ONBOARD ILS PACKAGE GENERAL SPECIFICATIONS

SUMMARIZATION OF ONBOARD ILS PACKAGE

1. The onboard ILS package included the following seven functions:

 (1) Configuration Management (CM)
 (2) Maintenance Management System (MMS)
 (3) Supply Plan (SP)
 (4) Shipboard Stocks Management (SSM)
 (5) Technical Document Management (TDM)
 (6) Computer Aids Management system (CAMs)
 (7) Training and human resource management

ILS software is available with the organization and data is to be developed by ILS developer for all these modules. Details of the modules are as under:

2. **DESCRIPTION OF CONFIGURATION MANAGEMENT**

2.1 **Purpose Task and Scope of CM**

CM is function module of ILS system. The purpose of the CM is to establish a product structure tree with the ship on the top rank, production of an accurate (by drawings/documents/datum pack), recording the configuration identification information of all the equipments and controlling the change of the configuration items as well as the performance.

CM is the configuration management designed for the active se4rvice of the ship which doesn't include the configuration management in the designing and construction period.

The tasks of the CM include selecting the configuration item (configuration item is at equipment / device level, i.e. a combined unit which consists of or combined use one or more unit equipment or component unit, to complete certain operation function of ship. Such as diesel generation set), between

which the configuration status report of the functional relationship to be established; Recording all the required information to formulate the configuration identification information; The configuration change should be strictly controlled during the service time of the ship so as to make sure of the synchronous change of the configuration and other support resources, and further to make sure of the correctness and consistency of the data in ILS system.

2.2 Configuration Management Documents

(1) CONFIGURATION STATUS REPORT (CSR)

(2) CONFIGURATION IDENTIFICATION DATA (CID)

(3) MEC of Equipment list (MECL)

2.2.1 Configuration Status Report (CSR)

This table is the concourse of all the configuration items fitted on the ship (system, subsystem, and equipment / device, some repair parts of essential equipment) and its shows the status of systematic and hierarchal structure of all the material fitted onboard intuitively. The function codes, names, location No., APL No, mission essentially codes (equipment) and maintenance departments onboard of the configuration items can be inquired from this table.

2.2.2. Configuration Identification Data (Cid)

This table is used to record the physical and functional characteristics of the configuration items (equipment / device level, some repair parts of essential equipment), index numbers of technical information (technical documents, drawings, handbooks), supply information and commerce information and so on. CID not only provides each device with detailed identification information, but also provides the entries for inquiring the maintenance plans, supply plans and technical information.

2.2.3 MEC of Equipment List (MECL)

This table is an equipment list which lists out all the equipments whose MEC is within 1-5 and it is used to record and inquire the MEC of the equipments.

2.3 Configuration Change

Configuration change here aims at interior data change within the ILS system during service of the ship. Accurate timely updating of the design documentation defined as necessary for the through life support of the ship Effective management of changes.

3. <u>DESCRIPTION OF MMS</u>

3.1 Aim, Task and scope of the MMS

MMS is a functional module in the single ship – ILS system, it is mainly intended for making plans for single ship's maintenance, giving requirement, and controlling, recording and reporting the those parts of the maintenance works to be done.

The focus of the maintenance plan module is preparing the single ship's (MEC≥4) essential equipments preventive maintenance plans and maintenance management module is performing a series of organizing, planning and coordinating and monitoring operations for preventive maintenance and corrective maintenance during the whole ship's life cycle. The system should provide the necessary capability and capacity to perform corrective maintenance on all critical machinery / equipments and defer corrective maintenance action non-essential equipment to intermediate or Deport Levels.

3.2 Documents Used for MMS

3.2.1 List of Maintenance Documents

(1) MMS7-maintanence management system index
(2) MMS5-preventive maintenance schedule
(3) MMS1E-equipment log contents list
(4) MMS1B-performance and servicing schedule form

(5) MMS1A (S2001A)-performance and servicing record
(6) S2019-defect log form
(7) S2002-central planning schedule (ship)
(8) S2002A- central maintenance plan record form (ship)
(9) MMS4-maintenance planning card
(10) MMS6 (MMS2)-job information card
(11) MMS9A-maintenance record card
(12) MMS3-central maintenance schedule form (dockyard)
(13) S2002B-central maintenance plan record form (dockyard)

3.3. Planning, Executing and Recording the Work

This MMS is considered for onboard MMS system. Planning of the work which the ship herself intends to do is sub-divided into the plan that made centrally in the planning office and that made locally by the ship staff who is incharge of the section to undertake the maintenance job. In general, for the longer term preventive maintenance routines, such as four monthly or above (MMS2 & MMS3), are planned centrally and all other maintenance routines (MMS1) are plan locally.

