

1 INTRODUCTION

TARKA-SYSTEMS is an innovative company specialized in the development and production of client-specific measurement and monitoring tools and (portable) data-acquisition systems (hardware and software). The company TARKA-SYSTEMS was founded after 15 years world-wide field experience and system development for one of the largest maritime research institute in the world (MARIN, The Netherlands).

Details about TARKA-SYSTEMS and the provided monitoring systems and data-acquisition solutions can be found on the website: www.tarka-systems.nl

Core business of TARKA-SYSTEMS for the Marine, Offshore, Salvage and Civil branches.

1.1 Production and assembly

- To provide client-specific data-acquisition and monitoring solutions.
- To provide complete systems, hardware and software, and be a one-stop solution for the client.
- To translate client requirements into proven hardware units and easy-to-use software applications.
- To provide tailor size solutions: handheld, junction box, travel-case, flight-case, 19"rack or others.
- To provide tailor made portable data-acquisition solutions in travel cases.

1.2 Installation, maintenance, commissioning and support

- Installation, maintenance, commissioning of sensors and systems on-site.
- Integration of systems provide by TARKA-SYSTEMS with clients systems.
- Integration of clients systems to TARKA-SYSTEMS main measurement system.
- On-site assistance and handover of measurement systems.

1.3 Distributor and installation of IRIDIUM Track Trace units of GTT systems.

- IRIDIUM Track & Trace units with worldwide coverage. Stand-alone systems or systems with the option to add additional data. Special use for maritime applications.

1.4 Supplier of rugged transport cases (PELI & Explorer) and custom-made flight cases.

- All types of cases and inlays for client-specific solutions.
- Custom made flight cases.



2 TYPE OF APPLICATIONS / SENSORS

Below a brief overview of applications and sensors.

When your application or sensor is not mentioned in the overview please contact TARKA-SYSTEMS to determine what would be the possibilities for your application or sensor.

2.1 Applications

A brief overview of possible applications:

- Motion monitoring
- Environmental monitoring
- Decision support systems
- Heavy lift
- IRIDIUM tracking
- Offshore installation
- Wind park installation
- Transport tracking
- Heavy transport
- Tow monitoring
- Fatigue monitoring
- Wreck removal
- Salvage monitoring
- Ship behaviour monitoring
- Float-on / Float-off monitoring
- Float-over monitoring
- Load-out monitoring
- Incline measurement
- Marine survey
- Deadweight measurement

2.2 Sensors and data visualisation/storage

A brief overview of possible sensors:

- Motion sensor (6DOF)
- Wind
- Wave
- Flow (Current ADP, ADCP)
- DGPS (RTK)
- Incline
- Acceleration
- Raw Electrical values
- Raw thermal values
- Raw mechanical values
- Strain gauges
- Wireless data link
- Data visualisation
- Remote login
- Remote data
- Integration of bus-systems
- Client specific software (GUI)
- Serial data (RS232/RS485)
- Ethernet data
- Web based presentation of data

3 PERSONAL

3.1 Experience

With the practical experience of 15 years system development and executing measurements on ships and oil-rigs worldwide TARKA-SYSTEMS has the knowledge and experience to develop a system which can cover the extreme demands of working in harsh environments under uncomfortable conditions.

- Assembly and configuration of hardware and software for mobile tools and measurement systems with integrated data gathering, visualization and power supply.
- Equipment selection (sensors, cabling, data collectors) for short term and long term monitoring campaigns for specific measurements (Maritime, Offshore, Salvage, Civil and others).
- Development and programming data-acquisition software (GUI/SCADA) for all kind of different measurements.
- Configuration hardware for monitoring campaigns and measurements.
- Preparation, instrumentation and commissioning of measurements and monitoring campaigns on projects (heavy transport/lift, offshore constructions and ships) for fatigue issues.
- Professional diving for several years (licence expired).

3.2 Areas of Expertise

- Sensor selection, configuration and integration into data-acquisition software for all kinds of measurement.
- On board hardware and software installation (trouble shoot and start up).
- Development of data-acquisition software, at office or direct development on-site.
- On site supervision of large instrumentation campaigns worldwide.
- Commissioning of on board data acquisition systems.
- Working independent, as site manager, or as member of a larger team.



WHY...
Major companies find their way to
TARKA-SYSTEMS for monitoring systems

**CURIOUS?
CHECK IT OUT!**



www.tarka-systems.nl info@tarka-systems.nl

4 REFERENCE

A small summary of the projects carried out by TARKA-SYSTEMS for MARINE, OFFSHORE, SALVAGE and CIVIL applications:

- **CHINA client**, development of complete float over measurement system.
- **RESOLVE MARINE**, complete motion monitoring system for wreck removal
- **CHINA client**, installation and setup of equipment for two float over installations
- **BARGE-MASTER**, development of portable Measurement System (T40)
- **HEEREMA**, complete monitoring system on largest barge of the world Barge H-851. Structural and float-over monitoring.
- **BARGE-MASTER**, development of Measurement Integration System (T700)
- **MAMMOET**, Salvage monitoring system, used for several wreck-removals
 - o B_Oceania / Malaysia
 - o Zalinski / Canada
 - o Baltic Ace / Nordsee
- **HEEREMA**, motion monitoring system for tow-transport
- **BLUEWATER**, setup proposal for complete monitoring system for BLUETEC project
- **SMIT**, tender for complete sensor monitoring system for COSTA-CONCORDIA project
- **MAMMOET**, video monitoring of submerged objects
- **HONEYWELL**, portable server system
- **HEEREMA**, wireless motion monitoring on reel of AEGIR
- **RESOLVE MARINE**, wireless inclination system, portable and battery powered

