



SAL ENGINEERING SERVICES

OUR PACKAGES

FREE SUPPLY

€ 0

ECONOMY

€ 650

BUSINESS

€ 1800

PREMIUM

€ 4600

	ITEM	GLOSSARY ANNOTATIONS	PACKAGE CONTENT			
			FREE SUPPLY	ECONOMY	BUSINESS	PREMIUM
STANDARD	Documentation Package	1)	None	Transportation Proposal	Operations Manual	Operations Manual
	Revision Costs	2)	–	○ ³	○ ³	○ ³
	Vessel Particulars	3)	●	●	●	●
	Stowage Proposal	4)	●	●	●	●
	Rigging Arrangements	5)	–	●	●	●
	Securing Arrangements (acc. to IMO Annex 13)	6)	–	●	●	●
	Visualization of Loading/Discharge Sequences	7)	–	–	●	●
	Provision of Certification Packages (GEAR)	8)	– ¹	– ¹	● ²	●
	Clarification to Marine Warranty Surveyor	9)	–	○ ³	○ ³	●
	Stability/Draft Calculations (DEP/ARR/Most critical lift)	10)	–	–	●	●
	Harbour Mooring Calculation (POL & POD)	11)	–	–	●	●
	Rigging Calculations acc. Guidelines	12)	–	–	–	●
	Seafastening acc. Guidelines other than CSS Ann 13	13)	–	–	–	●
	Weight Spreading (Documentation Package)	14)	–	–	–	●
	Mooring/Berthing Drawing (POL & POD)	15)	–	–	–	●
ADDITIONAL	Reduced Friction Factor (<0.3)	16)	–	–	●	●
	Engineering Attendance on Site	17)	●	●	●	●
	Route Assessments	18)	–	–	–	●
	Motion Monitoring	19)	–	–	–	●
	3D Modelling	20)	–	–	–	●

Disclaimer: Any documents and information exchanged are strictly confidential and not to be released without prior written consent. Engineering packages are applicable only for transportation by a nominated SAL vessel type and are prepared based on assumptions and information and data and con-

clusions as supplied without SAL verifying the accuracy of the data. All intellectual property contained in any results or any other information created in any form in the course of the provision of the engineering packages shall solely be vested in SAL.
© SAL Heavy Lift GmbH 2018 • All rights reserved

- Included
- Special Condition
- Optional Extra (not included in package price)
- Not available

¹ Available on board

² Provision of copies in advance

³ Charged with an hourly rate of € 110. If related to errors/missing information in original documentation, no charges apply.

ENGINEERING PACKAGES – GLOSSARY

DEFINITIONS

Merchant/Charterer

The orderer of engineering and transport services; the booking party as per C/P.

Carrier/Owner

SAL Heavy Lift GmbH, if and when applicable as commercial manager.

Heavy Lifts

Heaviest cargo piece(s) for which lifting arrangements and cargo securing arrangements are prepared.

As a guideline, cargo pieces with weights more than 200 tons shall be considered as "Heavy Lifts".

Due to the nature of the cargo SAL Engineering department and/or Merchant may identify further cargo pieces for which it is necessary to prepare a lifting arrangement drawing and/or seaweasting arrangement, which shall be mutually agreed.

Estimated duration of voyage

Estimated number of sailing days between loading and discharging port. Used as reference only to calculate costs for motion monitoring system.

Friction factor

Friction coefficient (cargo-deck) considered in the seaweasting calculation. SAL standard is according to IMO CSS, Annex 13, section 7.2, table 5.

Usually a friction coefficient of 0.3 (steel-timber) is applied.

A lower friction factor leads to more required seaweasting and additional costs mutually agreed in the engineering package.

TTP

"Transportation proposal". Transportation documentation produced which includes basic information, stowage proposal, lifting arrangements and sea fastening designs for Heavy Lifts.

