

SEC DESIGN

A separate department inside SEC takes care about all kinds of container related design parts for ships as shown on the following pages. Our design office is equipped with the latest CAD programs by AUTODESK namely AutoCAD, Mechanical Desktop and Inventor.

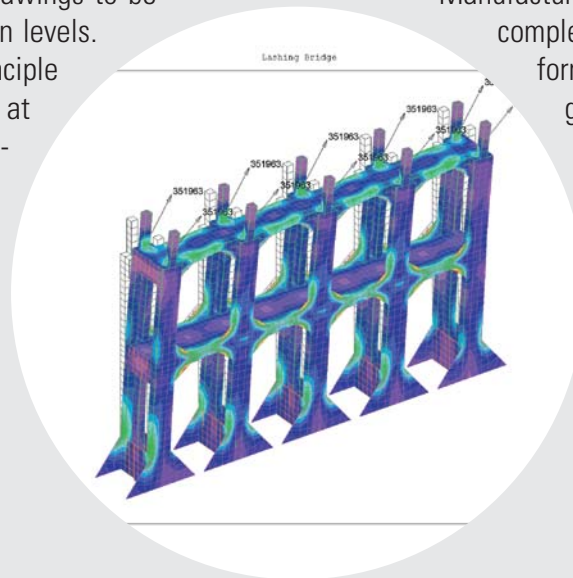
Strength analysis is performed by Finite Element Method (FEM) using ANSYS. Drawing transmission by e-mail is possible in all kinds of common file formats, i. e. dxf and dwg. Large files will normally be compressed by WINZIP.

Different levels of design can be offered starting with principle layout drawings to detailed manufacturing drawings with complete outfitting. In order to avoid misunderstandings we would like to precise our definition of different design levels:

1.) Layout Level

Principle Layout shows typical situations i. e. at midship section with the principle arrangement of the concerned design part. These drawings to be used as a base for further design levels.

An example could be the principle arrangement of lashing plates at lashing bridge for optimised lashing of containers, interference check with hatch cover panels, parking position of turnbuckles and unified lashing length.



2.) Design Level

a) Typical situation only

Principle Design consists of main steel structure with dimensioning based on the result of our FE calculations but without measuring any details. The principle arrangement of necessary reinforcements at the hull will be indicated but dimensioning of such stiffeners to be done by hull designers. An example is the arrangement and dimensioning of typical container stanchions at ship sides.

b) Complete design

Same as before but for all situations on board which are different, for example the arrangement and dimensioning of main steel structure for all container stanchions on deck.

3.) Manufacturing Level

We will prepare a complete set of manufacturing drawings with detailed measuring including welding details for each individual item ready for production.

Manufacturing drawings normally will include complete outfitting with working platforms, railings, ladders, access lids, gratings, light housings and what ever might be necessary. Outfitting with electrical equipment can not be offered. A material list for each item or nesting drawings can be prepared on request.