



DEPARTMENT OF THE NAVY

NAVAL SEA SYSTEMS COMMAND
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IN REPLY TO
NAVSEAINST 4790.1B
Ser 04L/143
10 Apr 07

NAVSEA INSTRUCTION 4790.1B

From: Commander, Naval Sea Systems Command

Subj: EXPANDED SHIP WORK BREAKDOWN STRUCTURE
(ESWBS) HIERARCHICAL STRUCTURE CODES (HSC) FOR SHIPS,
SHIP SYSTEMS, AND SURFACE COMBATANT SYSTEMS

Ref: (a) NSTM 0900-LP-039-9020, Ship Work Breakdown Structure
for Nuclear Propulsion
(b) Ship Configuration and Logistics Support
Information System (SCLISIS) Technical Specification
(9090-700 Series) of 7 Dec 93
(c) MIL-HDBK-881 Work Breakdown Structure of 30 Jul 05

Encl: (1) Change Procedures and Processes
(2) Digitized worksheet for HSC Change Request - Addition
(3) Digitized worksheet for HSC Change Request - Deletion
(4) Digitized worksheet for HSC Change Request -
Modification

1. Purpose. To revise the existing policy and issue procedures
to:

a. Provide a method to integrate design, configuration and
logistics through standard coding of the breakdown structure for
aircraft carriers, submarines, surface combatants and associated
ship systems.

b. Require the use of HSC standardized coding for all new
design/new construction and, as appropriate, alteration/
modernization configuration identification and change reporting.
This is a major change to the previous instruction.

c. This instruction provides direction relative to new
assemblies and not to alter any existing data.

2. Cancellation. NAVSEAINST 4790.1A of 13 February 1985 and
NAVSEAINST 4130.13 of 19 July 1985.

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3. General

a. The first five-characters of the Hierarchical Structure Code (HSC)/Functional Group Code (FGC) (commonly known as "ESWBS") will be referred to throughout this instruction as the first five-characters of the HSC. For purpose of definition, Hierarchical Structure Codes (HSCs) currently in use evolved from a variety of numbering system for the first five-characters. Some of the systems used for the first five-characters are:

- (1) ESWBS - Expanded Ship Work Breakdown Structure
- (2) ESWLIN - Expanded Ships Work Line Item Number
- (3) SWAB - Ship Work Authorization Boundary
- (4) SSDI - Ships System Drawing Index
- (5) Trident WBS - Work Breakdown Structure
- (6) Enterprise Resource Planning (ERP)

b. The Master HSC Cross-reference is a standard ERP HSC structure to be utilized by new construction programs (DDG 1000, LCS, CVX, etc). The Master Default ESWBS file list can be accessed, viewed and retrieved in the reference section of Configuration Data Manager's Database - Open Architecture (CDMD-OA) and Configuration Management Reference Material (CMRM) websites www.cm.navsea.navy.mil and www.cm.navsea.navy.mil/cm/index.nsf, respectively.

c. Shipbuilder Weight Reporting. For weight reporting purposes and organization of the data, only the first three digits of the HSC system apply.

d. NAVSEA recognizes that a significant amount of configuration and logistics data has been assembled using the above conventions. This instruction does not intend to alter any existing data structure, but rather intends to provide direction relative to new data assembled subsequent to the effective date of this instruction.

4. Scope. This instruction applies to all new designs and new construction programs for ships, submarines, ship systems and combatant systems, and to life cycle configuration identification and logistic support management procedures for existing ships.

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5. Exception

a. Nuclear Propulsion. The Deputy Commander for Nuclear Propulsion, SEA 08, is responsible for all technical matters pertaining to nuclear propulsion for U.S. naval ships. Work boundary definitions involving the nuclear propulsion plant will continue to use reference (a). Consult SEA 08 in all matters relating to the HSC structure for the nuclear propulsion plant and associated nuclear support facilities.

b. Fleet Ballistic Missile Weapons Systems (FBMWS). The Director, Strategic Systems Program (DIRSSP) Office is responsible for all technical matters related to FBMWS and Strategic Weapons Systems (SWS). Consult the DIRSSP in all matters relating to the HSC structure for the FBMWS or SWS.