OPM

"Operations manual". Transportation documentation produced which includes basic and project/shipment specific information, overview of sequence in POL and POD, responsibility matrix, stowage proposal, lifting arrangements and sea fastening designs for Heavy Lifts and other information relevant for the shipment.

POL

Port of Loading.

POD

Port of Discharging.

SAL standard

Refers to form and content of the provided documents, which shall be in line with SAL internal quality requirements and specifications.

ANNOTATIONS

- 1) Includes the preparation of the revision 0 (initial) of a TTP or OPM, all required drawings and calculations.
- 2) Update of TTP or OPM to the next revision. Costs based on time and effort.
- 3) SAL Vessel particulars.
- 4) Drawing according to SAL standard.
- 5) Drawing according to SAL standard.
- 6) Sea fastening design for Heavy lifts according to IMO CSS, Annex 13, "Advanced calculation method".
- 7) Drawing(s) acc. to SAL standard, illustrating loading/discharging sequence.
- 8) Certificates of lifting gear intended to be used for the applicable shipment. Originals are available on board. On demand and if agreed copies can be provided prior loading. Certificates in accordance with applicable class and flag state requirements.
- 9) Clarifications and explanations of contents of SAL's documentation, calculation methods and standards. Any modifications, amendment on request of Merchants are subject to additional costs and mutual agreement.
- 10) Draft and stability calculation of the applicable vessels. Calculations in advance to be considered preliminary, final calculation only can be provided by performing vessel after loading subject to Master's discretion.
- 11) Calculation according to SAL standard for berthing conditions in POL and POD in line with mooring berthing drawings. Additional information about local conditions (included but not limited to environmental conditions, bollard locations and capacity etc.) may be required.
- 12) Verification calculation of rigging components (grummets, shackles, etc.) according to guideline specified by Merchant such as GLND0027 (now replaced by DNVGL-ST-N001).
For "Heavy Lifts" only.
- 13) Seaweasting design calculation according to guideline specified by Merchant, other than IMO CSS, Annex 13, such as GLND0030 (now replaced by DNVGL-ST-N001).
For "Heavy Lifts" only.
- 14) Documentation of strength verification of vessel's deck(s) according to SAL standard.
- 15) Drawing(s) acc. to SAL standard. Based on information provided by the Merchant about bollard locations on jetties, water depths, etc. in POL and POD.
- 16) Friction between cargo and vessel's deck is considered in the seaweasting calculation. The higher the friction factor, the less additional securing (e.g. by lashings) is required. Applicable friction coefficients are chosen by SAL according to IMO CSS, Annex 13, section 7.2, table 5.
If a friction factor for wood-steel lower than 0.3, as stipulated in the IMO CSS, is required by Merchant, additional sea fastening is required to compensate.
The resulting total amount of additional sea fastening is mainly depending on the cargo weight and chosen friction factor.
Additional costs hereto do not include any vessel waiting time.
- 17) Costs for engineering support on the performing vessel(s) in port. SAL vessels and engineering closely cooperate on the voyage/cargo planning. During loading/discharging operations the vessels also are fully supported by SAL's engineering, which does not necessarily mean physical presence of an engineer/supercargo on site. If this is requested by Merchant, all occurring costs shall be to their account. Travelling and costs related hereto are based on SAL Travel Guidelines.
- 18) Route- and vessel specific calculation of accelerations.
The common guidelines for seaweasting follow a "worst case approach" for determining acceleration values. Hence accelerations during the sea passage often are overestimated, especially for short voyages and/or voyages in benign areas.
Accelerations provided are derived from route and vessel specific calculations which are based on ship specific hydro-dynamic properties, statistical weather data and recognized calculation methods.
Report according to SAL standard.
For SAL vessel types 183, 176, 161ab, PK116 only.
- 19) For weather restricted voyages, SAL can provide a motion monitoring system that logs all motions (pitch, roll, heave, etc.) and accelerations throughout the voyage. A report will be issued after completion of the voyage.
- 20) 3D simulations of loading, discharging operations, or stowage.