



SCEDAS[®]

Timekeeper

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A smart timetracking system provides workforce analysis

Maintenance and crewing are two of the major cost factors in ship operation, and also the ones with the greatest impact on safety and quality of the service. It is essential to have a profound information basis for business decisions in these fields. Numbers and figures on the crew's workload and their work distribution give valuable support for that.

Recording and analyzing task specific work hours

Fraunhofer CML has developed a universal recording and analysis tool for the workload distribution on board a vessel. An onboard software tool collects data on the workload and its distribution among the crew. Fleetwide analyses of the gathered data provide insights into the work processes on board and give valuable support for business decisions.

Two modules

SCEDAS[®] Timekeeper's recording module collects work hours to a task specific detail. The seafarers enter their work hours and specify corresponding tasks in an easy-to-use program.

Once a significant amount of data is gathered, the fleetwide recorded work hours offer great potential for analysis. SCEDAS[®] Timekeeper's analysis module provides insights into the job profiles, workload distribution and the vessel's maintenance status.

SCEDAS[®] Timekeeper was developed as an add-on to the SCEDAS[®] tools for optimized workforce planning. However, it can be deployed as an independent analysis tool.

A universal data analysis system for the maritime industry

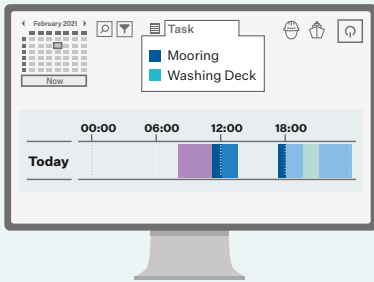
SCEDAS[®] Timekeeper offers various applications for the maritime industry. The original area of application is work on board the vessel. However, this data analysis system is highly flexible, which

Recording module

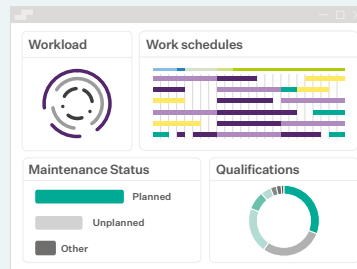
- Job selection from predefined lists
- Offline but synchronized with office when necessary
- Anonymized data processing

Analysis module

- Fleetwide analysis tool for recorded work hours
- Analyses for work distribution across qualification levels



The recording module registers the work hours with a task-based approach.



The analysis module provides insights by evaluating the workload in task categories.

allows easy modifications to provide analyses in other environments, e.g. analyses on land based operations of shipping companies or port operations. We provide support for customization to different needs and applications as well as for integration of company-specific KPIs.

a vessel's maintenance workload allows benchmarking between ships and gives an overview of the fleet's maintenance status. Moreover, the collection of data on unplanned maintenance in correlation to the ship's voyage and its condition inform about incidents.

Example applications

Crew demand assessment and scheduling

SCEDAS® Timekeeper provides data on the onboard work distribution among the available qualifications. Different SCEDAS® tools make use of these insights for the calculation of ship and voyage specific crew demands and for the calculation of optimized onboard work schedules. This offers decision support for ship and maintenance managements as well as for the crew (see www.scedas.com).

Towards standardization of job descriptions

The digitalization and automation redistributes workload from ship to shore. In addition to offering a custom digital solution, SCEDAS® Timekeeper supports these transitions in job profiles. It provides analyses of new task assignments and qualifications, which allows benchmarking of operational development and identification of potentials for educational trainings.

Improving database of PMS jobs

Systematic data on planned maintenance is already established in shipping. This data from the planned maintenance system (PMS) makes detailed maintenance analysis possible. SCEDAS® Timekeeper supports this by providing additional information on maintenance tasks, such as average job duration and involved positions, through an interface to the PMS.

Workload analysis for logistical hubs

SCEDAS® Timekeeper can be used for recording the tasks on container yards as well as work flows in logistical hubs, which helps to identify optimization potentials. For example, synergies through redistribution of jobs across departments or terminals can be evaluated. This can help to balance peaks in workload more efficiently.

Analysis of the fleet's maintenance status

SCEDAS® Timekeeper provides a fleetwide analysis of maintenance tasks. The investigations of

In particular, tracking the workload of planned and unplanned maintenance for a logistical hub provides data for condition assessment as well as monitoring maintenance executions and their effectiveness. This can give valuable decision support for maintenance management.

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