEGREASER
DI	D-	DISPENSER-CHAFF (ELEX)
DJ	44-002	DEHUMIDIFIER-DESICCANT ELECTRIC
DK	44-009	DEHUMIDIFIER-SPACE, MECH REFRIG SELF CONTAINED
DL	32-005	DEHYDRATOR-REFRIGERATION
DM	44-001	DEHYDRATOR-FILER, DESICCANT, HGH PRES AIR, SELF REAC
DN	44-004	DEHYDRATOR-NON REACTIVATING
DO		NOT ASSIGNED
DP	08-007	DEMINERALIZER-WATER, ION EXCHANGE
DQ	99-027	DESUPERHEATERS-ALL TYPES
DR	06-205	COMPRESSOR UNIT-AIR
DS	33-005	DAMPER-MECHANICAL EXHAUST VENTILATION SYS
DT	DT-	DETECTING HEADS (ELEX)
DU	54-021	DEVELOPING MACHINE-BLACK AND WHITE PROCESS
DV	43-001	DISH WASHING MACHINE
DW	41-049	DISINTEGRATING MACH-METAL, ELEC ARC
DX	32-014	DISPENSER-DRINKING WTR SEE ALSO DRNKG FTN(67-006)
DY	DY-	DYNAMOTORS (ELEX)
DZ	32-032	DISPENSER-MECHANICALLY REFRIGERATED, MILD
D0	09-002	CHARGER-BATTERY, D.C.
D1	41-146	DISPENSER-TAPE, ELECTRIC
D2	32-031	DISPLAY CASE-MECH REF,SELF CONTND/NON-REFR
D3	06-002	COMPRESSOR-RECIPROCATING
D4	08-001	DISTILLATION UNIT
D5	52-015	DESURGER-HYDRAULIC
D6	32-027	DISPENSER-MECH REF,OTHR THN MLK SEE CAB,ICE CR/FREEZR
D7	08-005	DISTILLATION UNIT-VAPOR COMPRESSION
D8	85-011	DOLLY-BOATSTORAGE SEE ALSO TRK/DOLLY/CRADLE ASS
D9	31-034	DOOR-ROLLER CURTAIN, SHIPBRD, HAND OR PWR OPER
EA	74-001	EDUCTOR-LIQUID
EB	49-001	CARBURETOR
EC	73-010	EJECTOR-GARBAGE AND TRASH DISPOSAL
ED	07-011	HEATER-FLUID
EE	88-031	VALVE-BUBBLER
EF	73-012	EJECTOR-SIGNAL
EG	73-001	EJECTOR ASSEMBLY-AIR
EH	E-	HOISTS (ELEX)
EI		NOT ASSIGNED
EJ	11-003	CONVERTER
EK	849	NITROGEN CHARGING ASSEMBLY
EL	59-001	ELEVATOR-ELECTRO MECHANICAL
EM	15-013	CONTROLLER-AC
EN	16-010	GENERATOR-GAS
EO		NOT ASSIGNED
EP	59-002	ELEVATOR-AIRCRAFT LIFTING

CDC LAPL

EQ 41-050 EMBOSSING MACHINE-METAL & CRDBRD ALSO OFF MACH ACC
ER 16-012 BENCH-LIQUID OXYGEN CONVERTER FILL
ES 66-001 ENGINE-DIESEL, SHIP PROPULSION AND SHIP'S SERVICE, 2 & 4 CYCLE
ET 22-022 SWITCHBOARD-MINESWEEPING
EU 88-037 VALVE-REFRIGERATION SHUT OFF, SMALLER THAN 3/4 IN
EV 66-005 ENGINE-DIESEL, 2 & 4 CYC, TYPE B
EW 16-014 BOOSTER-GAS
EX 66-006 ENGINE-DIESEL,NON-MAGNETIC MINESWP PROP & AUX 4 CYC
EY 66-017 ENGINE-GASOLINE AIR OR FLUID COOLED
EZ 18-007 MOTOR GENERATOR
E0 88-042 VALVE-FLOAT, LIQUID LEVEL CONTROL, REFRIGERATION SYSTEMS
E1 66-019 ENGINE-GASOLINE, BOAT PROP, OUTBOARD MOTOR
E2 66-020 ENGINE-STEAM,RECIPROCATING,MN PROP & AUX SERVICE
E3 88-044 VALVE-STEAM SEAL MANIFOLD
E4 88-045 VALVE-GUARDING
E5 41-051 ENGRAVING MACHINE PANTOGRAPH
E6 59-005 ESCALATOR
E7 09-011 EXCHANGER, ION
E8 93-001 EXPANSION JOINTS-PIPE,PACKLESS
E9 88-046 VALVE-TRIP THROTTLE
FA 40-001 FAN-VANEAXIAL AND/OR TUBEAXIAL
FB 18-009 MOTOR GENERATOR
FC 40-002 FAN-CENTRIFUGAL
FD 20-002 RHEOSTAT
FE 40-003 FAN-CIRCULATING
FF 40-009 FAN-CENTRIFUGAL, CARBON DIOXIDE REMOVAL SYS
FG 99-030 FEEDRAIL-BRIDGE CRANE
FH 41-076 FILING MACHINE-SAW,BLADE
FI C56 BOILER FEEDWATER TEST AND TREATMENT
FJ 09-010 FILLER-PORTABLE BATTERY WATER
FK 48-002 FILTER-FLUID,PRESSURE
FL F- FILTER UNITS (ELEX)
FM 20-006 RHEOSTAT
FN FN- FURNITURE (ELEX)
FO NOT ASSIGNED
FP 88-048 VALVE-CROSSOVER AND MANIFOLD
FQ 43-034 FILTER-COOKING GREASE
FR FR- FREQUENCY MEASURING DEVICES (ELEX)
FS C55 FUEL OIL STOWAGE AND EQUIPMENT
FT 31-023 FITTINGS-HULL SEE ALSO TOWING-ACC,MOORING ACC
FU 24-002 FIXTURE-LIGHTING
FV 48-006 FILTER-AIR, WET OR DRY ELEMENTS
FW 76-003 FILTER-WATER PURIFICATION
FX 31-012 FLAME ARRESTER-VENTILATION
FY 54-015 FOLDING MACHINE-PAPER
FZ 43-012 GRINDERS AND CUTTERS-FOOD ELECTRICAL
F0 16-011 FURNANCE ASS OXY CANDLE ROUND AND SQUARE
F1 43-059 FOOD WARMER-RADIANT,OVERHEAD,ELECTRIC
F2 41-016 FORGE-OIL BURNING ELEC OR OTHER ALSO FURNACE
F3 41-053 FORGING MACHINE-HAMMER VERTICAL
F4 41-017 FORMING MACHINE-SHEET METAL
F5 54-004 FRAME PRINTING
F6 43-006 FRYERS-DEEP FAT, ELECTRIC
F7 85-046 FUEL DISPERSING SYS
F8 41-019 FURNANCE- ELECTRIC
F9 41-020 FURNANCE-OIL BURNING

CDC	LAPL	
GA	45-003	GAGE-LIQ QNTY MECHANICAL SEE ALSO INDICATOR AND METER
GB	45-004	GAGE-LIQUID QUANTITY HYDRAULIC/PNEUMATIC
GC	45-007	GAGE-PRESSURE
GD	45-009	GAGE-DEPTH SUBMARINE
GE	43-002	GALLEY EQUIPMENT-ELECTRICAL
GF	43-009	GARBAGE DISPOSAL MACHINE
GG	31-005	GATE-STERN SEE ALSO DOOR OR HATCH
GH	G-	GENERATOR-POWER (ELEX)
GI	B67	OPERATING GEAR MISCELLANEOUS REPAIR PARTS
GJ	43-047	DOUGHNUT MACHINE-CUTTING AND FRYING
GK	69-028	GEAR-TURNING/JACK DEVICE
GL	69-029	GEAR-TILTING
GM	69-006	GEAR ASSEMBLY-SPEED DECREASER,MAIN PROP SERVICE
GN	69-016	GEAR ASSEMBLY-SPEED DECREASER, AUX SERVICE
GO	GO-	GONIOMETERS (ELEX)
GP	GP-	GROUND RODS (ELEX)
GQ	B51	BOILER FEEDWATER SYSTEM CONTROL FITTINGS
GR	23-008	SEMAPHORE-MECHANICAL SIGNAL
GS	43-044	GALLEY UNITS-COMPACT
GT	16-006	GENERATOR-DC OR AC
GU	24-004	FIXTURE-LIGHTING FLUORESCENT
GV	24-006	FIXTURE-LIGHTING MERCURY VAPOR
GW	16-008	GENERATOR-SMOKE, MECHANICAL
GX	16-009	GENERATOR-OXYGEN/NITROGEN
GY	16-001	GENERATOR-BATTERY CHARGING
GZ	70-001	GOVERNOR-MECHANICAL
G0		FUEL GELLING UNIT MIG - 10
G1	70-005	GOVERNOR-HYDRAULIC
G2	88-072	GOVERNOR-PUMP
G3	70-013	GOVERNOR-ELECTRO HYDRAULIC
G4	70-014	GOVERNOR-ELECTRIC
G5	23-004	SEARCHLIGHT-SIGNAL
G6	41-057	GRINDING MACHINE-CYCLINDRICAL
G7	41-060	GRINDING MACHINE-GLASS
G8	41-063	GRINDING MACHINE-VALVE
G9	41-065	GRINDING MACHINE-SURFACE, RECIPROCATING
HA	85-031	HANDLING GEAR-GUIDANCE CAPSULE
HB	85-045	HANGAR-AIRCRAFT
HC	HC-	HOLDER, CRYSTAL (ELEX)
HD	HD-	ENVIRONMENTAL APPARATUS (ELEX)
HE	07-002	HEATER-FLUID, FUEL OIL AND LUBE OIL, STEAM HEATED
HF	07-003	HEATER-WATER AND AIR
HG	26-015	PROJECTOR-MOTION PICTURE, SOUND, SUPER 8MM
HH	07-004	HEATER-WATER, STM/HT WTR HTD,INST, STM WTR CVTR
HI	07-001	HEATER-FLUID, SEA WATER, STEAM HEATED
HJ	07-005	HEATER-FLD, DEAERATING, BOILER FDWTR, TYPES I & II
HK	07-006	HEATER-IMMERSION, ELECTRIC
HL	07-007	HEATER-SPACE ELEC, TYP D RADIANT, TYPE T TUR,RAD PANL
HM	26-016	PROJECTOR-MOTION PICTURE, SOUND, SUPER 16MM
HN	07-013	HEATER-WTR, ELECTRIC STORAGE TYPE
HO		NOT ASSIGNED
HP	07-016	HEATER-COOLANT ENGINE, OIL FIRED OR ELECTRIC
HQ	07-022	HEATER-VENTILATION , VENT DUCT, ELEC, TYP 51-61
HR	07-023	HEATER-SPACE ELECTRIC, BLOWER, TYPE B
HS	H-	HEAD, HAND, AND CHEST SETS (ELEX)
HT	07-017	HEATER-AIR CIRCULATING UNIT, STEAM OR HT WTR HTD