Projects carried out as Lead Instrumentation Engineer at Maritime Research Institute Netherlands (MARIN).
(Period 1998 -2011, average of 100 days a year abroad for installation en measurement activities)

- **US Coast Guard**, site manager and full installation of measurement system on Coast Guard cutter BERTHOLF. (USA)
- **BLUEWATER – FPSO GLASDOWR**, Installation and maintenance on fatigue life system.(Scotland, South Africa, Singapore)
- **ANADARKO – TLP MARCO-POLO**, motion monitoring system for tow-transport (Gulf of Mexico)
- **FSPO – USAN**, Installation of complete measurement system (Angola)
- **Cruise ship – MILLENNIUM**, installation of sensors and system for research project.

4.1 References from clients:

Barge Master: http://www.tarka-systems.nl/images/pdf/2492015134736_TARKA_Offshore_Barge_Master.pdf

United States Coast Guard: http://www.tarka-systems.nl/images/pdf/2492015133240_USCG_Recommendation.pdf

MAMMOET: http://www.tarka-systems.nl/images/pdf/2492015133206_MAMMOET_Recommendation_TARKA.pdf

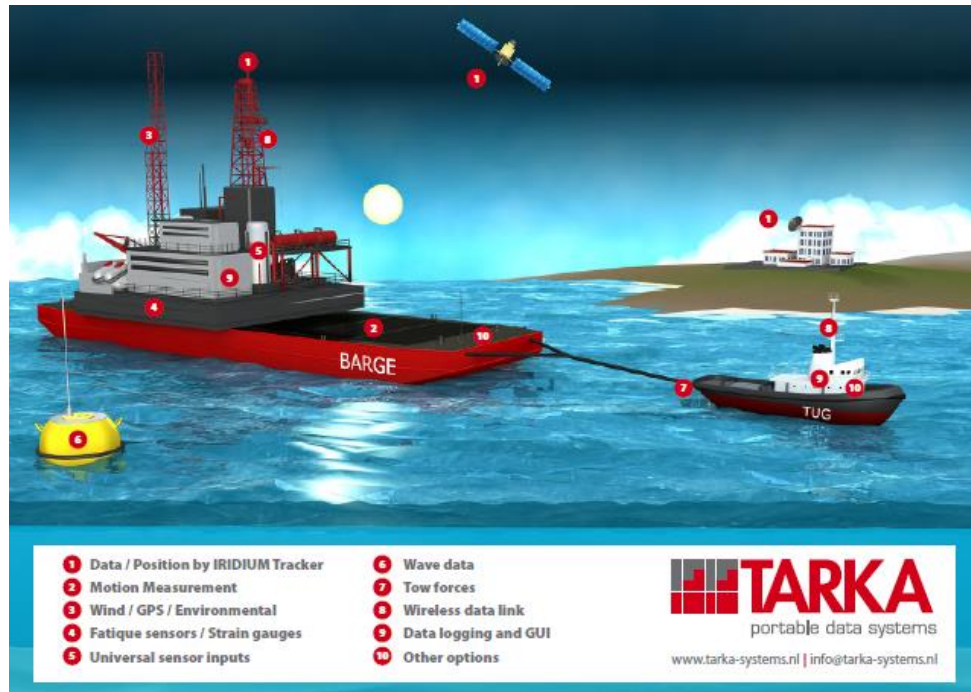


MOSS MARINE OPERATIONS SURVEY SYSTEM

The Marine Operations Survey System (MOSS) is a multipurpose tool for field applications and survey jobs. With the MOSS it is possible to carry out different measurement with the same hardware. With multiple sensor inputs a wide range of sensors can be connected. The basic software reads, displays and stores all sensor values. Client specific software can be programmed and be installed by use of a USB stick even when the system is already in the field.



More info : http://www.tarka-systems.nl/images/pdf/3122015130837_Tarka_87x126_HR_5.pdf



Example of measurement system



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The one-stop solution for reading, presenting and storing sensor values of all types and quantities.

With over 15 years of experience of design and manufacture of individual in-field monitoring and measurement solutions **TARKA-SYSTEMS** can provide rugged, easy-to-use, measurement solutions to suit your needs for portable or (semi) permanent applications.

What TARKA-SYSTEMS can provide:

- Complete solutions
- Reliable Hardware
- Reliable Software
- Sensor knowledge
- Installation/assistance on-site
- Practical experience
- Complete layout

Benefits for the client:

- One-stop solution
- Single investment for multiple projects
- One system for all data sources
- Reduce development costs
- Improve uptime
- Easy to analyse data
- Improve response time
- Reduce setup time

Examples : MOTION-MONITORING // GPS LOCATION (on web) // FATIGUE LIFE (strain gauges) // ENVIRONMENTAL // others

Brief summary of projects and portable solutions:

