REFMAN

Drydocking Software

If you write drydock specifications, YOU NEED REFMAN's Specification Generator

If you want ship's staff involved in specification writing, YOU NEED REFMAN's Shipboard Defect Recording

If you compare tenders from shipyards, YOU NEED REFMAN's Cost Control

If you want standard specifications, YOU NEED REFMAN's Master Data Maintenance

If you are responsible for controlling costs during drydocking, YOU NEED REFMAN's Cost Control

for Superintendents & Ship's Officers

REFMAN *for windows*

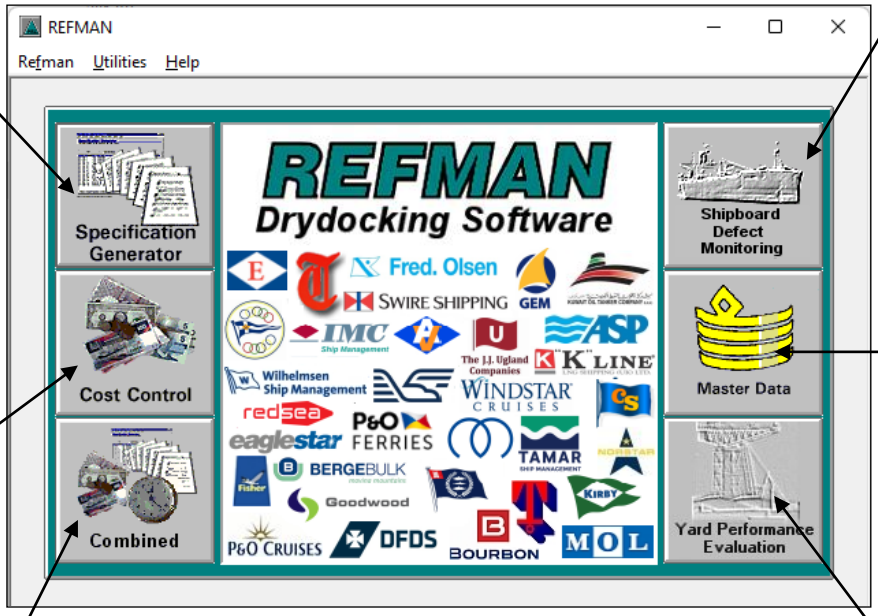
Drydocking Software Overview

Writing drydock specifications

Specification Generator is used for compiling and printing Refit, Repair & Drydock Specification documents

… getting ship's staff involved

Shipboard Defect Recording & Monitoring is used by ship's staff to record defects and other ship initiated jobs



Comparing shipyard tenders

Cost Control is used for recording, analysing and reporting on the cost of jobs in Refit, Repair & Drydock Specifications

Creating company standards

Master Data is used for setting up standard specification templates, standard job descriptions & standard libraries

Keeping control of costs & monitoring progress during the drydocking

Specification Generator, Cost Control & Time Management all in one

Evaluating shipyard performance

Yard Performance Evaluation is used to "rate" or "grade" the yard's performance before, during and after the repair period.

Overview

REFMAN is a software package that has been specially designed to allow technical people who are responsible for the day to day running of ships, to take control of the drydocking and ship repair process.

REFMAN has a Specification Generator for compiling and printing specification documents; Cost Control for comparing shipyard tenders and reporting drydocking costs, Shipboard Defect Recording & Monitoring for managing defects and other jobs initiated onboard. There is also a Drawing Package for creating simple drawings, sketches and annotating photographs; a Time Management module for planning and keeping track of the progress of jobs and a Yard Performance Evaluation module for rating the yards performance.

When you use REFMAN to write specifications there are no large word processed documents to manipulate and the software itself handles all of the job numbering, text formatting, collation and merging of attached files and it automatically creates a table of contents and a list of attached files, so that leaves you with a lot more time to concentrate on the technical content of the specification.

Also, all of REFMAN's modules are fully integrated so when you use REFMAN to write a specification the framework for comparing tenders, recording costs, project planning, daily reporting and writing a drydock report is created and updated automatically each time a job is added, removed or cancelled in a specification.

So when you use REFMAN to control your costs, there are no cumbersome spreadsheets to setup, no complex formulas and the software produces all the reports that are needed automatically. The shipyards can even quote electronically so that means less time typing and checking numbers which leaves you a lot more time to concentrate on what the numbers mean.

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REFMAN – Specification Generator

REFMAN's Specification Generator has been designed to allow technical people to quickly and easily produce well formatted, professional looking specification documents.

To achieve this, REFMAN allows the creation of Standard Specification templates which can either be 'general' for use with any ship, or they can be tailored to a particular type or class of ship or tailored to an individual ship.

REFMAN encourages a high degree of standardisation, not just in the presentation, style and layout of specification documents, but also in technical content.

Standardisation of content is achieved by making use of previously written job descriptions both as templates for new jobs and as standard work descriptions which can be used over and over again.

This saves both time and effort when preparing new specifications and allows you to refine or 'hone' standard job descriptions each time they are used, giving you the possibility of producing 'tighter' and 'tighter' specifications!

Features include:

- *Automatic Job numbering/re-numbering.*
- *Instant recall of any previous job description.*
- *Simple to use job writing facilities.*
- *Simple to use drawing tool for line drawings, sketches & annotating photographs and scanned images.*
- *Automatic formatting of printed specifications.*
- *Flexible document printing facilities.*
- *Automatic table of contents & list of attached drawings.*

REFMAN – Cost Control

REFMAN's Cost Control module has been designed to allow technical people who are NOT 'accountants' to quickly and easily forecast the cost of a refit or drydocking, to obtain and compare competing tenders, to monitor and report on costs and keep track of changes during the repair period itself.

In a REFMAN analysis there are no complicated 'accruals', no 'reversals' and no 'balances B/F'. Instead, REFMAN simply uses the 'best' cost information which is available at any particular time. If a job is complete, the 'actual cost' is used, if a job is in progress, the 'bid' is used, and if a job has been included as an 'extra' and the only cost available is an estimate, then that will be used.

By combining these together, at all times before, during and after a repair period, the Superintendent or Port Engineer gets the clearest possible indication of 'how much has to be saved' or 'how much is available to spend'.

Features include:

- *Ability to record estimated costs for yard & owners items, yard bid (including contingency for exclusions), and actual yard and owners costs for each job.*
- *Analysis of job costs against repair, capital, guarantee, insurance and/or individual account/project budgets.*
- *Ability to send Specifications to the shipyard and for them to submit tenders electronically so avoiding the need to enter prices and comments manually.*
- *Recording of yard tenders in tender currency with analysis in your own currency.*
- *Full range of on screen and printed reports in your own or tender currency.*

REFMAN – Shipboard Defect Recording & Monitoring

Recognising the part which ship's Engineers and Deck Officers play in initiating many of the 'repair' type items in a specification, REFMAN has been designed to provide a smooth transition for each specification item from 'defect report', through to inclusion as a 'job' in a specification right through to its eventual completion.

This is achieved by providing an onboard system for recording defects in a format which can be transferred to the Superintendent or Port Engineer and incorporated directly into a specification document with little or no re-typing.

This makes it easier and quicker for the Superintendent or Port Engineer to get ship initiated jobs into the specification.

Also, because the Shipboard Defect Recording Module is cross-referenced with REFMAN's Specification Generator, when the final specification is produced, the ship's staff can easily confirm that all of the defects which they have reported actually found their way into the specification.

Features include:

- *'On screen forms' to ensure that the ship's staff supply all the information which the Superintendent needs.*
- *Automatic defect numbering.*
- *Simple to use defect writing facilities.*
- *Simple to use drawing tool for line drawings, sketches & annotating photographs and scanned images.*
- *Facilities for 'private' or 'departmental' work lists for 'ship's staff' jobs.*
- *Optional module which allows onboard defects to be monitored from the office and provide feedback to the ship about how each defect is to be dealt with.*

System Requirements: Win11/10/8/7 (64 bit) with 4GB RAM or Win10/8/7 (32 bit) with 2GB RAM and 500 MB Free Hard Disk Space.

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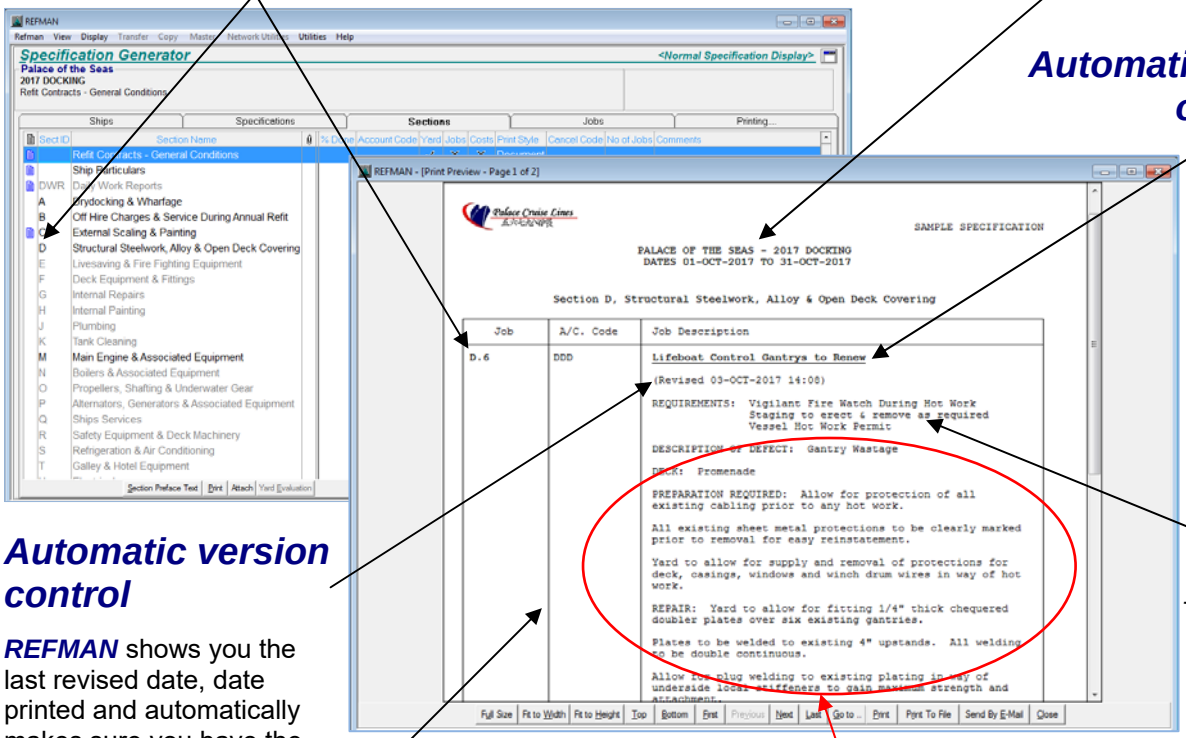
Specification Generator

Automatic job numbering

REFMAN automatically assigns each new job the correct number based on the section it is in and re-numbers existing jobs where necessary. So no more duplicated or missing job numbers in your specifications!

Automatic page headers

REFMAN automatically generates the header for each page, containing company logo or name, ship name, title, docking dates, section name and page number.



Automatic formatting of job names

REFMAN automatically prints the job name in bold and underlines it so every job is printed in exactly the same style.

Automatic version control

REFMAN shows you the last revised date, date printed and automatically makes sure you have the latest version of all standard items.

Tag codes

Pick from a list of job 'Requirements' and ***REFMAN*** automatically shows them in the specification.

Page format

REFMAN automatically generates either a 'form-like' layout or a 'plain' document style layout according to your company preference.

You only type this part...

...and ***REFMAN*** will automatically format the text, set the font, print it on the page and if required continue on to the next page and automatically re-head the continuation page with the job number and name.

Overview

REFMAN's Specification Generator has been designed to allow technical people to quickly and easily produce well formatted, professional looking specifications.

To achieve this, REFMAN allows the creation of Standard Specification templates which can either be 'general' for use with any ship, or they can be tailored to a particular type or class of ship or tailored to an individual ship.

REFMAN encourages a high degree of standardisation, not just in the presentation, style and layout of specification documents, but also in technical content.

Standardisation of content is achieved by making use of previously written job descriptions both as templates for new jobs and as standard work descriptions which can be used over and over again.

This all saves both time and effort when preparing new specifications and allows you to refine or 'hone' standard job descriptions each time they are used, giving you the possibility of producing 'tighter' and 'tighter' specifications!

REFMAN's Specification Generator also avoids the need to handle individual document files for each job and the collation problems which go with them and it does this without the need to manipulate large, cumbersome word processed specification documents and the formatting and printing problems which go with them.

REFMAN's Specification Generator is easy to use and handles all of the job numbering, text formatting, collation and/or merging of attached files. It also automatically creates a table of contents and list of attached files. So that all leaves you with a lot more time to concentrate on the technical content of the specification.

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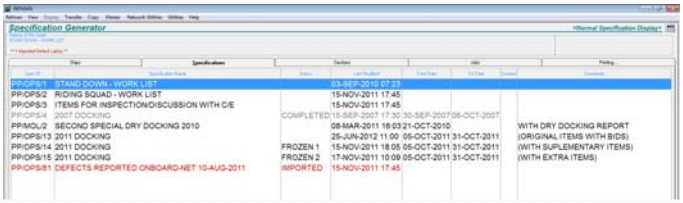
REFMAN – Specification Generator

Provides the Superintendent or Port Engineer with facilities to create refit, repair & drydock specifications, copy and store specifications, add, amend, delete and cancel jobs, move jobs from one specification to another, print specifications and incorporate defect reports and other jobs which have been initiated in REFMAN's Shipboard Defect Recording module.

It also provides powerful logic to control the inclusion of previously prepared standard job descriptions and the use of previously written job descriptions as 'templates' for creating new job descriptions.



Easy access to previous specifications and ship's defect reports, as well as a means of keeping track of non-drydocking jobs.

REFMAN allows you to create any number of specifications, so you can compile a specification for the next scheduled drydocking whilst simultaneously creating work lists for intermediate repair periods (some of which you may manage yourself such as in water surveys, wet docks, or stand-down periods).

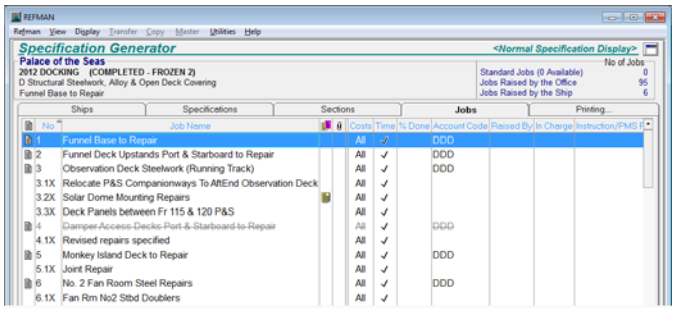
You can also use a REFMAN specification as a 'holding area' for defect reports which have been received from a ship but which need to be inspected before deciding whether or not to include them as jobs in a specification.

REFMAN also allows you to 'tag' jobs as being of a particular type or as having particular requirements and to use these to group related jobs into work lists.

These work lists or 'mini-specifications' can be useful when you are planning work for an onboard repair team or sea-going maintenance squad or for a specialised squad such as an asbestos abatement team, etc. These can also be used during the repair period itself for extracting just those jobs which are subject to inspection by the classification society or flag state surveyor.

Features

- *Complete management of your job description files.*
- *Standard specification sections tailored for your Company (SFI Group System optional) to ensure standardisation across all specifications.*
- *Create standard specification templates for an entire fleet, class or type of ship, or for an individual ship.*
- *Build a library of your own standard job descriptions which can instantly be incorporated into a specification.*
- *Ability to copy a complete specification for use as a template for the next refit or drydocking specification.*
- *Easy retrieval, editing and re-use of any job description which has previously been included in <u>any</u> specification on <u>any</u> ship.*
- *Automatic inclusion of mandatory sections or pages (particularly useful for ship particulars, standard terms & conditions, general instructions, etc.).*
- *Easy to use facilities which allow jobs to be added, amended or deleted/cancelled at any time.*
- *Simple to use drawing tool for line drawings, sketches & annotating photographs and scanned images.*
- *Automatic job number allocation and automatic re-numbering when jobs are added, moved or deleted.*
- *Automatic collation of external Attached files/drawings with automatically generated 'page numbered' list of attachments with direct access via hyperlink.*
- *Flexible document printing facilities which allows printing of a complete specification; a single section; a single job; just the 'supplementary' items; just jobs of a particular type; or print a summary of the requirements of each job.*
- *'Tag' codes to provide each job with a succinct summary of what the job entails and to enable jobs to be grouped into work lists or 'mini-specifications'.*
- *Automatic generation of title page and 'page numbered' table of contents for 'original' and 'supplementary' specifications as well as for work lists or 'mini-specifications' generated using 'Tag' code(s).*



Full control over 'original', 'supplementary' and 'extra' jobs.

- *Record 'supplementary' and 'extra' jobs into any section or into separate 'supplementary' or 'extras' sections.*
- *Separate 'Notes' & 'Remarks' for each job in the specification to enable the Superintendent to record information which will be used to help negotiate the final bill and/or create a post-docking Drydock Report.*
- *Create 'Daily Reports' which can be sent to the ship owner/manager in an automatically generated email along with 'Notes' and/or 'Remarks' included and Cost and/or Time reports attached.*

System Requirements: Win11/10/8/7 (64 bit) with 4GB RAM or Win10/8/7 (32 bit) with 2GB RAM and 500 MB Free Hard Disk Space.

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REFMAN *for windows*

Cost Control

On-screen totalling

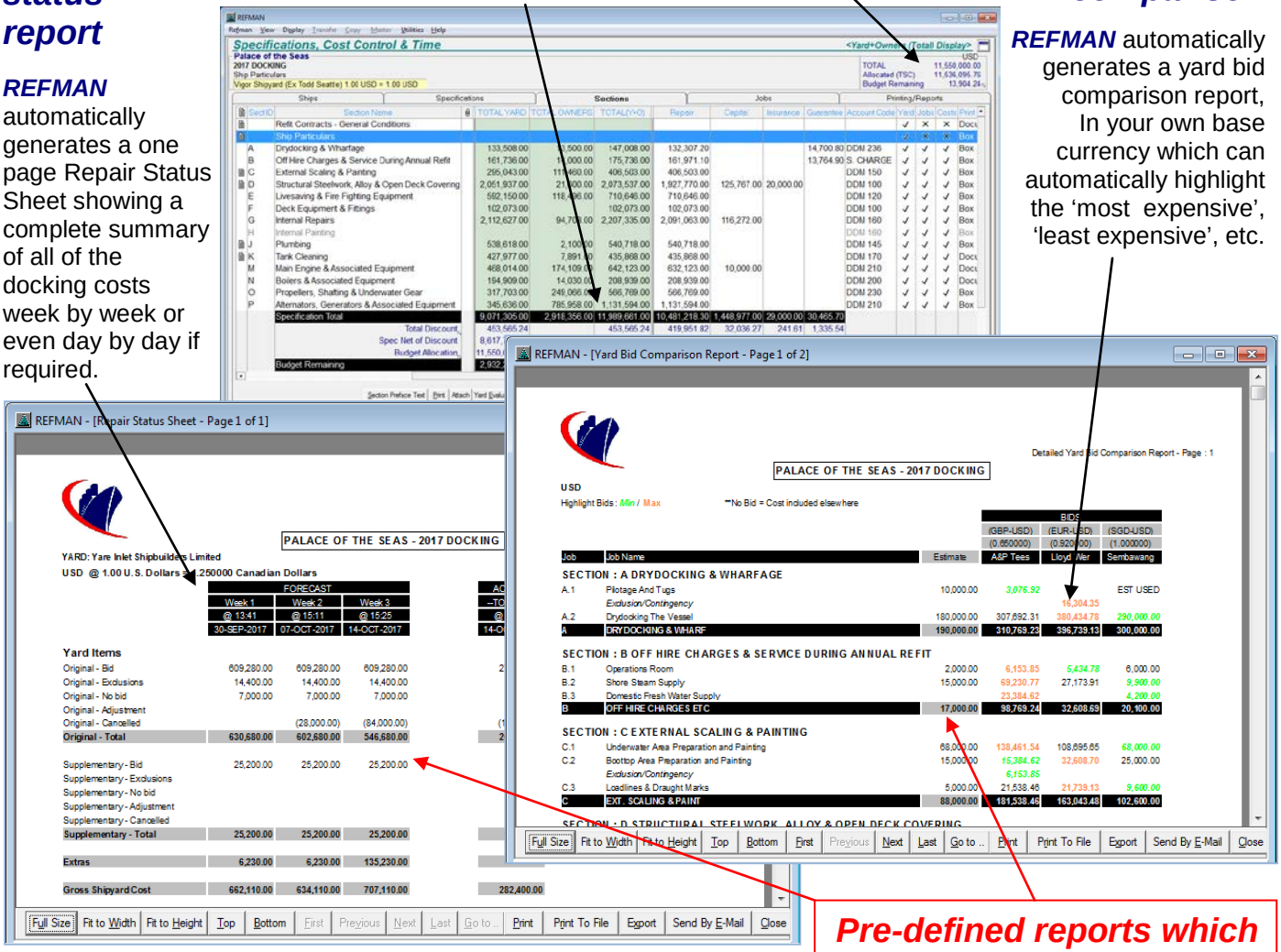
Automatic status report

REFMAN automatically generates a one page Repair Status Sheet showing a complete summary of all of the docking costs week by week or even day by day if required.

REFMAN shows you constantly updated totals on the screen so you can easily see the current position relative to the budget.

Automatic yard comparison

REFMAN automatically generates a yard bid comparison report, In your own base currency which can automatically highlight the 'most expensive', 'least expensive', etc.



Pre-defined reports which are error and tamper free

Overview

REFMAN' Cost Control module has been designed to allow technical people who are NOT accountants to quickly and easily forecast the cost of a refit or drydocking, to obtain and compare competing tenders, to monitor costs during the repair period itself and to reconcile and negotiate the final bill on completion.

In a REFMAN analysis there are no complicated 'accruals', no 'reversals' and no 'balances B/F'. Instead, REFMAN simply uses the 'best' cost information which is available at any particular time. If a job is complete, the 'actual cost' is used, if a job is in progress, the 'bid' is used, and if a job has been included as an 'extra' and the only information which is available is an estimate, then that is what will be used.

By combining these together, at all times before, during and after the repair period, the Superintendent or Port Engineer gets the clearest possible indication of 'how much has to be saved' to meet the budget or 'how much is available to spend'.

REFMAN's Specification Generator and Cost Control modules are fully integrated so when you use REFMAN to write a specification, the framework for comparing bids, recoding & reporting costs and project planning is created and updated automatically each time jobs are added, deleted or cancelled in a specification.

REFMAN's Cost Control module avoids the need to manipulate large cumbersome spreadsheets with complex formulas and the problems which go with them.

REFMAN's Cost Control module is easy to use and takes care of all the 'accounting and reporting tasks' leaving you free to concentrate on what the numbers mean.

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REFMAN – Cost Control

Provides the Superintendent or Port Engineer with facilities for obtaining shipyard tenders electronically and for comparing prices on a job by job basis, in a mix of currencies.

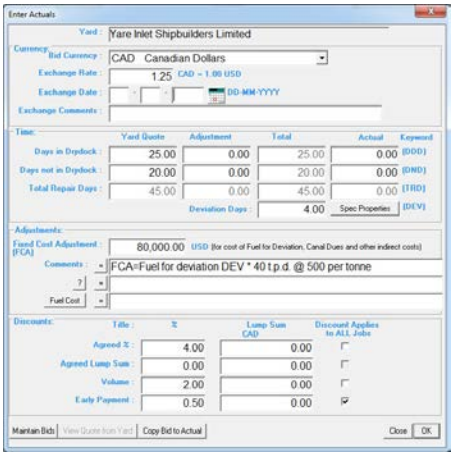
It also provides facilities for recording estimates of the cost of yard work (optional) and sub-contract labour, owner's supply materials and general expense elements of the jobs which have been included in a specification.

Once a yard has been selected and the repair period is underway, REFMAN is used by the Superintendent in the yard (normally on a laptop/notebook computer) to monitor the cost of jobs which arise as 'extras' as well as the cost of variations in the scope of the originally contracted work.

Finally, when it is time to settle the shipyard's invoice, REFMAN provides facilities to record the actual cost of each job and produce reports in 'bid' currency for agreeing or negotiating the final cost.

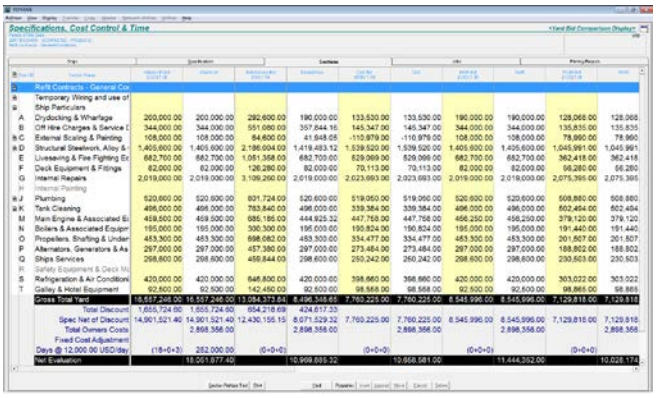
Features

- *Complete management of costs with the ability to record estimated costs for yard & owner's items, yard bid (including contingency for exclusions) and actual yard and owners costs for each job.*
- *Full control over allocation of account codes to each job and the amount (or proportion) of the cost of each job to allocate against each budget.*
- *Automatic allocation of costs against budgets for repair, capital (investment) expenditure, insurance (casualty or damage claims) and guarantee work.*
- *Yard bid comparison which takes account of the cost of yard items, owners items, negotiated discounts, number of repair days and number of deviation days*



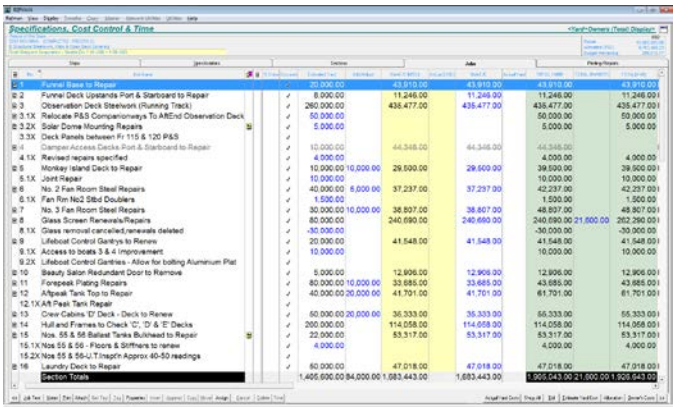
Support for four levels of shipyard percentage/lumpsum discounts.

- *Ability to send Specifications to the shipyard and for them to submit tenders electronically so avoiding the need to enter prices manually.*
- *Facilities to record 'supplementary' jobs which arise after the original yard tender is accepted but before the drydocking begins*



Bid Comparison Screen showing all costs for each shipyard.

- *Facilities to record 'extra' jobs into any section or into a separate 'extras' section. Either way, 'extra' jobs are totalled separately from originally contracted work.*



Cost of 'original' and 'extra' jobs shown in 'bid' and 'owner's' currency.

- *On screen and printed reports to facilitate cost analysis including a one page Repair Status Sheet which shows a complete cost summary/forecast, with the ability to save and recall forecasts.*
- *Full reporting of the cost of projects, insurance/casualty and guarantee claims.*
- *Automatic apportioning and allocation of service costs to the cost of projects and claims.*
- *Full reporting of the cost of owner's supply items with facilities to record up to eight categories for each job and to report by purchase/work order numbers.*
- *'Tag' codes to produce cost reports and summaries for jobs of a particular type or category.*
- *Pre-defined, reports which are easy to produce and free from 'spreadsheet errors' ensure that management always receives accurate information in a consistent format, regardless of which Superintendent is in charge of the docking.*

System Requirements: Win11/10/8/7 (64 bit) with 4GB RAM or Win10/8/7 (32 bit) with 2GB RAM and 500 MB Free Hard Disk Space.

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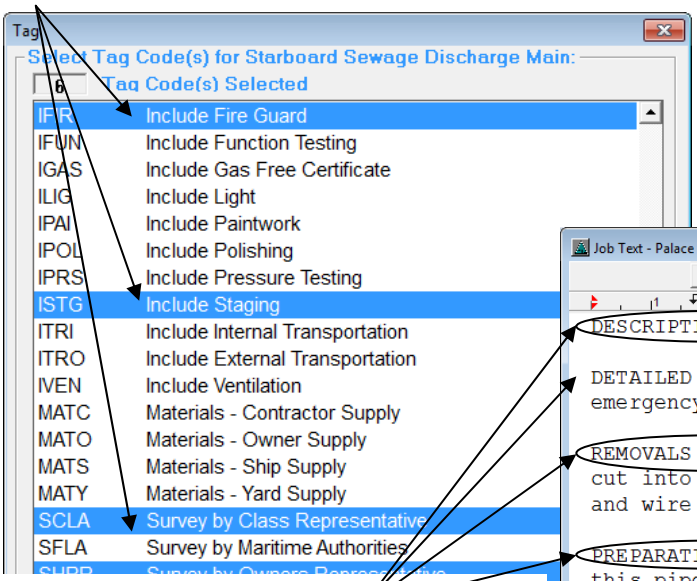
REFMAN for windows

Shipboard Defect Recording

Tag codes

Provide a quick and simple way for ship's staff to indicate what is involved in a defect or job without any typing.



On screen 'forms'

Each time a defect is recorded, ***REFMAN*** automatically displays a 'company' standard form which contains prompts to remind ship's staff about what information is required for the particular type of defect which is being recorded.

Simple drawing tool

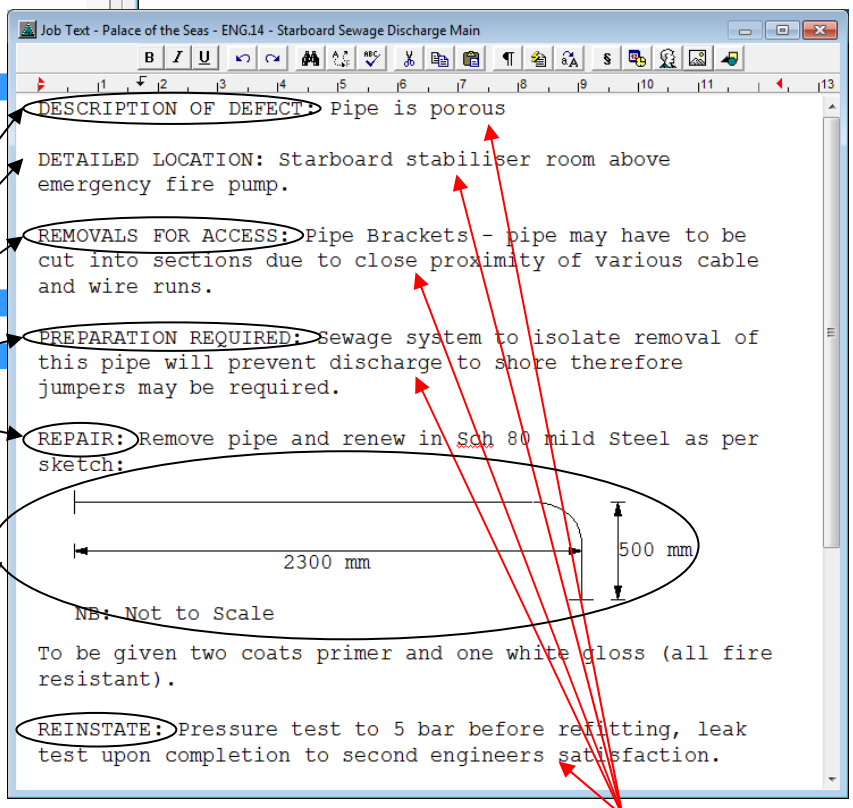
REFDRAW for line drawings, sketches & annotating digital photographs and scanned images.

3 Simple steps to writing a defect report

- ***Type a brief heading/title for the defect.***
- ***Type a few words against the prompts in the standard form.***
- ***'Tick' the tag codes which are relevant.***

…and that is all there is to it …which should ensure that the Superintendent never sees a 'one-line' defect description again…

…and ensure that the description actually contains <u>all</u> of the information which the Superintendent needs.



ship's staff type this

Overview

Recognising the part that ship's Engineers and Deck Officers play in initiating many of the 'repair' type items in a refit, repair or drydock specification, REFMAN has been designed to provide a smooth transition for each specification item from 'defect report', through to inclusion as a 'job' in a specification right through to its eventual completion.

This is achieved by providing an onboard system for recording defects in a format which can be transferred to the Superintendent or Port Engineer for approval and incorporated directly into a specification document without any sorting, filing or re-typing.

This makes it quicker and easier for the Superintendent or Port Engineer to get ship initiated jobs into the specification.

REFMAN's Shipboard Defect Recording module is easy to use by ship's Engineer and Deck Officers, even if they have little or no previous computer experience.

Through the use of standard forms in conjunction with standard 'tag' codes, REFMAN's Shipboard Defect Recording module makes it easier for ship's Engineers and Deck Officers to provide the information which the Superintendent or Port Engineer requires in order to prepare the specification.

Also, because the Shipboard Defect Recording Module is cross-referenced with REFMAN's Specification Generator, when the specification is eventually produced, ship's staff can quickly and easily check that all of the defects which they have reported actually found their way into the final specification.

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REFMAN – Shipboard Defect Recording

Provides ship's staff with facilities to record defects on board, including creating and storing defect lists, adding, amending, deleting and cancelling defects, moving defects from one list to another, printing defect lists and transferring defects reported in a particular period to the Superintendent or Port Engineer.

REFMAN allows you to create any number of defect lists. Lists can be 'exportable', that is to say that the defects they contain can be transferred to the Superintendent or Port Engineer, or they can be 'non-exportable' which means that they can be used as 'private' or 'departmental' onboard work lists for ship's staff.

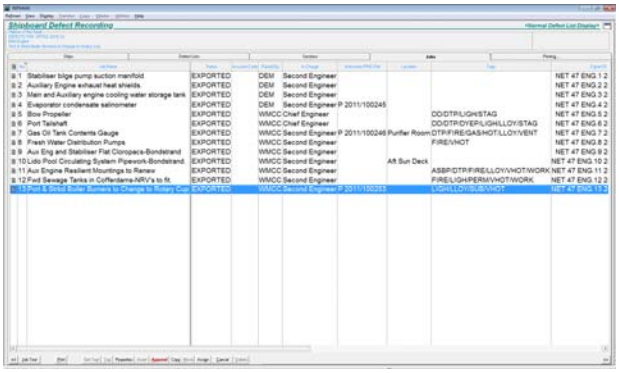
Jobs in 'private' work lists can start out as 'one-line' items which are simply deleted as they are completed. Those items that cannot be completed by ship's staff in service can later be expanded into a full defect description before being assigned to the 'exportable' list for transfer to the Superintendent or Port Engineer for possible inclusion in a refit, repair or docking specification.

Easy to use by ship's staff.

REFMAN also allows ship's staff to assign codes to jobs to 'tag' them as being of a particular type or as having particular requirements. These 'tag codes' can then be used to produce work lists of similar or related work for use during a stand down period or other *ad hoc* repair periods.

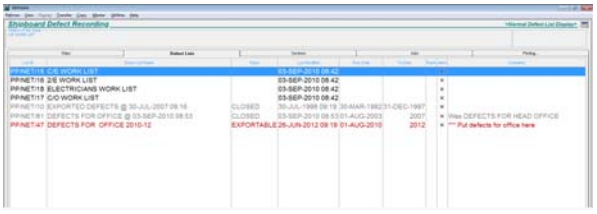
Features

- *On board recording of defects and job descriptions.*
- *Pre-defined sections for ease of use, ease of printing and standardisation of reporting across the fleet.*
- *On screen forms to ensure that ship's staff are always prompted to provide a full description of every job.*
- *Simple to use defect writing facilities with drawing tool for line drawings, sketches and annotating photographs and other scanned images.*
- *Easy to use save and recall facilities which allow defects to be added, amended or cancelled at any time.*
- *'Tag' codes to provide defects with a summary of the job content and to enable defects to be grouped into work lists or 'mini-specifications'.*
- *Automatic numbering of defects as they are added to a defect list.*



Defects transferred to Superintendent are marked as 'exported'.

- *Flexible printing facilities which allow printing of a complete defect list; a single section; an individual defect; all defects of a particular type, or print just a summary showing the main job requirements or assigned priority.*
- *Automatic generation of title page and 'page numbered' table of contents for all defect lists.*
- *Attach external files/drawings for transfer to the office.*
- *Ability to transfer defects from ship to Superintendent for easy inclusion into a specification.*
- *Transfer defects via your standard email client using built in "Send by Email"; via your existing file transfer/ server replication mechanism or by DVD/CD or Memory stick, etc.*
- *Facilities for each ship's Engineer and Deck Officer to maintain private 'non-exportable' work lists with ability to transfer to/from the exportable defect list.*



Easy access to 'exportable', 'private' and 'running' defect lists.

- *Ability for Superintendent to include, add and amend ship initiated jobs with little or no re-typing.*
- *Superintendent has full control over which ship initiated jobs are included in the specification and which are rejected. Accepted jobs may be allocated to any section in any specification. Rejected jobs can be cancelled, referred back to the ship for additional detail or included in another work list.*
- *Active defects which are still outstanding at the end of a docking or reporting period automatically 'carried-forward' to a new list.*

System Requirements: Win11/10/8/7 (64 bit) with 4GB RAM or Win10/8/7 (32 bit) with 2GB RAM and 500 MB Free Hard Disk Space.

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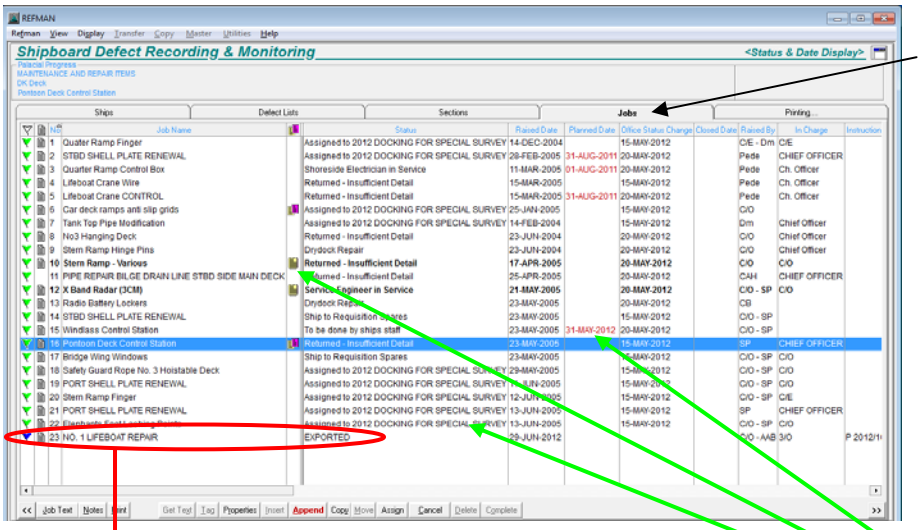
REFMAN *for windows*

Shipboard Defect Status Monitoring

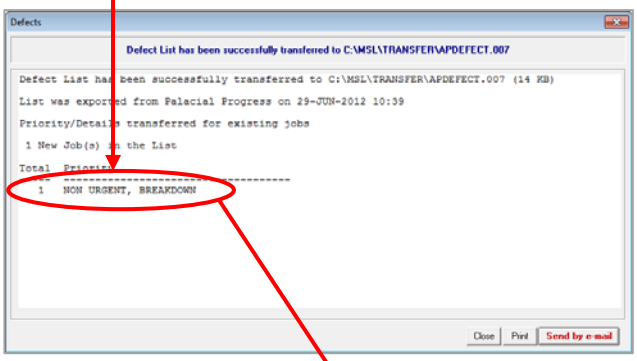


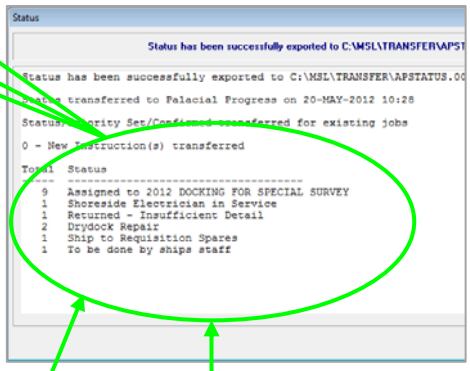
Defects reported onboard

Recording defects onboard is done in the same way as it is in the 'standard' REFMAN Shipboard Defect Recording module (See separate sheet). Briefly, for each defect, **ship's staff need to**:

- ***Type a brief heading/title for the defect.***
- ***Assign a 'Priority' to the defect.***
- ***Type a few words against the prompts in the standard form.***
- ***'Tick' the tag codes which are relevant.***

Defects reported onboard are then transferred to the office.





Defect status, planned date & any 'notes' transferred back to the Ship.

Notes from the 'Office' to the 'Ship' appear yellow and appear purple if they are from the 'Ship' to the 'Office'.

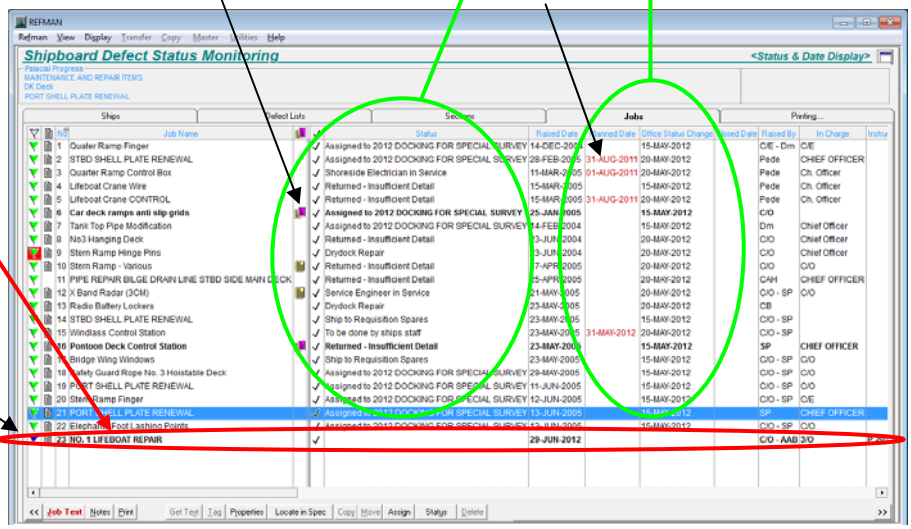
'Planed Date' appears red if overdue.

Defects monitored in the office

Defects transferred to the office are automatically added to the "office copy" of the ships defect list.

Superintendent reviews new defects and sets a status to indicate how each one is to be dealt with.

New defects appear in bold typeface to indicate they have not been read along with a coloured flag to indicate the priority assigned by the ship's staff.



Overview

Makes Shipboard Defect Recording a "two-way" process rather than the "one-way" operation when REFMAN's original Shipboard Defect Recording module is used alone. Defects are reported onboard using REFMAN's Shipboard Defect Recording module as before except that now the ship must also assign a priority to each defect. Defects are transferred to the office where they can be reviewed, assigned to a specification or have a status and planned date assigned to indicate how and when they are to be dealt with.

The status, planned date and any 'notes' explaining why a particular status has been assigned are then transmitted back to the ship. This provides the ship with confirmation that the reported defects have been received as well as providing positive feedback about how and when each one is to be dealt with. As Defects are rectified they are marked as complete by ship's staff along with a date and code to indicate how and when they were actually dealt with. In this way both office and ship can see the current status of every reported defect.

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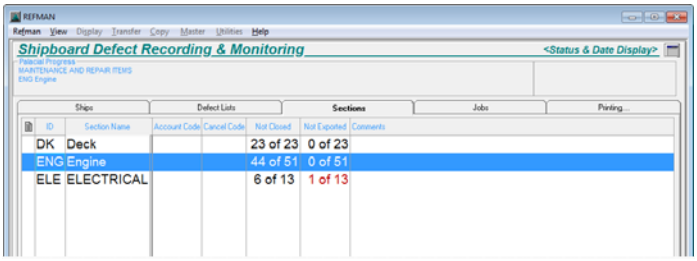
REFMAN – Shipboard Defect Reporting Onboard.

Onboard, ship's staff have access to all the normal facilities provided by the standard REFMAN Shipboard Defect Recording Module, including:

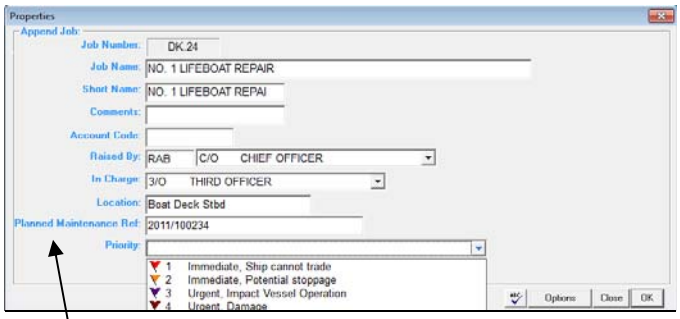
- *Pre-defined sections for ease of use and ease of printing.*



The number of defects waiting for transfer to the office is shown in red.

- *On screen forms to ensure that ship's staff are always prompted to provide a full description of every defect.*
- *Simple to use defect-writing facilities with drawing tool for line drawings, sketches and annotating photographs and other scanned images. Files can also be attached.*
- *Easy to use save and recall facilities that allow defects to be added amended or cancelled at any time.*
- *Automatic numbering of defects as they are added to a defect list.*
- *Tag' codes to provide defects with a succinct summary of the job contents and to enable defects to be grouped into work lists or 'mini-specifications'.*

Additionally, each time a defect is recorded onboard, ship's staff are prompted to assign a priority:



Can also be used in conjunction with an interface to your PMS.

Defects are then transferred to the office in the normal way. After the defects have been processed in the office, the ship will receive a status transfer that updates the defect list to show how and when the Superintendent has decided to deal with each of the reported defects.

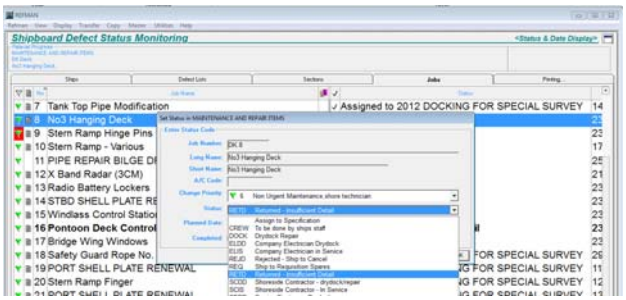
If the status of a defect changes before it is rectified, both the ship and office copy of the list are updated to keep everyone informed. Once a defect has been rectified, the ship marks it as complete, records the date it was completed and assigns a 'user-defined' completion code to indicate how it was actually dealt with.

REFMAN – Shipboard Defect Status Monitoring in the office.

In the office, the Superintendent has access to a complete copy of the ships defect list which is updated each time the ship makes a transfer to the office. When new defects are received these are reviewed by the Superintendent and then processed.

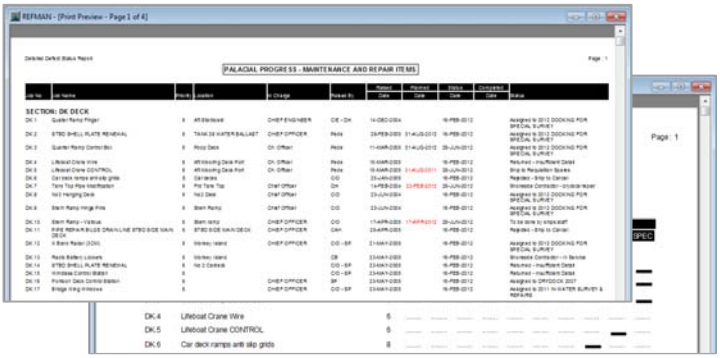
Defects that are to be dealt with during a Refit or Drydocking are assigned to a Specification as normal, but doing this also sets a status in the Defect List showing exactly which specification it has been assigned to.

Defects that are to be dealt with in service which do not need to be assigned to a specification can still have a "planned date" and a 'user-defined' status code assigned to indicate how they are to be dealt with. A status can also be used to instruct the ship to 'cancel' an item or request that they send more detail about a particular job.



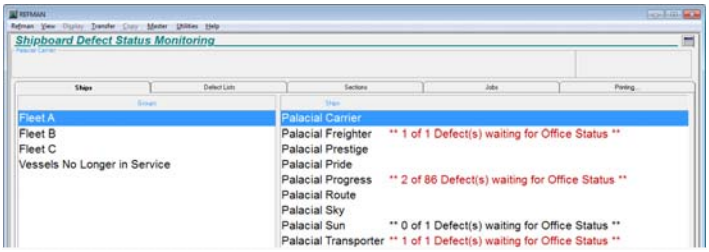
The Superintendent can also attach notes to a defect to give the ship instructions or further explanation and can also amend the Priority that was assigned by the ship.

At any time, the status, planned date, amended priority and any 'notes' can be transferred back to the ship.



Status reports that can be used by both ship and office to track the status of defects.

Reports can be generated in the office showing the defect status for a single ship, a group of ships or the entire fleet.



The number of defects waiting for action by the office is shown in red.

System Requirements: As per REFMAN's Shipboard Defect Recording or Specification Generator module as appropriate.

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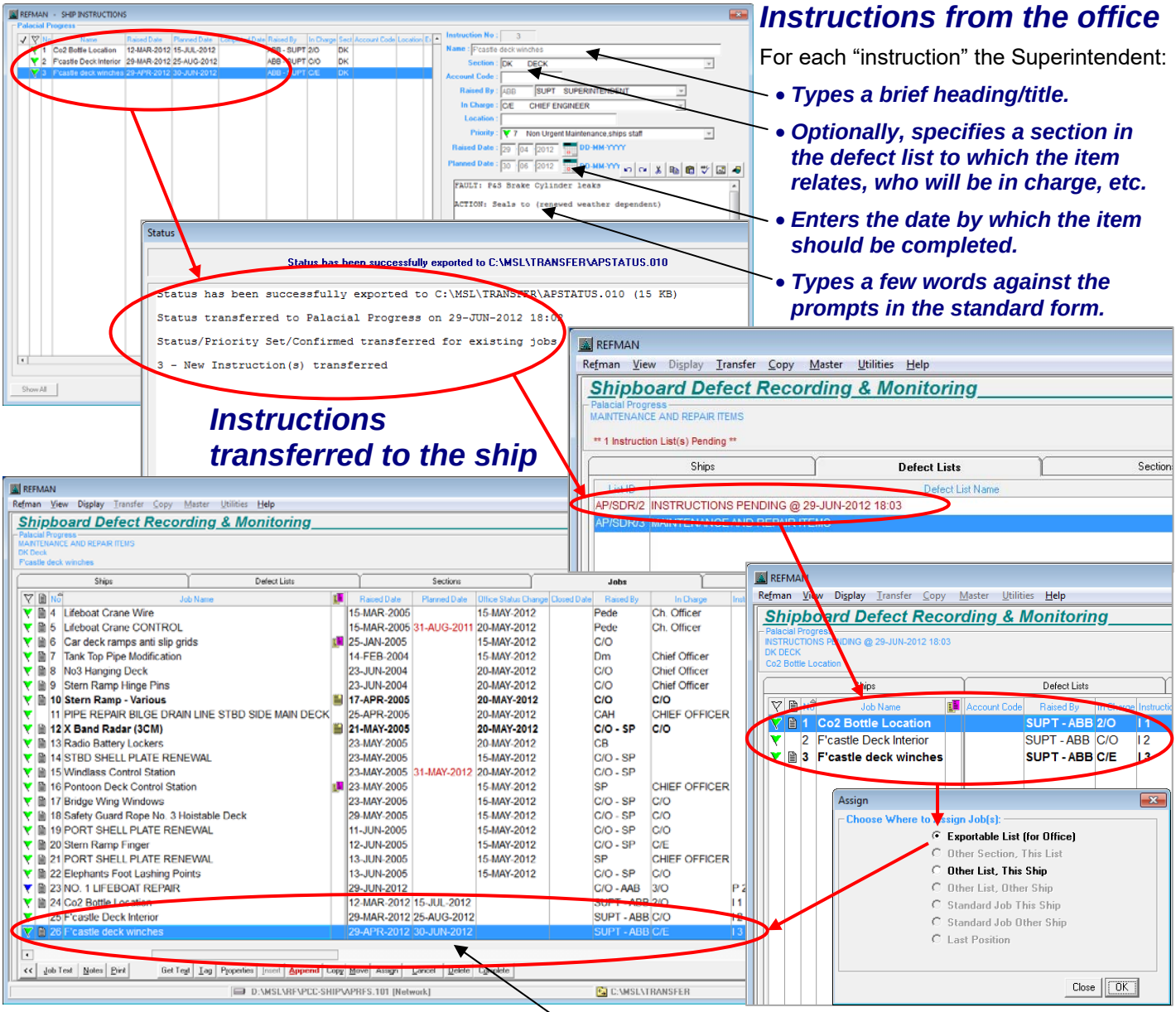
REFMAN *for windows*

Ship Instruction & Feedback Module



Instructions from the office

For each "instruction" the Superintendent:

- *Types a brief heading/title.*
- *Optionally, specifies a section in the defect list to which the item relates, who will be in charge, etc.*
- *Enters the date by which the item should be completed.*
- *Types a few words against the prompts in the standard form.*

Overview

REFMAN's Ship Instruction & Feedback module has been designed to provide a simple means of ensuring that defects and other jobs which have been identified by the Superintendent or which have been brought to the Superintendents' attention (after an audit or ship inspection for example) are recorded and dealt with via REFMAN's Shipboard Defect Recording system onboard.