CDC	LAPL	
HU	07-045	HEATING ELEMENTS-ELEMENTS-ELECTRICAL
HV	07-036	HEATING UNIT-ELEC. CONTRLD TEMP FOR STRSS RELF PRHTG
HW	58-001	HOIST-WIREROPE ELECTRIC
HX	58-002	HOIST-MANUAL
HY	58-003	HOIST-ELECTRC HYDRAULIC & ELECTRO-MECHANICAL
HZ	58-004	HOIST-CHAIN ELECTRIC
H0	61-116	HYDROSTAT. CONTROL
H1	58-005	HOIST-PNEUMATIC
H2	58-006	HOIST-HYDRAULIC
H3	85-025	HOIST-WINDSCREEN
H4	87-009	HOIST-RODMETER. U/W LOG
H5	52-035	HOIST ASSEMBLY-CYL & RAM TYP FOR COMMUN MAST
H6	41-069	HONING MACHINE-HORIZONTAL OR VERTICAL
H7	38-010	HUMIDIFIER
H8	52-016	HYDRAULIC MECHANISM SEE ALSO MISSLE HNDG SYS-HYD
H9	31-033	HYDROFOIL ASSEMBLY
IA	64-018	FIRE EXTINGUISHING SYSTEM
IB	66-002	ENGINE-DIESEL. TWO CYCLE
IC	665	IC COMMUNICATION EQUIPMENT
ID	ID-	INDICATOR-NON CATHODE RAY TUBE (ELEX/CRD)
ID		INDICATOR-NON CATHODE RAY TUBE (ELEX/CRD)
IE	66-018	ENGINE-GASOLINE
IF	66-021	ENGINE-DIESEL. NONMAGNETIC
IG	66-022	ENGINE-DIESEL. MODEL 645
IH	69-026	GEAR ASSEMBLY-SPEED INCREASER
II	71-001	DISTRIBUTOR-IGNITION SYSTEM
IJ	73-011	EJECTOR-SEWAGE
IK	78-018	COUPLING ASSEMBLY
IL	IL-	INSULATORS (ELEX)
IM	IM-	INTENSITY MEASURING DEVICES (ELEX)
IN	79-003	MUFFLER-DRY
IO		NOT ASSIGNED
IP	IP-	INDICATORS-CATHODE RAY TUBE (ELEX)
IQ	83-015	CONTROL BOARD-CONTROLLABLE PITCH PROPELLER. EMER. PITCH CONTROL
IR	91-004	LAUNDRY PRESS-COMMERCIAL
IS	859	AIR CONDITIONING REFRIGERATION TOOLS AND ACCESSORIES
IT	92-020	TANK-LUBE OIL STORAGE AND CONDITIONING ASSEMBLY
IU	94-004	ACOUSTIC DEVICE
IV	94-005	ACOUSTIC DEVICE
IW		NOT ASSIGNED
IX	97-012	SUB ASSEMBLIES-PERISCOPE
IY	97-018	CAMERA ACCESSORIES-PERISCOPE
IZ	99-029	RECEIVER-FUELING PROBE
I0		NOT ASSIGNED
I1		NOT ASSIGNED
I2	864	NAVIGATIONAL SIGNAL LIGHTS
I3		NOT ASSIGNED
I4		NOT ASSIGNED
I5		NOT ASSIGNED
I6		NOT ASSIGNED
I7		NOT ASSIGNED
I8		NOT ASSIGNED
I9		NOT ASSIGNED
JA	43-028	ICE CREAM CUP FILLING MACHINE- HAND OPERATED
JB	32-017	ICE CREAM FREEZER-PWR OPER WITH INTGRL MCH REF EQ
JC	32-022	ICE MAKING MACHINE-MECH REFRIG SELF CONTAINED

CDC	LAPL	
JD	J-	INTERFACE UNITS (ELEX)
JE	32-004	ICE MAKING PLANT
JF	41-032	IMPREGNATING EQUIPMENT
JG	30-006	INCINERATOR SEE ALSO BURNER
JH	27-008	SALINITY INDICATING EQUIPMENT
JI		NOT ASSIGNED
JJ	38-002	INDICATOR-TEMPERATURE, ELECTRICAL
JK	28-028	NAVIGATION EQUIPMENT
JL	38-007	INDICATOR-BOILER SMOKE
JM	38-014	INDICATOR-SALINITY & SALINITY CELL
JN	38-015	INDICATOR-PRES DIFFERTL, LIQ/STM LVL, DIR OR REM
JO		NOT ASSIGNED
JP	38-016	INDICATOR-MECHANICAL TACHOMETER
JQ	38-020	INDICATOR-LIQ LVL, FLOW, WATER AND FUEL
JR	45-001	INDICATOR-SIGHT LIQUID, FLAT
JS	45-002	INDICATOR-SIGHT LIQUID, TUBULAR
JT	45-005	INDICATOR-METER, DIFFERENTIAL PRESSURE
JU	61-025	INDICATOR-PORTABLE SHIP CONTROL
JV	41-111	VULCANIZER - RUBBER COVERED CABLE
JW	29-001	INJECTOR- FUEL DIESEL ENGINE NOZZLE NON-MET TYP
JX	29-002	INJECTOR-FUEL, DIESEL ENGINE, UNIT METERING AND PRES
JY	43-060	INJECTOR-RINSE AGENT FOR DISHWASHING MACHINE
JZ	B87	MEASURING AND INDICATING INSTRUMENTS
J0	31-011	TENSION UNIT-HYDRAULIC RAM
J1	27-009	INTERCOMMUNICATION STATION
J2	97-002	MAST-ANTENNA
J3	97-013	MAST-SNORKEL
J4	G89	NUCLEAR POWER PLANT - COOLANT DISCHARGE SYSTEM VALVE
J5	85-035	JACK ASSEMBLY-HAND, SCREW, HYDRAULIC/PNEUMATIC OPR
J6	41-034	JOINTER-WOODWORKING
J7	27-010	TELEPHONE EQUIPMENT-DIAL
J8	43-008	KETTLE-STEAM JACKETED
J9	41-070	KEY DUPLICATING MACHINE
KA	40-004	DRIER-HAND, ELECTRIC
KB	86-003	DRIER-PHOTOGRAPHIC
KC	41-014	DRILLING MACHINE-FLOOR OR BENCH
KD	43-050	TABLE-FOOD WARMER,ELECTRIC/STEAM HEATED
KE	54-014	DRILLING MACHINE-PAPER
KF	67-006	DRINKING FOUNTAIN
KG	52-001	DRIVE ASSEMBLY-ELECTRO HYDRAULIC AMMUN HOIST
KH	52-004	DRIVE ASSEMBLY-ELECTRO HYD HST, VERT TUB,,12.75RKT
KI	16-005	TACHOMETER SEE ALSO INDICATOR-MECHANIC TACHOMETER
KJ	52-007	DRIVE ASSEMBLY-ELECTROHYDRAULIC HOIST,3000# MIS TRAV
KK	88-063	VALVE-PRESSURE REGULATING
KL	85-004	DRIVE ASSEMBLY-SLIDING BLOCK
KM	91-008	DRY CLEANING PRESS
KN	91-007	DRY CLEANING UNIT ASS-AUTO,SYNTHET SOLVENT TYPE
KO		NOT ASSIGNED
KP	54-018	DRYING MACHINE BLUEPRINT
KQ	91-002	DRYING TUMBLER-LAUNDRY
KR	59-003	DUMBWAITER
KS	54-002	DUPLICATING MACHINE-OFFSET SEE ALSO OFF MACH ACC
KT	41-015	DYNAMOMETER
KU	41-131	TANK-HOT DIP
KV	92-005	TANK-DIESEL ENGINE,AIR STARTING
KW	92-001	TANK-STORAGE

CDC	LAPL	
KX	88-104	VALVE-STOP CHECK
KY	KY-	KEYING DEVICES (ELEX)
KZ	88-117	VALVE SUBPLATE
K0	88-125	VALVE-PRESSURE CONTROL
K1	88-129	VALVE-PRESSURE REGULATING
K2	88-130	VALVE-HYDRAULIC CONTROL
K3	01-010	PUMP, ROTARY PISTON, FIXED OR VARIABLE DELIVERY
K4	88-134	VALVE-SHUTTLE
K5	88-135	VALVE-HYDRAULIC
K6	88-138	VALVE-CHECK, INLINE, UNDER $25.00
K7	01-025	PUMP, PORTABLE SUBMERSIBLE
K8	88-142	VALVE-CHECK, INLINE, $25.00 AND ABOVE
K9	88-158	VALVE-TEST CASTING
LA	24-009	LANTERN-ELECTRIC, BATTERY TYPE
LB	41-036	LATHE-METAL WORKING
LC	LC-	TOOLS-LINE CONSTRUCTION (ELEX)
LD	91-012	LAUNDRY EQUIPMENT
LE	23-002	LIGHT-INDICATOR
LF	24-008	LIGHT-NAVIGATIONAL MARINE
LG	54-024	LIGHT-ARC PHOTOLITHOGRAPHIC
LH	16-015	LIQUIDIFIED GAS STORAGE AND CHARGING SYS
LI		NOT ASSIGNED
LJ	54-007	LITHOGRAPHIC, NEGATIVE AND PLATE MAKING
LK	99-020	LOCK-ELECTROMECHANICAL
LL	28-018	LOCKER-BINOCULAR DRYING
LM	26-013	LOUDSPEAKER-MOTION PICTURE PROJECTOR
LN	65-001	LUBRICATOR-MECHANICALLY OR HAND OPERATED
LO		NOT ASSIGNED
LP	65-002	LUBRICATOR-AIR OPERATED
LQ	C16	LADDERS AND ACCESS CLOSURE EQUIPMENT
LR	B45	LUBE OIL PIPING SYSTEM REPAIR PARTS
LS	LS-	LOUDSPEAKERS (ELEX)
LT	41-037	LATHE-WOODWORKING
LU	88-159	VALVE-DISTRIBUTOR LUBRICATION
LV	41-141	UNDERCUTTER - ARMATURE, MICA, ELECTRICAL OPERATED
LW	C20	UNDERWAY REPLENISHMENT TOOLS AND ACCESSORIES
LX	32-008	UNION TUBE - REFRIGERATION
LY	43-005	URNS -COFFEE
LZ	88-162	VALVE-SHEARING
L0	88-169	VALVE-LINE BLIND
L1		LAUNCHER STAND-WEAPON SYSTEM
L2		LAUNCHER GUIDES-WEAPON SYSTEM
L3		TRAIN ASSEMBLY-WEAPON SYSTEM
L4		ELEVATION ASSEMBLY-WEAPON SYSTEM
L5		AMPLIFIER,POWER DRIVE-WEAPON SYSTEM
L6		RAMMER-LOADER ASSEMBLY-WEAPON SYSTEM
L7	88-170	VALVE AND TRAP MANIFOLD
L8	88-177	VALVE-SPECIAL STOP CHECK
L9	88-186	VALVE-FLOW FUSE
MA	MA-	MAGAZINE-MAGNETIC TAPE OR WIRE (ELEX)
MB	68-001	MAGNETO-IGNITION
MC	32-006	MANIFOLD-REFRIGERATION
MD	MD-	MODULATORS, DEMODULATORS, AND DISCRIMINATORS (ELEX)
ME	ME-	METERS (ELEX)
MF	MF-	MAGNETS OR MAGNETIC FIELD GENERATORS (ELEX)
MG	45-008	MANOMETER-U TUBE AND OTHER TYPES