6. Discussion

a. Reference (b) includes the data previously provided by the HSC and the SWAB Manual, maintains the boundary of the preexisting three-digit HSC numbering system and expands the HSC indenturing concept to a five-character HSC. The HSC fosters the integration required to resolve fleet and user problems associated with logistic support documents and with the updating of the ship's configuration records. The CM/CMRM website shall be used to disseminate top-level guidance for implementation of the HSC code assignments contained in references (b) and (c).

b. Additions, deletions, modifications, or new boundary establishments should be submitted in accordance with enclosures (1) through (4) of this instruction.

7. Policy

a. For all new data assembled, NAVSEA's policy is that the first five-characters of the HSC will be based on the ESWBS (except SSN 688, Trident, SSGN-726, and SSN 774 (New construction) class ships).

b. New Ship Construction Programs Using New Designs. The first five-characters of the HSC (Default ESWBS file) shall be the only interface used for all configuration identification, configuration change control and reporting systems (except submarines under previously existing drawings).

c. New Ship Construction Programs Using Existing Designs.

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Use of the first five-characters of the HSC for all new construction is encouraged. However, for new ship/submarines construction programs using existing specialty designs (CG-47, DDG-51, FFG-7, FFG-61, SSN-688, SSN-774 and SSGN-726) the associated specialty ESWBS can be used.

d. New Ship Systems for Existing Ships. Maintenance plans for new systems and associated functional block diagrams will contain at a minimum, the first five-characters of the HSC. If the system is being installed onboard ship, the first five-characters of the HSC will conform to the existing HSC structure applicable to that specific ship class.

8. Action

a. Ship Design, Integration and Engineering, SEA 05 is responsible for ship integration and ship systems and shall:

(1) Incorporate the first five characters of HSC structures into the shipbuilding specifications for ship detail design, construction and survey of material condition throughout its life. When new boundaries are established, ensure that the code recommended for use is not in conflict with reference (a).

(2) Coordinate with Naval Sea Logistics Center (NAVSEALOGCEN) Mechanicsburg, PA, updates, new boundary definitions, and changes that directly effect reference (a).

b. Logistics, Maintenance and Industrial Operations Directorate, SEA 04L shall:

(1) Submit changes to NAVSEALOGCEN Mechanicsburg, PA for the first five-characters of the HSC system groupings used only for industrial availability planning and execution requirements (80000 and 90000 HSC Groups).

(2) Task NAVSEALOGCEN Mechanicsburg, PA to function as NAVSEA's Technical Agent and single gatekeeper for all matters relating to the first five-characters of the HSC.

(3) Task NAVSEALOGCEN Mechanicsburg, PA to maintain the ERP Master HSC Cross-reference files and the Configuration Management Reference Website,
<http://www.cm.navsea.navy.mil/cm/index.nsf>.

(4) Monitor all implementation actions defined in this instruction and be the final approval/disapproval authority for all first five-characters of the HSC actions.

c. Program Executive Officers (PEOs), Ship Program Managers (SPMs) shall:

(1) Ensure the ESWBS-based first five-characters of the HSC are used as the indenturing system in new ship construction programs using existing designs. The implementation shall be coordinated with SEA 04L.

(2) Include the first five-characters of the ERP HSC as a required data element in the Configuration Data Manager Database-Open Architecture (CDMD-OA) requirement statement for new start and new construction programs.

(3) Ensure that the first five-characters of the HSC is the primary interface for integration of the ship and combat system functional block diagrams and associated maintenance plan for new start and new construction shipbuilding contracts.

(4) Ensure that new ship systems for existing ships incorporate the provisions of this instruction into new system designs (if the ship/class to receive the new system is first five-characters of the HSC based).

(5) Coordinate with NAVSEALOGCEN Mechanicsburg, PA updates, new boundary definitions, and changes that directly effect reference (a).

(6) Coordinate with NAVSEA 05 to ensure the following are maintained current:

(a) General Specifications for Overhaul of Surface Ships (GOS) to incorporate the first five-characters of the HSC concepts.

(b) Deep Diving General Overhaul Specifications (GOS) to incorporate the first five-characters of the HSC concepts.

d. Naval Sea Logistics Center, Mechanicsburg, PA., is responsible for the technical direction of the first five-characters of the HSC program and shall:

(1) Perform duties as directed by NAVSEA 04L to function as their technical agent and gatekeeper for all matters pertaining to the first five-characters of the HSC.

(2) Maintain and periodically incorporate HSC updates, changes, and postings to the website at <http://www.cm.navsea.navy.mil>, CMRM section and the CDMD-OA based ESWS Reference Files.

(3) Forward changes, additions, and deletions to the first five-characters of the HSC codes to Space and Naval Warfare System Center (SPAWAWSYSCEN) Norfolk, VA to update the legacy Shipboard Non-tactical Automated Data Processing (ADP) Program (SNAP) first five-characters of the HSC skeleton table.

(4) As technical agent, coordinate and review all requested ESWS code additions, changes and deletions for approval and inclusion in the ESWS reference files contained in CDMD-OA and CMRM.



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Distribution:

SNDL C84B COMNAVSEASYSCOM Detachments
FKP COMNAVSEASYSCOM Shore Activities
(less FKP6B & FKP24)

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CHANGE PROCEDURES AND PROCESSES

The HSC system must have the flexibility to change with the introduction of new systems/equipment into the Naval fleet and shore activities. These change procedures and processes are automated and reside on the Configuration Management Reference Material (CMRM) section of the Configuration Management website at www.cm.navsea.navy.mil. Access to the CMRM section of the CM website requires mandatory registration prior to submitting any change requests. Individuals requiring access to CMRM, can register at the above mentioned website.

NAVSEALOGCEN Mechanicsburg, PA, will be the NAVSEA technical POC responsible for:

- Researching and processing all change requests
- Maintaining a first five-characters of the HSC reference database
- Forwarding all unresolved issues to NAVSEA 04L5 for final determination
- Administering and managing the CM/CMRM website.

CHANGE PROCEDURE

Organizations submitting change requests will:

1. Obtain access to the CMRM section of the CM website by following the established registration procedures.
2. Access the "Change Request Queue" of the ESWBS section, selecting the appropriate change request type (Addition, Deletion or Modification).
3. Complete the Change Request Form as required. Examples of each type of Change Request Form are included as enclosures (2), (3) and (4).

Upon receipt of change requests, NAVSEALOGCEN Mechanicsburg, PA shall:

1. Automatically assign a change request tracking number to the change request and place it in the "Change Request Queue".

Enclosure (1)

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CHANGE PROCEDURES AND PROCESSES (Cont'd)

2. Electronically notify the originator of receipt and tracking number assigned via E-Mail.
3. Review each request for technical accuracy and functional viability.
4. Approve or disapprove the request.
5. Electronically notify the requestor of determination, providing rationalization for all disapprovals.

ESWBS Change Request (Addition)

* denotes a required field

Ship Class*

Requested ESWBS #

ESWBS Nomenclature*

Equipment AN/Indicator or MK/MD

Equipment Topdown/Breakdown (All Affected ESWBS)*
(View Example)

Equipment Description*

Includes List

Associated Equipment List

Does Not Include List

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Choose Row for Deletion Request

ESWBS: Ship Class:

ESWBS Change Request (Deletion)

* denotes a required field

Ship Class: ESWBS #:

ESWBS Nomenclature

Justification*

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Choose Row for Modification Request

ESWBS: Ship Class:

ESWBS Change Request (Modification)

* denotes a required field

Ship Class: ESWBS #

ESWBS Nomenclature

Recommended Change*

Justification*