3.4 Warship defect report and corrective maintenance

This part describes the provision made in MMS for reporting within the ship the occurrence or discovery of defects and for planning, initiating and recording their rectification. The central planner will combine defect rectification with maintenance work whenever possible. This can be achieved by advancing or retarding maintenance work on the central planning board.

4. <u>SUPPLY PLAN INSTRUCTION</u>

4.1 Purpose, Task and Scope of Supply Plan (SP)

SP is a function module of single ship-ILS system. The purpose is to prepared and deliver the initial supply plan for any sorts of spares and equipage, and provide the modification proposal for the follow-on supply plan for single. The initial supply plan is mainly for meeting the self-support

requirement during 90 days, and for the maintenance carried out by the ship staff.

4.2 **Supply Plan (SP)**

4.2.1 The scope of supplies: supplies are the materials required to ensure the operation and maintenance support. The supplies are divided into five parts: test equipment, materials, Spare parts, tools, Miscellaneous and sub-divided into seven parts: portable testing equipment, other testing equipment, consumables, repair parts, special tools, common tools and other materials.

4.2.2 The depth of supplies allowance of each kind of spare parts and equipage fitted on the ships for 90 days should be defined by OEM.

The allowance of supplies includes the onboard spares parts and onboard tolls provided by OEM, and spare parts and tools which should be provided by users as well.

4.2.3 Supply plan (SP) refers to Coordinated Shipboard Allowance List (COSAL)

4.2.3.1 **Purpose and Constitution of COSAL**

Purpose: COSAL establishes the support for fitted equipage and portable equipments (meeting the spare parts, special tools, special testing equipments and supporting equipments required to carry out preventive maintenance and corrective maintenance during 90 days), and provide list of equipages required to finish the operation risk.

COSAL : APL/AEL Summary of index

COSAL : Index A

COSAL : Index B

COSAL : APL onboard allowance part list

COSAL : AEL onboard allowance equipage list

COSAL :SNSL onboard stock number sequence list.
       (Section A: stock Allowance items)

COSAL :SNSL onboard stock number sequence list.
       (Section B: operation site items)

4.3   Subsequent supply plan modification suggestions.

Automatically or semi-automatically calculate recommended quantity of subsequent spare parts,

5.   SHIP STOCK MANAGEMENT (SSM) ISNTRUCTION

SSM is a function module of single ship-ILS System. It only refers to daily stock management of supplier onboard, various statistics, alarming when onboard items consumed (Can set alarm quantity manually) and generate onboard supplies requisition automatically. Bar code is used to search items.

6.   TECHNICAL DOCUMENT MANAGEMENT (TDM) INSTRUCITON

TDM system is used to carry out manually operation and the computer-aided management for various technical materials (technical documents, files, drawings). TDM is mainly used to save and manage contents, and it must be connected with other modules effectively so that the relevant files and drawings can be found easily when maintenance is necessary.

7.   TRAINING AND HUMAN RESOURCE MANAGEMENT SYSTEM

The main function of the subsystem of HRM is that carrying out operation training and maintenance training (including management training) for onboard operation personnel and maintenance personnel according to the requirement of contract and condition of ship or equipment. Personnel information management part shall realize PMSA current management requirement as per as possible. But for the training management module, CAMS shall only record personnel training result and the teaching material used during the training and won't conduct the management on training plan (for example: compile the training plan and the teaching program,etc).

8.   COMPUTER AIDED MANAGEMENT SYSTEM (CAMS)

8.1   Purpose and objective of Project CAMS

CAMS can help, support, and facilitate the single ship's ILS manage, decide and dispose the data of the ILS. Each module of ILS is to be operated through the system.

8.2　Software, hardware and information

8.2.1 System Software and Development Tools:

Table 1-1 System and Development Tools

Name of Software	Version	Quantity (unit: set)
Windows 7	Licensed (OEM)	As per requirement
Office 2010	--"--	--"--
SQL Server 2012/as per requirement	--"--	--"--
Crystal Report V12	--"--	--"--
Latest Version Kaspersky Antivirus	--"--	100 Keys

8.2.2 System Hardware:

Table 1-2 System Hardware

S No	Items	Quantity per ship
1.	Branded (Dell / HP) Desktop computer or notebook (with latest specifications)	As per requirement
2.	HP Printer (Heavy duty with latest specifications)	--"--
3.	UPS (Minimum 1 hour back up)	--"--
4.	HP Scanner (with latest specifications)	--"--
5.	Dell Server (with latest specifications supporting nodes network with provision of back-up plan)	--"--
6.	Required latest networking equipments for inter connection of 6 x ships.	--"--

Data tables structure is to be obtained by the lowest bidder before finalization of contract.

Note. Latest Software / Hardware available in the market is to be provided by the supplier.