Lashmate general description

Introduction

Lashmate is designed to calculate lashing forces according to following Classification Society Rules:

- American Bureau of Shipping
- Bureau Veritas
- DNV
- Lloyd's Register
- Korean Register
- ClassNK

Lashmate can calculate the forces in container structure and in lashing equipment for on deck and in hold containers.

Lashmate features

- Calculate the forces in lashings and in container structure for on deck containers.
- Calculate permissible stack weight for in hold containers.
- Display the bays in colors depending on the calculation result.
- Calculate the stacks with lashings applied.
- Calculate the final loading case using *final check mode*.
- Help in planning of container loading using *simulated hydrostatics mode* by:
    - Adding and removing containers from the stack
    - Adding maximum possible equal weight containers to existing stack
    - Adding maximum possible container weight to existing stack.
- Printout of the summary of lashing equipment used.
- Printout of bay screens with forces, lashings and container weights.

Lashmate system requirements

Software required:

- Operating system Windows 7 with Service Pack 1 64 bit or Windows 10 64 bit. 32 bit operating systems or any server operating systems are not supported.
- Installation of *Microsoft Visual C++ 2015-2019 Redistributable x64* is recommended.
- Ship definition file for each particular ship supplied by MacGregor.

Lashmate calculation capabilities

- Longitudinal stowage of containers.
- Supporting multiple container lashing systems.
- Mixed stacks (20ft containers topped with 40ft containers).
- Each stack is calculated for following cases:
    - Door side, force from PS
    - Door side, force from STB
    - Closed end side, force from PS
    - Closed end side, force from STB
    - Left side of the stack (Longitudinal forces)
    - Right side of the stack (Longitudinal forces)
    - The transversal wind forces
    - Longitudinal wind forces

Lashmate compatible file types

Following files can be used as the cargo data input:

- EDIFACT BAPLIE file used to transmit information about occupied places onboard of a vessel to interested parties.
- Internal format files with extension *.asc created by programs CASP 5.1 and CASP 6.0 made by Total Soft Bank Ltd.
- Internal format files with extension *.pml made by program PLANMASTER.
- The file with the extension *.LMUd (see Appendix A).

APPENDIX A

Format of LMUd interface file (ASCII format).

Introduction

The name of the input file can be the combination of following informations helping the user to identify the file like:

- Ship's name
- Ship's IMO code
- Date
- Time

The extension should be *.LMUd.

The example of the name of the data file can be: ShipName_20010629_2019.LMUd.

Format of the file

1st Record (Version of the loading data file format)

LD1

EOL (end of line)

2nd Record (Hydrostatic data), The fields are separated by space.

1st Field (Draft in meters)

99.99

2nd Field (Transversal height of Metacentre (KM) in meters)

99.99

3rd Field (Longitudinal Center of Flotation (LCF) from After Peak in meters)

999.99

4th Field (Corrected Metacentric Height (GM_0) in meters)

99.99

5th Field (Text describing the loading case)

"Aaaaaaaaaaaabbbbbbbbbbbbccccccccccccccccddddddddd"

In case when there is no text, following must be written:

EOL (end of line)

3rd and consecutive Records (Containers data) , The fields are separated by space.

1st Field (Bay Number)

9999

2nd Field (Row Number)

99

3rd Field (Tier Number)

99

4th Field (Weight of the container in metric ton)

99.9

5th Field (Height of the container in meters)

9.999

6th Field (Container size code according to ”Old” and ”New” ISO size type codes or empty string)

”9999” or ””

EOL (end of line)

4th Record (Container data) , The fields are separated by space.

5th Record (Container data) , The fields are separated by space.

6th Record (Container data) , The fields are separated by space.

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nth Record (Container data) , The fields are separated by space.

EOF

Remark:The sequence of container records is not important.

Example of loading data file:

LD1

10.50 14.22 89.55 1.32 ”Departure from Singapore to Hong Kong, Voyage no 1234”

02 11 82 29.5 2.591 ”4240”

17 10 82 30.0 2.591 ””

1648 02 82 30.5 2.591 ”9400”

Remarks:

1. *Bay Number 1648 concerns the bay 16 with special slots assigned only for 48ft containers. (ISO sockets situated on 48ft corners, not at 40ft distance).*
2. *For details of ISO containers size codes visit http://www.smdg.org/*

APPENDIX B

How to prepare Loading Program for auto start of Lashmate

Introduction

In case when the user wants to have direct possibility of the check of lashing forces for a loading case created in a loading computer then the loading software maker should prepare the software according to the below suggestion to transfer necessary data from the loading computer to Lashmate.

1. To detect Lashmate application full path name programmatically:

Call MsiLocateComponent with first argument set to:

"{70F33B48-F052-4ABA-89A6-C69EC6057A36}" (for current Lashmate version, 64bit)

or

"{053F5A83-DD72-42E3-9DC5-3974B00FF3A5}” (for current Lashmate version, 32bit)

or

"{873327AD-1E63-5C0C-BABB-AE50E0962625}" for the Lashmate version prior to 4.1.46c (32bit only).

If a return value is different from INSTALLSTATE_LOCAL then the Lashmate is not installed, otherwise the second output parameter to MsiLocateComponent contains a full path to the Lashmate application.

Dependences: header: msi.h, library: msi.lib

2. Use following command line parameters when calling Lashmate from Loading Program:

/IMO:[IMO_CODE]

/LMUd:[INPUT_FILE_PATH_AND_NAME]

Where [IMO_CODE] is a ship IMO Code and [INPUT_FILE_PATH_AND_NAME] is a full path to LMUd input file, if the path and/or name contains spaces, surround it with double quotation marks. Examples of valid command line parameters:

/IMO:12345678 /LMUd:C:\FOLDER\FILE.LMUd

/IMO:12345678 /LMUd:"C:\Documents And Settings\Username\MyDocuments\File name.LMUd".

When loading case is ready to be checked by Lashmate, then Loading program should create the *.LMUd file in format described in Appendix A. This should be done when an additional Lashmate button located in the loading program toolbar is pressed.

Remark: All above is valid for Lashmate installed by pressing “Start.exe” including ship definition file for particular ship supplied.