CDC	LAPL	
MH	91-006	MARKING MACHINE-LAUNDRY
MI	M-	MICROPHONES (ELEX)
MJ	85-030	MAST-HINGED
MK	MK-	MISCELLANEOUS KITS (ELEX)
ML	ML-	METEOROLOGICAL DEVICES (ELEX)
MM	43-016	MEAT SLICING MACH-ELEC & MANUAL SEE ALSO FOOD CUTTER
MN	43-021	MEAT TENDERIZER-ELECTRIC
MO		NOT ASSIGNED
MP	10-001	METER-VOLUMETRIC, POS DISPL,FUEL OIL,WTR,GAS,JP-5,AL T
MQ	10-002	METER-FLOWRATE INDICATING, FLOAT TYPE ROTAMETER
MR	10-003	METER-IMPELLER TYPE LIQUID VELOCITY
MS	10-004	METER-VENTURI TYPE
MT	MT-	MOUNTINGS (ELEX)
MU	MU-	MEMORY UNITS (ELEX)
MV	41-042	MILLING MACHINE-HORIZONTAL
MW	41-043	MILLING MACHINE-WOODWORKING, VERTICAL, BORING
MX	MX-	MISCELLANEOUS EQUIPMENT (ELEX)
MY	41-038	MIXER-LIQUID, PORTABLE
MZ	43-004	MIXING MACHINE-ELECTRIC, FOOD AND FLUID
M0	28-031	SEXTANT, MARINE
M1	43-035	MOLDING MACHINES-MEAT, FISH
M2	C26	ANCHORING AND MOORING APPLIANCES
M3	41-088	MORTISER-HOLLOW CHISEL
M4	17-023	MOTOR-AC/DC 0.25 HORSEPOWER AND SMALLER
M5	31-039	SONAR DOME WINDOW SYSTEM
M6	10-005	METER-FLOWRATE INDICATING, VANE TYPE
M7	17-001	MOTOR-AC OR DC
M8	31-040	TENSIONING DEVICE-TORSION BAR
M9	E32	MISCELLANEOUS FLAG ALLOWANCES, OFFICE MACHINES
NA	32-021	CARBONATOR-SODA FOUNTAIN
NB	13-013	TRANSFORMERS-REPAIRABLE AND NON-REPAIRABLE
NC	32-025	ICE CREAM FREEZER
ND	33-004	CHILLER-WATER, AIR CONDITIONING
NE	61-080	AMPLIFIER-ELECTRONIC
NF	52-005	TRANSMISSION-HYDRAULIC,FIXED OR VARIABLE DELIVERY SEE ALSO POWER UNIT
NG	69-011	TRANSMISSION-MECHANICAL
NH	27-005	TRANSMITTER-MECHANICAL
NI		NOT ASSIGNED
NJ	27-006	TXMTR-LIQ LVL AND/OR FLOW,CAP,FLOAT,IND,RADIOACT,RES AND SONIC TYPE
NK	27-021	TRANSMITTER-LIQUID LEVEL, ELECTRICAL
NL	28-024	TRANSMITTER-NAVIGATIONAL
NM	61-085	TRANSMITTER-TEMPERATURE SEE ALSO INDICATOR - TEMPERATURE,ELEC RESIST
NN	27-001	TRANSMITTER/INDICATOR-ELECTRICAL TRANSMITTER TYPES
NO		NOT ASSIGNED
NP	54-022	PRINTING MACHINE-BLUEPRINT
NQ	85-043	STAND-MISSILE
NR	88-192	VALVE-PRESSURE REGULATING, HIGH PRESSURE AIR
NS		STEEL PLATE
NT	88-193	VALVE-FLOW CONTROL
NU	88-201	VALVE-ORFICE
NV	77-001	TRAP-STEAM AND/OR AIR
NW	37-016	BEARING-JOURNAL, PIVOTED PAD/SHOE
NX	38-021	INDICATING SYSTEM-LIQUID LEVEL, PNEUMATIC
NY	41-002	BALANCING MACHINE-DYNAMIC, STATIC, HORIZONTAL
NZ	41-031	MACHINE-HOSE ASSEMBLY, REPAIR AND CUTOFF
NO	93-004	NOZZLE-PRESSURE FUEL SERVICING

CDC	LAPL	
N1	C24	NAVIGATION EQUIPMENT AND ACCESSORIES
N2	28-027	NAVIGATION EQUIPMENT-PLOTTING SYS SEE ALSO PLTG TABLE
N3	28-026	NAVIGATION EQUIPMENT-DEAD RECKONING EQUIPMENT
N4	28-001	NAVIGATION PLOTTING BOARDS
N5	28-011	NAVIGATIONAL CLOCKS
N6	31-041	DOOR-HINGED-HAND OPERATED
N7	64-001	NOZZLE-FIRE HOSE SEE ALSO DAMAGE CONTROL ACC
N8	64-003	NOZZLE-MONITOR TYPE
N9	64-004	NOZZLE-WATER QUENCH
OA	OA-	MISCELLANEOUS GROUPS (ELEX)
OB	OB-	MULTIPLEXER AND/OR DEMULTIPLEXER GROUPS (ELEX)
OC	OC-	OCEANOGRAPHIC DEVICES (ELEX)
OD	OD-	INDICATOR GROUPS (ELEX/ORD)
OD		INDICATOR GROUPS (ELEX/ORD)
OE	OE-	ANTENNA GROUPS (ELEX)
OF	OF-	ADAPTER GROUPS (ELEX)
OG	OG-	AMPLIFIER GROUPS (ELEX)
OH	OH-	SIMULATOR GROUPS (ELEX)
OI	O-	OSCILLATORS (ELEX)
OJ	OJ-	CONSOLES AND CONSOLE GROUPS (ELEX/ORD)
OJ		CONSOLES AND CONSOLE GROUPS (ELEX/ORD)
OK		CONTROL GROUPS (ELEX/ORD)
OK	OK-	CONTROL GROUPS (ELEX/ORD)
OL	OL-	DATA ANALYSIS AND DATA PROCESSING (ELEX)
OM	OM-	MODULATOR AND/OR DEMODULATOR GROUPS (ELEX)
ON	ON-	INTERCONNECTING GROUPS (ELEX)
OO		NOT ASSIGNED
OP		POWER SUPPLY GROUPS (ELEX/ORD)
OP	OP-	POWER SUPPLY GROUPS (ELEX/ORD)
OQ	OQ-	TEST SET GROUPS (ELEX)
OR	OR-	RECEIVER GROUPS (ELEX)
OS	OS-	OSCILLOSCOPE-TEST (ELEX)
OT	OT-	TRANSMITTER GROUPS (ELEX)
OU	OU-	CONVERTER GROUPS (ELEX)
OV	OV-	GENERATOR GROUPS (ELEX)
OW	OW-	TERMINAL GROUPS (ELEX)
OX	OX-	CODER, DECODER, INTERROGATOR, TRANSPONDER GROUPS (ELEX)
OY	OY-	RADAR SET GROUPS (ELEX/ORD)
OY		RADAR SET GROUPS (ELEX/ORD)
OZ	OZ-	RADIO SET GROUPS (ELEX)
CO		NOT ASSIGNED
O1	99-A01	NR-1 SUBMERSIBLE RESEARCH SHIP
O2	99-A02	ATS-1, 2, 3 (UNITED KINGDOM)
O3	99-A03	ORDNANCE FIRE CONTROL SWITCHING EQUIPMENT (HM&E/ORD)
O3		ORDNANCE FIRE CONTROL SWITCHING EQUIPMENT (HM&E/ORD)
O4	99-A04	DEEP DIVING SUBMERGENCE SYSTEM
O5	99-A05	OCEANOGRAPHIC COMPONENTS
O6		TRANSCEIVER GROUPS
O7		SONAR SET GROUPS
O8	97-003	ANTENNA SYSTEM-FLOATING WIRE
O9	97-004	ANTENNA SYSTEM-HELICAL, LOOP OR WHIP
PA	50-033	PANEL-REMOTE VALVE OPERATING
PB	88-203	VALVE-MIXING, REFRIGERATION, AIR CONDITIONING AND COOLING
PC	50-001	PANEL-FUSE
PD	PD-	PRIME DRIVERS (ELEX)
PE	50-005	PANEL-COMMUNICATION

