

**SMM Ship's Squat/UKC/Speed**  
**Loss/Static from Dynamic Condition and Tide Prediction Software**

**BRIEF DESCRIPTION**

Ship's Squat / Under Keel Clearance / Speed Loss at Restricted Waters & Static Condition from Dynamic Drafts / Calculation of Safe Speed / Tide Calculation is based on Dr. Bryan Barrass privileged analytical method, using the Admiralty Digital Publications SDK from UKHO.

**Features of this Module for vessel and office application:**

- Ship Squat
- Under Keel Clearance
- Speed Loss at Restricted Waters
- Static Condition from Dynamic Drafts (if the vessel needs to perform draft survey (before and after loading or unloading) in a river with current say of 1.5 knots)
- Calculation of Safe Speed
- Tide Calculations
- Drop Down Menu for Selection of Predefined Minimum UKC Margin as per Company's Policy
- Drop Down Menu for Selection of ZOC Categories (CATZOC) & Depth Accuracy instead of manual adjustment of Accuracy of hydrographic data.
- Automatic synchronization of data between vessel and office

**Benefits of this Module for vessel and office application:**

- Compliance with the management framework/system for Under Keel Clearance Management in certain areas (ie. Torres Strait/AMSA, etc.)
- Ship Static Condition with **DWT increase/loss from dynamic drafts**
- **Calculated grounding Speed**, the Safe Speed, the Grounding Area and the Loss of Speed
- This Option is based on the over than 36-year experience and research of Dr. Bryan Barrass (UK) **using his privileged analytical method** for the applicable calculations with less conservative calculations as to DWT Margin with positive impact on the cargo intake. Through our company, in cases of incident involving squat, Dr. Bryan Barrass is also available as expert witness. Dr. Bryan Barrass (UK) mentions about S.A. MALLIAROUDAKIS MARITIME (UK) LTD. on his website.
- **Improved efficiency** of operations, judgement and communication.
- **Clarity & Transparency** based on official shipyard's documentation endorsed by SMM (UK) Ltd. as 3rd party.

## FREQUENTLY ASKED QUESTIONS

1. How the crew familiarization is achieved?
  - a. Manual is incorporated in each Program with detailed & extensive Instructions
  - b. Distant Training
  - c. Direct Replies to Email of Masters / Chief Officers / Chief Engineers with Cc to your good Company
  - d. User Friendliness of Software Interface with a brief description of required actions
  
2. How we can we handle tiresome ISM / SMS Amendments for alignment with this SMM Product?
  - a. SMM Software is tailored to your company's policy/S.M.S. meaning minor ISM/SMS alterations.
  - b. Just a quick reference to the SMM Software in place and their Manual Contents in ISM is, often, common and effective practice for the majority Shipping Companies.
  
3. Relative requirements of Programs (hardware, software, data exchange if any)
  - a. Light, server-based application running exclusively on Windows operating system environments
  - b. SMM Software can be operated by multiple users (clients) on a network
  - c. Sync Mechanism requires email access or *data import path* for the whole fleet or a desired path for each vessel.
  - d. Possible export in desired editable format, upon discussion and analysis.

## SCREENSHOTS

Please see below **Screenshots**:

**Ship Squat / UKC / Speed Loss at Restricted Waters**

File About Ship Squat

| Vessel              | Voyage No | Location | Latitude | Longitude | Country |
|---------------------|-----------|----------|----------|-----------|---------|
| M/T MINERVA CONCERT |           |          |          |           |         |

Local Authority Information

Safe Draft: 1.025 m  
 Confirmed Depth: 12 m  
 Remarks:   
 Date: Jan 3, 2019  
 Time: 11:30

**Ship Static Condition at Restricted Water Location**

As calculated by Multiloop for Windows or other ship loading instrument. Other Allowances that may apply to UKC

| Seawater Density (MT/M <sup>3</sup> ) | Static Drafts at 1.025 Mean (m) | Angle of Heel (deg) | Displacement (MT) | LBP (m) | Breadth (m) | CB    | Safe UKC Margin (m) |
|---------------------------------------|---------------------------------|---------------------|-------------------|---------|-------------|-------|---------------------|
| 1.025                                 | 12                              | 12.0                | 95702             | 232.00  | 42.00       | 0.799 | 0.8                 |

**Restricted Waters Description**

Width of Influence FB = 358.00 m Please select between **Open Water** or **Confined Channel** Condition:

**Open Water Conditions**  
 (If channel width is greater than FB (358.00m))  
 Chart Datum Depth (h1) 13.5 m

**Channel Conditions (Rectangular or Trapezoidal channel)**  
 (If channel width is less than FB (358.00m))  
 Chart Datum Depth (h1) m Width (w1) m

Grounding Speed: 13.79 knots  
 Safe Speed: 9.56 knots  
 Grounding Area: FWD End  
 Loss of Speed: 31.9%

## WE CAN SAIL TOGETHER.....

---

### **S.A. Malliaroudakis Maritime (UK) Ltd.**

UK Office: 1, Portulacea Gardens · High Snoad Wood · TN25 4DS · Challock, Ashford, Kent · U.K. · **Tel:** [+44 \(0\) 1233 742673](tel:+441233742673)

GR Office: 41, Agiou Dimitriou Str. · 185 46 · Piraeus · Greece · **Tel.:** +30 210 45 10000 · **Fax:** + 30 210 46 10333

**Web:** [www.smmnet.com](http://www.smmnet.com) · **Email:** [info@smmnet.co.uk](mailto:info@smmnet.co.uk) , [sales@smmnet.co.uk](mailto:sales@smmnet.co.uk)

---