

Self Study Course in Advanced Calculation Method for Securing Non-Standardised Cargo



**NATIONAL
CARGO
BUREAU
INC.**

**International
Institute of
Marine Surveying**

August 2009

- **Defining Securing**
- **Understanding Basic Acceleration Data**
- **Maximum Securing Load**
- **Strength of the Lashing Assembly**
- **Balancing the Opposing Forces**
- **The Mechanism of Tipping**
- **Explanations and Methods**
- **Bulky or Unweildy Cargo**



International Institute of Marine Surveying

International Institute
of
Marine Surveying

National Cargo Bureau, Inc.

Self-Study Course

in

Securing of Non-Standardized Cargo

in accordance with Annex 13 of the IMO
Code of Safe Practice for Cargo Stowage and Securing

PREFACE

As of 31 December 1997, in accordance with regulations VI/5 and VII/6 of the International Convention for the Safety of Life at Sea (SOLAS) 1974, as amended, it became mandatory that cargo units and cargo transport units be secured throughout the voyage in accordance with the Cargo Securing Manual approved by the vessel's Flag State Administration.

In stating the methods for complying with this requirement, the regulations accept the standards prescribed by the several recognized classification societies when applied to fixed, or installed, securing systems. But, if a ship transports a cargo unit which is not accommodated by such systems, the regulations provide a method for calculating a satisfactory securing arrangement. This is identified in the 'Code of Safe Practice for Cargo Stowage and Securing' as the Annex 13 Advanced Calculation Method.

In order that surveyors and other involved parties understand this method and are proficient in its use, this self-study course is intended to provide explanation, illustrative examples and exercise in its practical application.

The course is presented in eight lessons which are developed from four basic factors:

- (i). the forces to which the cargo is subjected
- (ii). the devices used for securing
- (iii). the securing arrangements
- (iv). the calculation which demonstrates that the forces involved are adequately balanced by the securing provided.

The material in the course constitutes the text. However, a copy of the Code of Safe Practice for Cargo Stowage and Securing (CSS Code), which includes Annex 13, is provided with the course as authority for content. The course is in Metric units with conversion from English units whenever necessary.

In the example calculations the format used is the standard National Cargo Bureau (NCB) Worksheet. Also, this worksheet is provided for use in the exercises to be submitted for grade. However, it is not required that this worksheet be used. The student may use his own format. The grade will be based on the answers not on the format.

Although effort is made in this course to present the material as simply and understandably as possible, it must be recognized that the intended purpose will not be achieved without effort and conscientious application.

Marking Scheme

In order to pass the course, candidates must achieve a minimum of 50% for each Lesson and an overall average of at least 70%. Certificates will be awarded to successful candidates.

Candidates passing with an overall average of at least 80% will have a 'Merit' notation placed on their certificates. Candidates passing with an overall average of at least 90% will have a 'Distinction' notation placed on their certificates.

Support

NCB offers support to candidates through its New York office at no additional charge. Questions or comments can be E-mailed to ncbnyc@natcargo.org or faxed to National Cargo Bureau at +1 212 785 8333. Please make reference to SELF-STUDY CARGO SECURING or similar in the subject line.

* * * *

Code of Safe Practice for
**CARGO STOWAGE
AND SECURING**

2003 Edition