CDC	LAPL	
PF	PF-	FITTINGS-POLE (ELEX)
PG	PG-	PIGEON ARTICLES (ELEX)
PH	PH-	PHOTOGRAPHIC ARTICLES (ELEX)
PI	97-011	PERISCOPE-STADIMETER
PJ	50-010	PANEL-POWER DISTRIBUTION AND/OR CONTROL (HM&E/ORD)
PJ		PANEL-POWER DISTRIBUTION AND/OR CONTROL (HM&E/ORD)
PK		PANEL-INDICATING (HM&E/ORD)
PK	50-025	PANEL-INDICATING (HM&E/ORD)
PL	PL-	PLUG-IN UNITS (ELEX)
PM	41-072	PAPER SHREDDING MACHINE SEE ALSO OFF MACH ACC
PN	25-004	PELORUS STAND SEE ALSO NAVIGATION EQUIPMENT ACC
PO		NOT ASSIGNED
PP	PP-	POWER SUPPLY-NONROTATING MACHINE TYPE (ELEX)
PQ	97-008	PERISCOPE-COLLIMATOR
PR	97-009	DEPLUMERS, FAIRINGS AND SUPPORTS FOR SUBMARINE PERISCOPES AND MASTS
PS	50-009	PANEL-ALARM
PT	PT-	MAPPING AND PLOTTING UNITS (ELEX)
PU	PU-	POWER SUPPLY-ROTATING (ELEX)
PV	41-047	CLEANING MACHINE-CLOCK AND WATCH
PW	41-073	PINKING MACHINE
PX	B48	PIPING SYSTEM HARDWARE
PY	41-091	PLANER-METAL CUTTING
PZ	97-010	PERISCOPE-SEXTANT
P0	11-009	POWER SUPPLY-AN/SQS-26 SONAR
P1	28-029	PLOTTING TABLE, MK NC2 MODO.2 & 3 SEE ALSO NAVIG EQ (HM&E/ORD)
P1		PLOTTING TABLE, MK NC2 MODO.2 & 3 SEE ALSO NAVIG EQ (HM&E/ORD)
P2	B36	SANITATION EQUIPMENT AND REPAIR PARTS
P3	27-011	PNEUMATIC TUBE SYSTEMS-COMMUNICATION
P4	41-093	POLISHER-METALLURGICAL
P5	41-095	POSITIONER-WELDING
P6	41-094	POT-MELTING, ELEC
P7	97-001	PERISCOPE-SUBMARINE
P8	11-001	POWER SUPPLY-METALLIC RECTIFIER OR SEMICONDUCTOR DIODE TYPE
P9	41-008	CLEANER-STEAM PRESSURE JET
QA	54-010	PRINTING MACHINE-HEAT DEVELOPING
QB	54-005	PRINTING PRESS-OFFSET
QC	54-008	PRINTING PRESS-LETTER PRESS
QD	54-019	PRINTING PRESS-LETTER
QE	54-025	PRINTING PRESS-PROOF
QF	99-028	PROBE AND CARRIER-FUELNG SEE ALSO FUEL OIL SYS ACC
QG	54-017	PROCESSING MACHINE-BLUE PRINT
QH	86-013	PROCESSING MACHINE-PHOTOGRAPHIC FILM
QI		NOT ASSIGNED
QJ	61-117	PROGRAM CONTROLLER
QK	26-001	PROJECTION EQUIPMENT-MOTION PICTURE
QL	26-002	PROJECTION EQUIPMENT-STILL PICTURE
QM	83-030	PROPELLER ASSEMBLY-CONSTANT PITCH
QN	64-007	RECHARGING UNIT-CO2 PUMPING METHOD
QO		NOT ASSIGNED
QP	89-002	RESCUE CHAMBER AND RECOMPRESSION TANK
QQ	55-002	REELING MACHINE-HOSE
QR	32-039	REFRIGERATION SYSTEM-ABSORPTION
QS	83-034	PROPELLER ASSEMBLY-CONTROLLABLE PITCH
QT	64-008	PROPORTIONER-FOAM LIQ SEE ALSO DAMAGE CONTRL ACC
QU	83-043	PROPULSION DRIVE UNIT-STERN
QV	01-038	PUMP UNIT-PUMP AND ACCESSORIES INSTALLED AS A UNIT

CDC	LAPL	
OW	88-213	VALVE-OVERFLOW
OX	01-011	PUMP-CENTRIFUGAL, POWER DRIVEN
OY	32-023	REFRIGERATION-MECHANICAL
OZ	42-001	REGULATOR-ELECTRICAL (EXCPT ENGINE GENERATOR)
O0	88-231	VALVE-CROSS
O1	01-017	PUMP-CENTRIFUGAL, POWER DRIVEN, CLOSE-COUPLED OR COUPLING DESIGN
O2	88-245	VALVE-DIRECTIONAL INTERLOCK
O3	88-248	VALVE-PILOT, PNEUMATIC OPERATED
O4	01-001	PUMP-CENTRIFUGAL, BOILER FEED
O5	88-249	VALVE-CONTROL THERMAL
O6	41-048	CLEANING MACHINE-ELECTRIC AND OILBURNING
O7	88-251	VALVE-LOW PUMP SECTION, SAFETY TRIP
O8	88-252	VALVE-CONTROL AIR
O9	01-014	PUMP-HAND DRIVE, OSCILLATING, RECIPROCATING OR ROTARY
RA	58-007	RACK-READY SERVICE
RB	52-029	RAM-HYDRAULIC
RC	RC-	REELS (ELEX)
RD	RD-	RECORDER/REPRODUCERS (ELEX)
RE	RE-	RELAY ASSEMBLY UNITS (ELEX/ORD)
RE		RELAY ASSEMBLY UNITS (ELEX/ORD)
RF	RF-	RADIO FREQUENCY COMPONENTS (ELEX)
RG	RG-	CABLES, RF BULK-(ELEX)
RH	16-013	RECONDENSER SYSTEM-NITROGEN AND OXYGEN
RI	B34	COMMISSARY EQUIPMENT
RJ	32-007	REFRIGERATION PURGE UNIT
RK	46-010	RECORDER-PNEUMATIC AND ELECTRO-PNEUMATIC
RL	RL-	REELING MACHINES (ELEX/ORD)
RL		REELING MACHINES (ELEX/ORD)
RM	41-084	CLEANING MACHINE-TANK
RN	55-003	REEL-HOSE
RO	RO-	RECORDERS (ELEX/ORD)
RO		RECORDERS (ELEX/ORD)
RP	RP-	REPRODUCERS (ELEX)
RQ	32-029	REFIGERATED TANK-FILM PROCESSING
RR	RR-	REFLECTORS-EXCEPT ANTENNA REFLECTORS (ELEX)
RS	32-001	REFRIGERATION SYSTEM-MECHANICAL
RT	RT-	RECEIVER & TRANSMITTER (ELEX)
RU	C88	DAMAGE CONTROL EQUIPMENT AND ACCESSORIES
RV	R-	RECEIVERS (ELEX)
RW	42-002	REGULATOR-ENGINE GENERATOR, BATTERY CHRG, ELECTROMECH
RX	42-007	REGULATOR-ENGINE GENERATOR, BATTERY CHRG, ELEX
RY	42-100	REGULATOR-PRESSURE
RZ	42-101	REGULATOR-FLOW, BOILER FEED WATER
PO	88-253	VALVE-LINEAR DIRECTIONAL CONTROL WITH ACTUATOR
R1	42-102	REGULATOR-FLOW, FLOAT OPERATED,DRAIN/MAKE-UP VLV
R2	42-104	REGULATOR-PRESSURE OXYGEN SERVICE
R3	99-004	RECEPTACLE ASSEMBLY-CO2 ABSORBENT
R4	41-067	GRINDING MACHINE-UTILITY
R5	20-003	RESISTOR-VARIABLE
R6	20-004	RESISTOR-FIXED
R7	41-104	REWINDING AND INSULATION MACHINES
R8	20-001	RHEOSTAT
R9	88-254	VALVE-REGULATING, COMPRESSED GAS
SA	SA-	SWITCHING UNITS (ELEX)
SB	SB-	SWITCHBOARDS (ELEX)
SC	41-112	SANDER-BELT, DISK AND SPINDLE

CDC	LAPL	
SD	67-008	SANITATION EQUIPMENT SEE ALSO TOILET-MARINE
SE	41-114	SAW-ABRASIVE-DISC, MASONRY
SF	41-115	SAW-BAND
SG		GENERATOR-SIGNAL (ELEX/ORD)
SG	SG-	GENERATOR-SIGNAL (ELEX/ORD)
SH	S-	SHELTER (ELEX)
SI	54-016	COMPOSING MACHINE-PHOTO PRINTING
SJ	41-120	SAW- POWER HACK
SK	43-017	SAW BAND, MEAT CUTTING
SL	41-078	SAW SETTING MACHINE
SM		SIMULATORS (ELEX/ORD)
SM	SM-	SIMULATORS (ELEX/ORD)
SN	SN-	SYNCHRONIZERS (ELEX)
SO		NOT ASSIGNED
SP	83-010	SEAL-SWIVEL JOINT TYPE
SQ	41-145	SEALING MACHINE-HEAT
SR	07-029	HEATER-SPACE, MULTI-FUEL WITH BLOWER
SS	87-006	SELECTOR-SPEED SENSITIVITY
ST	ST-	STRAPS (ELEX)
SU	SU-	OPTICAL UNITS (ELEX)
SV	67-010	SEWAGE TREATMENT SYSTEM-MULTI TOILETS OR URINALS
SW	41-080	SEWING MACHINE-HOUSEHOLD AND INDUSTRIAL
SX	83-017	SHAFT-PROPULSION, SHIP
SY	41-119	SAW-JIG, WOOD WORKING
SZ	83-002	SEAL-STERN TUBE SHAFT
S0	43-023	SINK-SCULLERY
S1	41-123	SHAPER-METAL CUTTING AND WOODWORKING
S2	41-096	BENDING OR FOLDING MACHINE-MANUAL
S3	99-007	SHELL-MISSILE TUBE
S4	85-014	SHOCK ABSORBER-GAS, OIL OR PNEUMATIC
S5	41-081	SHOE FINISHING AND STITCHING MACHINE
S6	891	SHOP EQUIPMENT AND ACCESSORIES ON SHIPS
S7	40-005	SHUTTER
S8	41-125	SIEVE-FOUNDRY
S9	43-052	SIFTING MACHINE-FLOUR, ELECTRIC
TA	TA-	TELEPHONE APPARATUS (ELEX)
TB	TB-	TOWED BODY (ELEX)
TC	TC-	TOWED CABLE (ELEX)
TD	TD-	TIMING DEVICES (ELEX)
TE	92-007	TANK-LIQUID STORAGE
TF	TF-	TRANSFORMERS (ELEX)
TG	TG-	POSITIONING DEVICES-TILT AND/OR TRAIN (ELEX)
TH	TH-	TELEGRAPH APPARATUS (ELEX)
TI	61-107	TRANSDUCER-MOTIONAL PICKUP
TJ	88-049	VALVE-MANEUVERING AND THROTTLE
TK	TK-	TOOL KITS (ELEX)
TL	TL-	TOOLS (ELEX)
TM	88-250	VALVE-MANUAL RESET
TN	TN-	TUNING UNITS (ELEX)
TO		NOT ASSIGNED
TP	AN/ A	INVISIBLE LIGHT, HEAT RADIATION
TQ	52-012	TANK-ACCUMULATOR, HYDRAULIC
TR	TR-	TRANSDUCERS (ELEX)
TS		TEST AND MEASURING EQUIPMENT NOT OTHERWISE CLASSIFIED (ELEX/ORD)
TS	TS-	TEST AND MEASURING EQUIPMENT NOT OTHERWISE CLASSIFIED (ELEX/ORD)
TT	TT-	TELETYPE WRITER AND FACSIMILE APPARATUS (ELEX)

CDC	LAPL	
TU	52-048	COMPENSATOR-HYDRAULIC
TV	TV-	TESTER-TUBE (ELEX)
TW	TW-	TAPE UNITS-USED FOR OPERATIONAL TEST AND CHECK OUT (ELEX)
TX	T-	TRANSMITTERS-ALL TYPES EXCEPT TELEPHONE (ELEX)
TY	31-006	TENSIONING DEVICE-COUNTERWEIGHT
TZ	46-002	TEST EQUIPMENT-ANALYZER
T0	41-149	PUMP-AIRLESS SPRAY PAINT
T1	46-006	TEST FIXTURES, SETS, STANDS AND CALIBRATORS, ALL TYPES
T2	41-150	CLEANER-VACUUM, ELECTRIC
T3	43-029	TOASTER-ELECTRIC, INTERMITTENT
T4	43-030	MIXER AND TANK-FLUID ELECTRIC
T5	43-058	FOOD CUTTER AND MIXER-ELECTRICAL
T6	43-061	COMPACTOR-TRASH
T7	46-013	TORSION METER-PROPULSION SHAFTING
T8	48-010	FILTER-AIR, ELECTROSTATIC
T9		TEST EQUIPMENT-MISCELLANEOUS (HM&E/CRC)
T9	41-132	TEST EQUIPMENT-MISCELLANEOUS (HM&E/CRC)
UA	U-	CONNECTORS-AUDIO AND POWER (ELEX)
UB	C35	LAUNDRY EQUIPMENT AND ACCESSORIES
UC	C22	STEERING GEAR, EMERGENCY
UD	C21	HYDRAULIC FILTER UNIT, PORTABLE
UE	C30	PORTABLE CLEATS
UF	C23	INDUSTRIAL GASES GENERATING, HANDLING AND STOWAGE
UG	UG-	CONNECTORS-RF (ELEX)
UH		DIRECTOR-WEAPON SYSTEM
UI		NOT ASSIGNED
UJ	88-014	VALVE-GATE, HYDROCARBON FUEL SERVICE
UK	99-018	CABLE ASSEMBLY-ELECTRICAL
UL	99-031	DISPENSER-CHAFF
UM	88-032	VALVE-REFRIGERATION SHUT OFF 3/4 IN AND LARGER
UN	52-006	MISSILE HANDLING SYSTEM-HYDRAULIC
UO		NOT ASSIGNED
UP	41-071	MAGNETIC INSPECTION UNIT PORTABLE
UQ	50-003	PANEL-TEST ELECTRICAL
UR	C27	CARGO HANDLING ACCESSORIES
US	50-006	PANEL-INTERIOR COMMUNICATION
UT	50-008	PANEL-GYRO OR DEAD RECKONING CONTROL
UU	86-004	SAFELIGHT-DARKROOM, PHOTOGRAPHIC
UV	28-023	PLOTTING AND TRACING EQUIPMENT
UW	55-004	REEL-CABLE
UX	19-002	RELAY-ELECTRICAL SEE ALSO TEST EQUIPMENT
UY	55-001	REELING MACHINE-CABLE
UZ	46-003	RECORDER-ELECTRICAL AND ELECTRONIC
U0	41-118	SAW-CIRCULAR
U1		SHIELD ASSEMBLY-WEAPON SYSTEM
U2		TRAIN POWER DRIVE ASSEMBLY-WEAPON SYSTEM
U3		ELEVATION POWER DRIVE ASSEMBLY-WEAPON SYSTEM
U4		TRAIN TRANSMISSION ASSEMBLY-WEAPON SYSTEM
U5		ELEVATION TRANSMISSION ASSEMBLY-WEAPON SYSTEM
U6		TRAIN RECEIVER REGULATOR-WEAPON SYSTEM
U7		ELEVATION RECEIVER REGULATOR-WEAPON SYSTEM
U8		CONTROL ASSEMBLY-WEAPON SYSTEM
U9		FUSE SETTER ASSEMBLY-WEAPON SYSTEM
VA	88-103	VALVE-BALANCING
VB	88-149	VALVE-ANGLE
VC	88-039	VALVE-ASTERN

CDC LAPL

VD	838	ENVIRONMENTAL CONTROL SYSTEM SPARES AND REPAIR PARTS
VE	88-001	VALVE-BALL
VF		CONTROL-LAUNCHER
VG	88-038	VALVE-BUTTERFLY
VH	V-	VEHICLES-CARTS, DOLLIES, VANS U/W ELECTRONIC EQUIPMENT (ELEX)
VI	88-057	VALVE-GLOBE
VJ	88-036	VALVE-CHECK
VK	88-175	VALVE-SPECIAL
VL	88-019	VALVE-PILOT AND LINE PRESSURE OPERATED, DIAPHRAGM AND PISTON TYPES
VM	88-171	VALVE-RELAY AIR, DIAPHRAGM AND PISTON TYPES
VN	88-026	VALVE-EXPANSION
VO		NOT ASSIGNED
VP	88-212	VALVE-FLOAT
VQ	88-024	VALVE-FUEL OIL REGULATING
VR	88-013	VALVE-GATE, ALL TYPES EXCEPT HYDROCARBON FUEL SERVICE
VS	VS-	SIGNALING EQUIPMENT-VISUAL (ELEX)
VT	88-124	VALVE-LINEAR, DIRECTIONAL CONTROL
VU	88-189	VALVE-INSTANTANEOUS HEATER
VV	88-071	VALVE-NEEDLE
VW	88-217	VALVE-PILOT CONTROL, BELLOWS AND SOLENOID OPERATED
VX	88-033	VALVE-PLUG
VY	88-020	VALVE-PRESSURE REGULATING, STEAM SERVICE
VZ	88-025	VALVE-FLUSH
V0	88-102	VALVE-ROTARY, DIRECTIONAL CONTROL
V1	88-176	VALVE-EXHAUST AND RELIEF
V2	88-191	VALVE-FEEDWATER REGULATING
V3	87-013	VALVE - SEA, UNDERWATER LOG
V4	88-152	VALVE-MAIN BALLAST
V5	88-144	VALVE-MANIFOLD (EXCLUDES VALVE AND TRAP MANIFOLDS)
V6	88-216	VALVE-SOLENOID
V7	88-010	VALVE-TEMPERATURE REGULATING, AUTOMATIC OPERATION
V8	88-166	VALVE-HINGE TYPE
V9	88-055	VALVE-Y
WA	91-001	WASHING MACHINE - LAUNDRY
WB	41-086	WELDING AND BRAZING MACHINE - BAND SAW BLADE
WC	82-002	WELDING MACHINE - RESISTANCE
WD	WD-	CABLE, 2 CONDUCTOR, NON-RF (ELEX)
WE	82-005	WELDING MACH-ARC,ADJUST,CONST VLTG OR CONST CURR TRANSFORER RECTIFIER
WF	WF-	CABLE, 4 CONDUCTOR, NON-RF (ELEX)
WG	82-001	WELDING SET - TUNGSTEN ARC,INERT GAS SHELDED,NONCONSUMABLE ELECTRODE
WH	82-004	WELDING SET - ARC,INERT GAS SHIELDED, CONSUMABLE ELECTRODE
WI		NOT ASSIGNED
WJ	82-007	WELDING SET - STUD, ELECTRIC ARC
WK	62-001	WINCH - HAND OPERATED
WL	62-002	WINCH - STEAM OPERATED
WM	WM-	CABLE, MULTIPLE CONDUCTOR, NON-RF (ELEX)
WN	62-004	WINCH - ELECTRC - HYDRAULIC
WO		NOT ASSIGNED
WP	62-006	WINCH - ENGINE DRIVEN, GASOLINE OR DIESEL
WQ	62-007	WINCH - PNEUMATIC DRIVE
WR	41-087	WINDING MACHINE COIL
WS	WS-	CABLE, SINGLE CONDUCTOR, NON-RF (ELEX)
WT	WT-	CABLE, 3 CONDUCTOR, NON-RF (ELEX)
WU	63-003	WINDLASS - ELECTRICAL MECHANICAL SEE ALSO ANCHOR HANDLING ACCESSORIES
WV	63-004	WINDLASS - HAND OPERATED SEE ALSO ANCHOR HANDLING ACCESSORIES
WW	31-025	WINDOW - OBSERVATION, OPTICAL, PORTLIGHT

CDC	LAPL	
WX	99-001	WINDOW - NON ICING
WY	35-001	WIPER-WINDOW PNLM, RTY OR VERT TYPE, ELEC OR MNL (HM&E/ORD)
WY		WIPER-WINDOW PNLM, RTY OR VERT TYPE, ELEC OR MNL (HM&E/ORD)
WZ	35-002	WIPER - WINDOW, PENDULUM TYPE, PNEUMATIC
W0		FIRING CUTOUT ASSY-WEAPON SYSTEM
W1		CARRIAGE ASSEMBLY-WEAPON SYSTEM
W2		STAND ASSEMBLY-WEAPON SYSTEM
W3		SLIDE ASSEMBLY-WEAPON SYSTEM
W4		RAMMER ASSEMBLY-WEAPON SYSTEM
W5		HOUSING ASSEMBLY-WEAPON SYSTEM
W6		GUN BARREL ASSEMBLY-WEAPON SYSTEM
W7		GAS EJECTOR ASSEMBLY-WEAPON SYSTEM
W8		EMPTY CASE EJECTOR ASSY-WEAPON SYSTEM
W9		HOIST ASSEMBLY-WEAPON SYSTEM
XA	C00	COMPRESSOR GAS TURBINE REPAIR PARTS
XB		BULKHEADS-STRUCTURAL
XC		CANVAS
XD		DECK COVERINGS
XE	E34	MISCELLANEOUS FLAG ALLOWANCES, MESSING GEAR
XF	C36	SURVIVAL EQUIPMENT
XG	C41	LIFTING AND HANDLING GEAR MAIN AND AUXILIARY MACHINERY
XH	C43	TOOLS AND ACCESSORIES MAIN PROPULSION SHAFTING
XI	C38	ENVIRONMENTAL CONTROL SYSTEM APPLIANCES
XJ	C47	PUMPS, PORTABLE
XK	C51	BOILER TOOLS AND ACCESSORIES
XL	C58	TOOLS AND ACCESSORIES DISTILLING PLANT
XM	C59	TOOLS AND ACCESSORIES REFRIGERATION SYSTEM
XN		DOOR-NON STRUCTURAL
XO		NOT ASSIGNED
XP	C48	HOSE AND MISCELLANEOUS HOSE FITTINGS
XQ	C61	TOOLS AND ACCESSORIES GENERATORS
XR	C18	RIGGING
XS		SHEATHING
XT	C62	TOOLS AND ACCESSORIES ELECTRIC POWER DISTRIBUTION
XU	C64	LIGHT EXTENSION
XV	C65	PORTABLE INTERIOR COMMUNICATION EQUIPMENT
XW	C66	LIGHT SIGNAL PORTABLE
XX	C67	ELECTRICAL AND ELECTRONIC HAND TOOLS
XY	C69	IOIC SUPPORT EQUIPMENT
XZ	C70	FLAGS AND PENNANTS
X0	C75	ASROC/TORPEDO/MINE HANDLING
X1		DECK
X2		DOME-SONAR(STRUCT AND NON STRUCT)
X3		BALLAST
X4		PLATFORM DECK
X5		FLAT
X6	C77	NBC WARFARE EQUIPMENT
X7	C81	MINESWEEPING EQUIPMENT
X8	C83	AIRCRAFT HANDLING AND STOWAGE
X9	C85	PROJECTION EQUIPMENT AND ACCESSORIES
YA	54-009	TABLE-LITHOGRAPHIC LAYOUT
YB	60-006	STEERING GEAR
YC	46-011	TRITIUM AIR MONITOR
YD	85-036	TROLLEY - MONORAIL AND BI-RAIL
YE		TRUCK/DOLLY/ CRADLE ASSEMBLY SEE ALSO CARGO HNDL ACCY (HM&E/ORD)
YE	85-018	TRUCK/DOLLY/ CRADLE ASSEMBLY SEE ALSO CARGO HNDL ACCY (HM&E/ORD)

CDC **LAPL**

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YF 41 .39 TUBE AND FLUE CLEANER - AIR MOTOR DRIVEN
.G 41-140 TUBE AND FLUE CLEANER - ELECTRIC MOTOR DRIVEN
YH 05-001 TURBINE-STEAM, MAIN PROPULSION
YI        NOT ASSIGNED
YJ 61-029 CONTROL PANEL-AUTOMATIC OR MANUAL
YK 61-048 ELECTRONICS SUB-ASSEMBLIES
YL 82-003 WELDING MACHINE - ARC, DRIVEN BY GAS OR DIESEL INTERNAL COMBUST ENGIN
YM 61-065 INDUCTOR-VERNIER
YN 82-006 WELDING MACHINE - ARC, ELECTRIC MOTOR DRIVEN
YO        NOT ASSIGNED
YP 62-003 WINCH - ELECTRIC
YQ 63-001 WINDLASS - STEAM DRIVEN SEE ALSO ANCHOR HANDLING ACCESSORIES
YR 05-006 TURBINE-STEAM, AUXILIARY
YS 05-022 TURBINE - WATER DRIVEN
YT 05-028 TURBINE - GAS, PROPULSION AND AUXILIARY SERVICE OVER 2000 HORSEPOWER
YU 05-029 TURBINE - GAS, PROPULSION AND AUX SERV 2000 HORSEPOWER OR UNDER
YV 05-025 TURBINE AND FAN, INTEGRAL FORCED DRAFT AIR SERVICE FOR MAIN BOILER
YW 05-019 TURBINE CONTROL - PROPULSION
YX 05-024 TURBO/SUPERCHARGER - DIESEL ENGINE
YY 85-003 TURNTABLE - TROLLEY OR BALL TYPE, MANUAL OR POWER DRIVEN
YZ 85-009 TORPEDO HANDLING UNIT (HM&E/ORD)
YZ        TORPEDO HANDLING UNIT (HM&E/ORD)
Y0 C12    HULL FITTINGS, LASHING GEAR AND ACCESS CLOSURES
Y1 53-002 CAPSTAN-POWER OPERATED, ELECTRIC OR HYDRAULIC
Y2 63-002 WINDLASS - ELECTRIC HYDRAULIC SEE ALSO ANCHOR HANDLING ACCESSORIES
Y3 C87    TEST, MEASURING AND INDICATING EQUIPMENT
Y4 C90    RADIATION MONITORING AND COUNTERMEASURES
Y5 C93    SHIPBOARD FIREFIGHTING AND ACCESSORIES
Y6        ORDNANCE TOOLS AND ACCESSORIES (AEL/CRD)
Y6 A00    ORDNANCE TOOLS AND ACCESSORIES (AEL/CRD)
Y7        WELDMENT
Y8 C94    SALVAGE TOOLS AND EQUIPMENT
Y9 C95    DIVING EQUIPMENT
ZA 61-086 STAND,CONTROL-STEERING
ZB 61-087 STAND, CONTROL PROPULSION
ZC 91-009 STARCH COOKER-LAUNDRY
ZD 61-482 VALVE OPERATOR-HYDRAULIC OPERATOR
ZE 34-001 STARTER-ENGINE, ELECTRICAL
ZF 34-002 STARTER-ENGINE, HYDRAULIC
ZG 34-003 STARTER-ENGINE, DIRECT COMBUSTION AND/OR GAS TURBINE
ZH 34-005 STARTER-ENGINE,AIR MOTOR OR AIR TURBINE TYPE
ZI        NOT ASSIGNED
ZJ 60-001 STEERING GEAR-ELECTRO-HYDRAULIC,MARINE,LINK,TILLER TY P
ZK 60-003 STRNG GEAR-ELEC MCH,MRN,DRM&CBL/CBL&CC,GR&OC,HND OP TY
ZL 60-007 STEERING GEAR-ELECTRIC,STEER MOTOR-CHAIN DRIVE TYPE
ZM ZM-    IMPEDANCE MEASURING DEVICES (ELEX)
ZN 60-008 STEERING GEAR-EMERGENCY SUBMERSIBLE TYPE
ZO        NOT ASSIGNED
ZP 61-027 STEERING HEAD-GYROPILOT
ZQ 54-020 STITCHER-BOOK AND PAMPHLET
ZR 64-005 STRAINER-PRESSURE,FIRE HOSE WITH BALL VALVE
ZS 64-014 FIRE EXTINGUISHING SYSTEM-TWIN AGENT
ZT C99    TOOLS AND EQUIPMENT MISCELLANEOUS
ZU 64-015 FIRE EXTINGUISHING UNIT-DRY CHEMICAL
ZV D39    DSRV RESCUE CONTROL CENTER
ZW 64-016 NOZZLE ASSEMBLY-TWIN AGENT
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CDC	LAPL	
ZX	41-113	SAND MULLER
ZY	75-001	STRAINER-SEDIMENT
ZZ		MISCELLANEOUS ITEMS NOT OTHERWISE CODED
Z0	E24	MISCELLANEOUS FLAG ALLOWANCES, NAVIGATION INSTRUMENTS
Z1	61-072	CONTROL-HUMIDITY
Z2	41-129	SURFACER-WOODWORKING
Z3	85-027	SWAY BRACE ASSEMBLY-ELECTRIC CHAIN HOIST DRIVE
Z4	89-005	SWIMMERS RECOVERY SYSTEM
Z5	E36	MISCELLANEOUS FLAG ALLOWANCES, VACUUM CLEANER
Z6	61-074	COMPUTER-SHIPBOARD
Z7	E85	MISCELLANEOUS FLAG ALLOWANCES, PROJECTION EQUIPMENT
Z8	61-389	BELLOWS ASSEMBLY-PRESSURE RELIEF
Z9		NOT ASSIGNED
0A		NOT ASSIGNED
0B		NOT ASSIGNED
0C		TELEMETERING SETS
0D		NOT ASSIGNED
0E		NOT ASSIGNED
0F		NOT ASSIGNED
0G		NOT ASSIGNED
0H		NOT ASSIGNED
0I		NOT ASSIGNED
0J		NOT ASSIGNED
0K		NOT ASSIGNED
0L		NOT ASSIGNED
0M		NOT ASSIGNED
0N		NOT ASSIGNED
0O		NOT ASSIGNED
0P		NOT ASSIGNED
0Q		NOT ASSIGNED
0R	OR	ORDALTS AND ORDNANCE MODIFICATIONS-OTHER THAN SWITCHBOARD
0S	RS	ORDALTS AND ORDNANCE MODIFICATIONS-SWITCHBOARD ONLY
0T		NOT ASSIGNED
0U		NOT ASSIGNED
0V		NOT ASSIGNED
0W		NOT ASSIGNED
0X		NOT ASSIGNED
0Y		NOT ASSIGNED
0Z		NOT ASSIGNED
00	NLAPLW	NLAPLW-ITEM LISTED BY SPCC AS NOT LAPL WORTHY
00	INCOMP	INCOMP-ITEM LISTED BY SPCC AS INCOMPLETE
01	06-001	COMPRESSOR-RECIPROCATING, OTHER
02	06-004	COMPRESSOR-CENTRIFUGAL, REFRIGERATION
03	06-201	COMPRESSOR-RECIPROCATING, AIR, HIGH, PRESSURE
04	06-202	COMPRESSOR-RECIPROCATING, AIR, LOW, PRESSURE
05	06-203	COMPRESSOR-CENTRIFUGAL, AIR, LOW PRESSURE
06	06-204	COMPRESSOR-ROTARY, AIR, LOW PRESSURE
07	06-501	COMPRESSOR-VAPOR ROTARY
08		AVIATION ORDNANCE EQUIPMENT
09	04-001	CONDENSER-REFRIGERATION, WATER, COOLED
1A		NOT ASSIGNED
1B	41-004	BOOTH-SPRAYING
1C	39-005	CLUTCH-FRICTION
1D	B37	PROPANE GAS AND CYLINDERS
1E		MACK
1F	14-007	FUSE UNIT ASS

CDC	LAPL	
1G	41-045	GRINDING MACHINE-UTILITY (INCL BUFFNG CAPABILITY)
1H	76-006	HYPOCHLORINATION UNIT
1I		NOT ASSIGNED
1J	01-012	PUMP-FUEL, ALL TYPES INCLUDING ELECTRIC DRIVE DESIGN
1K	54-001	PUNCHING MACHINE-PAPER
1L	61-049	SYNCHRO-RECEIVER, TRANSMITTER,RECEIVER,TRANSMITTER
1M	17-018	MOTOR-AC/DC MAIN PROP, UNLIMITED HORSEPOWER
1N	C32	FURNISHINGS AND OUTFITTINGS
1O		NOT ASSIGNED
1P	39-003	POWER TAKE OFF-ACCESSORY DRIVE
1Q	01-005	PUMP-ROTARY, POWER DRIVEN
1R	43-057	RINSER-SANITIZER
1S	86-001	SINK-PHOTOGRAPHIC PROCESSING
1T	01-013	PUMPING UNIT-CENTRIFUGAL, POWER DRIVEN, AIRCRAFT FUELING
1U		NOT ASSIGNED
1V	88-004	VALVE-SAFETY RELIEF, MAIN PROPULSION BOILER
1W		NOT ASSIGNED
1X	52-014	CYLINDER-ACTUATING LINEAR SEE ALSO JACK ASSEMBLY/SHOCK AB
1Y	57-008	CRANE-ASROC MISSILE
1Z		NOT ASSIGNED
1O		NOT ASSIGNED
11	04-100	CONDENSER-STEAM, ALL TYPES
12	01-003	PUMP-CENTRIFUGAL, MAIN CONDENSER CIRCULATING
13	01-004	PUMP-ROTARY, POWER DRIVEN, CAM AND PLUNGER DESIGN
14	01-006	PUMP-ROTARY, POWER DRIVEN, IMPELLER DESIGN WITH TIMING GEARS
15	01-007	PUMP-ROTARY, POWER DRIVEN, EXTERNAL GEAR DESIGN
16	32-009	CONDENSING UNIT-REFRIGERATION
17	99-023	CONNECTOR-ELECTRICAL SEE BOX-ELECTRICAL
18	61-030	CONSOLE-CONTROL AND POWER
19	09-004	CONTROL-BATTERY CHARGER
2A		LAUNCHING SYSTEM (MISSILE/ROCKET)
2B		BOX-ELECTRICAL (HM&E/ORD)
2B	99-008	BOX-ELECTRICAL (HM&E/ORD)
2C	39-006	CLUTCH-MAGNETIC
2D	B44	PROPELLER, SPECIAL TOOLS AND HANDLING GEAR
2E		LAUNCHERS (MISSILE/ROCKET)
2F	B50	GOVERNOR OVERSPEED SPARES
2G	25-024	GYRO COMPASS-ARMA MK 7,8,9,10,21,22,24,& 26
2H	31-003	HATCH COVER
2I		NOT ASSIGNED
2J		ANTI-ICING SYSTEM
2K	41-074	PUNCHING, SHEARING, AND NIBBLING MACHINE-METAL
2L	32-034	SEPARATOR-OIL, REFRIGERANT
2M	41-089	MOTOR-PNEUMATIC
2N	83-037	OIL DISTRIBUTION BOX OR OIL INJECTOR ASSEMBLY
2O		NOT ASSIGNED
2P	52-047	POWER UNIT-HYDRAULIC
2Q	39-001	CLUTCH-POSITIVE DRIVE AND ROTATING ELEMENT
2R	41-075	RIVETING MACHINE-ELECTRIC OR PNEUMATIC
2S	41-082	SKIVING AND BEVELING MACHINE-SHOE,SOLE,HAND OPERATED
2T	41-085	THREADING MACHINE-PIPE AND BOLT SEE ALSO SHOP ACCESSORIES-TOOLS X ECP
2U		MAGAZINES-WEAPON SYSTEM
2V		GUN MOUNTS
2W		NOT ASSIGNED
2X		CASTING
2Y	57-009	CRANE-ELECTRO HYDRAULIC

CDC	LAPL	
2Z	21-011	SWITCH-FLOAT, LIQUID LEVEL, FLOW DETECTING
20	61-008	CONTROL-STEERING SYSTEM
21	61-009	CONTROL-MECHANICAL
22		NOT ASSIGNED
23	61-015	CONTROL-NAVIGATIONAL LIGHT
24	61-022	CONTROL-ACOUSTIC DEVICE
25	61-024	CONTROL-MECHANICAL PUSH PULL STROKE
26	61-026	CONTROL-ELECTRIC LIGHT
27	61-040	CONTROL-VALVE OPERATOR
28	61-064	CONTROL-HUMIDITY
29	61-067	CONTROL-REMOTE TRANSMITTERS AND RECEIVERS
3A		NOT ASSIGNED
3B	80-001	BRAKE-ELECTRIC,SHOE OR DISC,SOLENOID
3C	39-007	CLUTCH-MAGNETIC PARTICLE
3D	B41	PROPULSION MAIN DRIVE DIESEL ENGINE EQUIPMENT AND ACCESSORIES
3E		NOT ASSIGNED
3F		FRAME-STRUCTURAL
3G	25-028	GYRO COMPASS-SPERRY MK 11, 14, 17, 18, & 19
3H		NOT ASSIGNED
3I		NOT ASSIGNED
3J	21-018	SWITCHING UNIT-POWER TRANSFER
3K	76-001	PURIFIER-CENTRIFUGAL
3L	93-009	SEPARATOR MOISTURE
3M	52-046	MOTOR-HYDRAULIC
3N	01-018	PUMP-CENTRIFUGAL, SINGLE STAGE, CLOSE-COUPLED, NAVY STD
3O		NOT ASSIGNED
3P	61-091	POWER UNIT-GYRO PILOT
3Q	01-009	PUMP-ROTARY, POWER DRIVEN, VANE DESIGN, FIXED OR VAR DELIVERY
3R	87-002	RODMETER-UNDERWATER LOG SYSTEM
3S	32-020	SODA FOUNTAIN
3T	61-056	THRUSTOR-MOTOR DRIVEN,HYDRAULICALLY OPERATED
3U	B58	DISTILLING PLANT ACCESSORIES
3V	16-016	VAPORIZER SYSTEM - LIQUID OXYGEN OR NITROGEN
3W	AN/ C	CARRIER
3X	C6-005	COMPRESSOR-RECIPROCATING, REFRIG, VERT OPR,SEMI-HERM
3Y	57-010	CRANE STERN
3Z	AN/ D	RADIAC
30	61-071	CONTROL-PHOTOELECTRIC CELL
31	61-078	CONTROL-CONSTANT FREQUENCY
32	61-096	CONTROL-TRANSMISSION REVERSING MECHANISM
33	61-108	CONTROL-PERISCOPE
34	61-110	CONTROL-SENSOR, DEPTH AND TRIM
35	61-402	CONTROL-FLAME FAILURE
36	61-444	CONTROL-GENERATOR, COOLER FEEDWATER
37	61-481	CONTROL-SERVO, CONTROLLABLE PITCH PROPELLERS
38	87-004	CONTROL-UNDERWATER LOG
39	61-019	CONTROL TRANSMITTER-PRESSURE DIFFERENTIAL
4A	AN/ G	TELEGRAPH OR TELETYPE
4B		BULKHEAD-NONSTRUCTURAL
4C	39-013	CLUTCH- ALL OTHER TYPES
4D	31-019	DOOR-MISSLE TUBE
4E	AN/ I	INTERPHONE AND PUBLIC ADDRESS
4F		FORGING
4G	25-039	GYRO COMPASS-SPERRY MK 23 AND 27
4H	AN/ J	ELECTROMECHANICAL OR INERTIAL WIRE COVERED
4I		NOT ASSIGNED

CDC	LAPL	
4J	22-001	SWITCHBOARD-DEGAUSSING
4K	61-012	CONTROL-DEGAUSSING
4L	61-011	SERVO GEAR TRAIN
4M	18-001	MOTOR GENERATOR
4N	31-002	OPERATING MECHANISM-DOOR,RAMP,STERNGATE & BRIDGE
4O		NOT ASSIGNED
4P	41-068	PRESS-GROMMET AND EYELET
4Q		TELEMETERING (FLEX/ORD)
4Q	AN/ K	TELEMETERING (FLEX/ORD)
4R	31-018	RUDDER-INCLUDING STOCKS, POSTS AND CARRIERS
4S	41-127	SOLDER AND DESOLDER UNIT-ELECTRIC
4T	61-005	TIMER
4U	AN/ L	COUNTERMEASURES
4V	43-014	VEGETABLE PEELING MACHINE - ELECTRIC
4W	AN/ M	METEOROLOGICAL
4X	C33	CLOTHING STANDARD OUTFIT, AIR PURIFICATION AND LIFE PRESERVERS
4Y	57-011	CRANE-HEAVY EQUIPMENT
4Z	01-019	PUMP CENTRIFUGAL, POWER DRIVEN, PERIPHERAL DESIGN
4O	61-075	CONTROL-STEERING AND DIVING ASSEMBLY
41	61-062	CONTROL-PNEUMATIC
42	61-066	CONTROL-TELEMOTOR STEERING
43	61-089	CONTROL-SPLIT PLANE
44	61-132	CONTROL-FEED WATER SYSTEM
45	61-251	CONTROL- PRESSURE,TEMP,LEVEL AND FLOW
46	83-040	CONTROL-CONTROLLABLE PITCH PROPELLER
47	15-002	CONTROLLER/STARTER, AC
48	AN/ N	SOUND IN AIR
49	AN/ P	RADAR
5A	AN/ Q	SONAR AND UNDERWATER SOUND
5B	80-002	BRAKE-ELECTRIC, MOTOR OPERATED
5C	43-015	COFFEE MAKER
5D	31-017	DOOR-HINGED TYPE, POWER OPERATED
5E	AN/ R	RADIO
5F		FOUNDATION
5G	25-008	GYRO COMPASS EQUIPMENT-AMPLIFIER-SYNCHRO SIGNAL
5H	AN/ S	SPECIAL TYPES MAGNETIC, ETC., OR COMBINATIONS OF TYPES
5I		NOT ASSIGNED
5J	22-002	SWITCHBOARD-INTERIOR COMMUNICATION
5K		PLATFORM-SERVICE
5L		STRUCTURE-DECKHOUSE
5M	AN/ T	TELEPHONE (WIRE)
5N	28-009	OPTICAL NAVIGATIONAL AIDS ALSO SEE SPECIFIC EQPMT
5O		NOT ASSIGNED
5P	41-058	PRESS-HYDRAULIC, MANUAL OR POWER OPERATED
5Q	01-008	PUMP-ROTARY, POWER DRIVEN, INTERNAL GEAR DESIGN
5R	B21	HYDRAULIC SYSTEM TOOLS AND REPAIR PARTS
5S	41-126	SOLDERING AND BRAZING OUTFIT, ELECTRIC
5T		TRUNK-STRUCTURAL
5U	AN/ V	VISUAL AND VISIBLE LIGHT
5V	87-007	VENT, AIR - U/W LOG EQUIPMENT
5W	AN/ W	ARMAMENT (PECULIAR TO ARMAMENT, NOT OTHERWISE COVERED)
5X	01-021	PUMP-CENTRIFUGAL, TURBINE DRIVEN, GASOLINE SERVICE
5Y	57-013	CRANE-GANTRY
5Z	B62	PORTABLE STORAGE BATTERIES AND POWER DISTRIBUTION ACCESSORIES
50	AN/ X	FACSIMILE OR TELEVISION
51	AN/ Y	DATA PROCESSING

CDC	LAPL	
52		AUTOMOTIVE & CONSTRUCTION EQUIPMENT (INCL ALL COMMODITY CLASS 95)
53		MISC. PARTS LISTS FOR SHIPS (INCL ALL APLS STARTING WITH 89000)
54		MAINTENANCE & REPAIR SHIP EQUIPMENT (INCL ALL COMMODITY CLASS 12)
55		CHEMICAL WARFARE EQUIPMENT (INCL ALL COMMODITY CLASS 47)
56		SICK-BAY EQUIPMENT (INCL ALL COMMODITY CLASS 84)
57	01-020	PUMP-CENTRIFUGAL, POWER DRIVEN, HORIZONTAL, SPLIT CASE DESIGN
58		RIGGING & RIGGING GEAR (INCL ALL COMMODITY CLASS 90)
59		CONSTRUCTION EQUIPMENT (INCL ALL COMMODITY CLASS 96)
6A	99-015	ARRESTOR-ELECTRICAL
6B	01-028	PUMP-CENTRIFUGAL, TURBINE DRIVEN, HORIZONTAL, CLOSE-COUPLED
6C	54-023	COLLATOR
6D	31-008	DOOR-METAL SLIDING
6E		SPECIAL POWER PLANT EQUIPMENT (INCL ALL COMMODITY CLASS 98)
6F		NOT ASSIGNED
6G	25-010	GYRO COMPASS EQUIPMENT-ALARMS-AUDIBLE & VISIBLE
6H		NOT ASSIGNED
6I		NOT ASSIGNED
6J	22-004	SWITCHBOARD-PROPULSION
6K		PYROTECHNIC EQUIPMENT
6L		SEA CHEST
6M	E99	MISCELLANEOUS FLAG ALLOWANCES, FURNITURE AND MISC. EQUIPMENT
6N	87-012	OSCILLATOR AND AMPLIFIER-U/W LOG EQUIPMENT
6O		NOT ASSIGNED
6P	41-100	PRESS-ARBOR, MANUAL OPERATION
6Q		NOT ASSIGNED
6R		NOT ASSIGNED
6S	61-046	SOLENOID-ELECTRIC
6T	43-026	TOASTER-ELECTRIC
6U		NOT ASSIGNED
6V	31-020	VENTILATOR - DECK
6W		NOT ASSIGNED
6X	B16	ACCESS CLOSURES OPERATING SPARES
6Y	57-016	CRANE-KINGPOST
6Z		NOT ASSIGNED
60	15-010	CONTROLLER, DC
61		NOT ASSIGNED
62	25-014	CONVERTER-SIGNAL DATA
63	01-022	PUMP-CENTRIFUGAL, POWER DRIVEN, FOR COMMERCIAL DISHWASHING MACHINE
64	01-023	PUMP-CENTRIFUGAL, POWER DRIVEN, SUBMARINE TRIM AND DRAIN SERVICE
65	59-006	CONVEYOR-POWER OPERATED, BELT OR VERTICAL TRAY TYPE
66		NOT ASSIGNED
67	03-001	COOLER-FLUID, SHELL/TUBE CONSTRUCTION
68	01-026	PUMPING UNIT-CENTRIFUGAL, ELECTRIC MOTOR DRIVEN, FOR STEAM SYSTEMS
69	03-002	COOLER-FLUID, TYPE B
7A		APPENDAGES-SHELL
7B	80-003	BRAKE-PNEUMATIC
7C	41-009	COLLECTOR UNIT-DUST
7D	43-054	DOUGH INTERMEDIATE PROOFING MACHINES
7E		NOT ASSIGNED
7F		NOT ASSIGNED
7G	25-011	GYRO COMPASS EQUIPMENT-CABINET-GYRO & GUID COMP STOR
7H		NOT ASSIGNED
7I		NOT ASSIGNED
7J	22-009	SWITCHBOARD-ALARM
7K		NOT ASSIGNED
7L		STANCHIONS

CDC	LAPL	
7M	51-006	MOUNT-RESILIENT
7N	41-090	OVEN-THERMAL DRYING, ELECTRIC
7O		NOT ASSIGNED
7P	44-008	PRESSURE REDUCING STATION
7Q		NOT ASSIGNED
7R		NOT ASSIGNED
7S	81-001	SOOT BLOWERS
7T		TORPEDO TUBE ASSEMBLY
7U		NOT ASSIGNED
7V	61-054	VERTICAL REFERENCE
7W		NOT ASSIGNED
7X		NOT ASSIGNED
7Y	41-039	CUT-OFF MACHINE-ABRASIVE DISK, METAL CUTTING
7Z	21-023	SWITCH-PRESSURE AND/OR THERMOSTATIC
70	03-003	COOLER-FLUID,ENGINE JACKET WATER HULL MOUNTED
71	03-004	COOLER, FLD SMPL WTR TYPE I SHL/CL DSN, TYP II DB TB
72	03-006	COOLER, AIR
73	03-011	COOLER-FLUID, RADIATOR ENGINE COOLANT
74	03-015	COOLER-AMINE
75	32-011	COOLER-AIR FLOW UNIT
76	32-010	COOLING COIL-AIR, DUCT TYPE AND GRAVITY TYPE
77	46-005	COUNTERS AND TOTALIZERS
78		NOT ASSIGNED
79	51-001	COUPLING-FLEXIBLE, SOUND ISOLATION
8A		NOT ASSIGNED
8B	80-004	BRAKE-MANUAL
8C	28-012	COMPASS COMPENSATING EQUIPMENT
8D	43-018	DOUGH MIXING MACHINES
8E		NOT ASSIGNED
8F		NOT ASSIGNED
8G	25-021	GYRO COMPASS EQUIPMENT-RELAY TRANSMITTER
8H		NOT ASSIGNED
8I		NOT ASSIGNED
8J	22-013	SWITCHBOARD-POWER
8K		NOT ASSIGNED
8L	878	AMMUNITION HANDLING AND STOWAGE
8M	86-014	MOUNT-FILM SLIDE, PHOTOGRAPHIC
8N	43-019	RANGES AND OVENS-OIL BURNING-SEE ALSO GALLEY EQPMT
8O		NOT ASSIGNED
8P	29-003	PRIMER-ENGINE STARTING, ETHER INJECTION
8Q	01-002	PUMP-RECIPROCATING, DIRECT ACTING AND POWER DRIVEN
8R		NOT ASSIGNED
8S	25-017	STABILIZER-GYRO
8T	67-009	TOILET-MARINE
8U		NOT ASSIGNED
8V	26-004	VIEWER - STILL PICTURE
8W		NOT ASSIGNED
8X		NOT ASSIGNED
8Y	02-004	BOILER-AUXILIARY, HP STEAM, OIL FIRED
8Z	21-006	SWITCHES-GENERAL
80	01-032	PUMP UNIT-CENTRIFUGAL, POWER DRIVEN, PORTABLE (SELF-CONTAINED)
81	78-001	COUPLING-FLEXIBLE, SHAFT
82	01-034	PUMPING UNIT-HYDRAULIC, AIR DRIVEN
83		NOT ASSIGNED
84	01-035	PUMP-CENTRIFUGAL, PWR DRIVEN, (MULTI-STAGE) VERT DEEPWELL TURB DESIGN
85	01-036	PUMP-JET, MAIN PROPULSION

CDC	LAPL	
86	01-037	PUMP-RECIPROCATING, AIR DRIVEN, MISCELLANEOUS SERVICE
87	78-004	COUPLING-FLEX, SHFT, AUXILIARY SERVICE
88	02-002	BOILER-AUXILIARY, HP STEAM, WATER TUBE
89	02-003	BOILER-AUXILIARY, HP STEAM, HORIZONTAL FIRE TUBE
9A		NOT ASSIGNED
9B	80-005	BRAKE-HYDRAULIC
9C		COMPARTMENT
9D	43-032	DOUGH PROCESSING MACHINE-POWER AND MANUAL
9E		NOT ASSIGNED
9F		NOT ASSIGNED
9G	41-066	GRINDING MACHINE-TOOLS & CUTTERS
9H		NOT ASSIGNED
9I		NOT ASSIGNED
9J	22-021	SWITCHBOARD-STATIC GROUP CONTROL
9K		NOT ASSIGNED
9L		SMALL ARMS
9M	79-001	MUFFLER
9N		GRATINGS, FLOOR PLATES
9O		NOT ASSIGNED
9P	86-002	PRINTER-PHOTOGRAPHIC
9Q		NOT ASSIGNED
9R		NOT ASSIGNED
9S	31-029	STABILIZER-ACTIV FIN,RETRCTBLE & NONRETRCTBLE
9T	025	TOWING GEAR
9U		NOT ASSIGNED
9V	86-006	VIEWER PRINTER - MICROFILM
9W		NOT ASSIGNED
9X		NOT ASSIGNED
9Y	54-013	CUTTER-PAPER, GUILLOTINE
9Z		NOT ASSIGNED
90		NOT ASSIGNED
91	820	WINCHES AND CAPSTANS REPAIR PARTS
92	78-011	COUPLING-RIGID, SHAFT
93	78-009	COUPLING-HYDRAULIC
94	78-012	COUPLING-CLAMP PIPE
95	78-013	COUPLING-ELECTRIC INDUCTION
96	93-018	COUPLING-HOSE,MISC SEE ALSO UNDWAY REPLEN ACC
97	57-001	CRANE-BRIDGE OR OVERHEAD TRAVELING
98	57-002	CRANE-QUARTER
99	57-003	CRANE-JIB