This is achieved by providing the Superintendent with the facility to send "instructions" to the ship which ship's staff can then use to automatically initiate new items in REFMAN's Shipboard Defect Recording system.

Jobs initiated in the Shipboard Defect Recording module in this way are automatically cross-referenced with the original instruction so that it is easy for ship's staff to track instructions and to check which have been processed and added to the ship's Defect List, which have been completed and which are still outstanding.

When used in conjunction with REFMAN's Shipboard Defect Status Monitoring module in the office, the Superintendent can also easily check the status of each Instruction and see which are overdue.

Used in this way it provides a comprehensive system for dealing with defects identified during ship inspections/ audits, *ad hoc* defects and or jobs that are identified following a Superintendents visit to a ship. Most importantly it provides a means of ensuring that nothing is overlooked and every item is dealt with.

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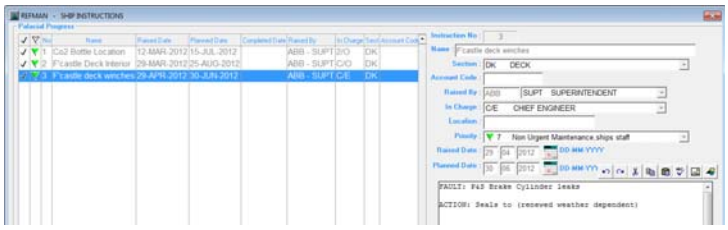
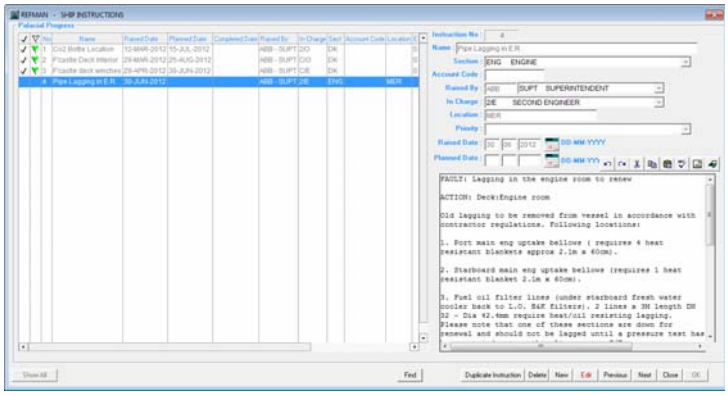
REFMAN – Ship Instruction & Feedback Module in the office.

Provides the Superintendent with the means to create a list of “instructions” in the office that relate to defects or jobs which the Superintendent wants the ships’ staff to record and deal with via REFMAN’s Shipboard Defect Recording module onboard.

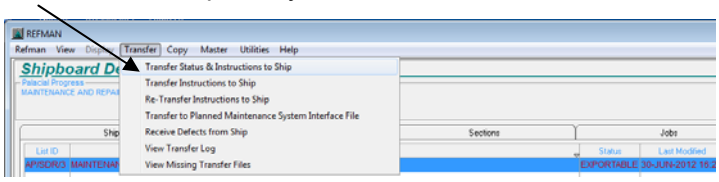
An instruction can just be a simple one-line item to act as a “prompt” or “reminder” to ships’ staff to record an item that has previously been raised or discussed:



Alternatively, it can contain detailed instructions about the actions required to rectify a known defect or deficiency:



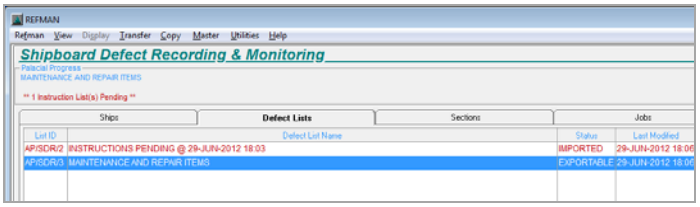
Instructions are transferred to the ship automatically when a routine “Status” transfer is made from REFMAN’s Shipboard Defect Status Monitoring module. Or they can be transferred separately if a status transfer is not due.



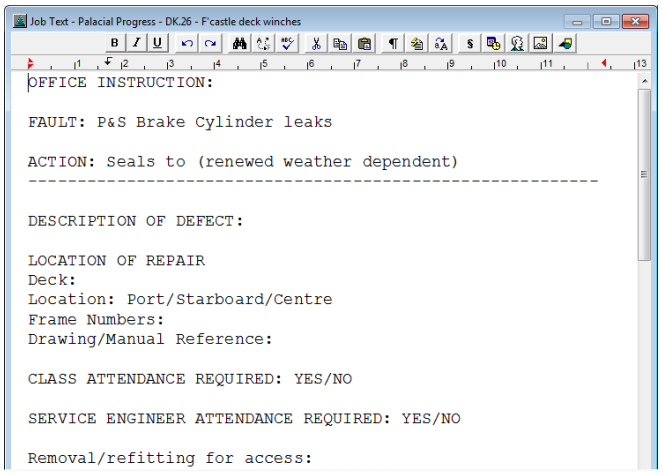
At any time a printed list of instructions can be produced along with a summary showing the total number of instructions and the numbers that have been completed, transferred, processed onboard, etc.

REFMAN – Ship Instruction & Feedback Module onboard.

When new “instructions” are received onboard, they appear as “Pending Items” in the defect list to alerts ships’ staff to the new “instruction”:

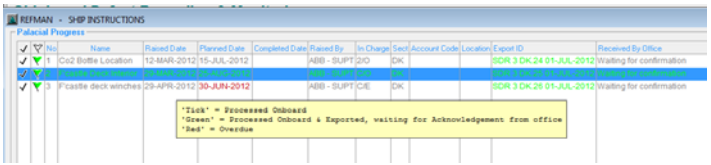


To “clear” the pending item from the list, each new instruction has to be assigned into the ships main defect list. Once in the main defect list, ships’ staff can add a full description of the work, insert drawings or images, set tag codes and attach files, in the same way as they would for a new defect or job which is initiated manually.



These defects are then transferred back to the office in the normal way, along with their original Instruction reference where they can be monitored and/or included in a drydock specification.

The instructions can also be displayed in a list on the screen onboard in exactly the same way as they can in the office.



Instructions that have been “processed” onboard and have already been included in a defect list are shown with a “tick”. Once transferred to the office an “Export ID” is added which will appear ‘green’ until they have been acknowledged by the office. Items that have been completed are shown with a green “tick” and items that are overdue have the “Planned Date” shown in red.

In this way, both Superintendent and Ships’ staff can see the status of each Instruction that has been issued.

System Requirements: As per REFMAN’s Specification Generator or Shipboard Defect Recording module as appropriate.

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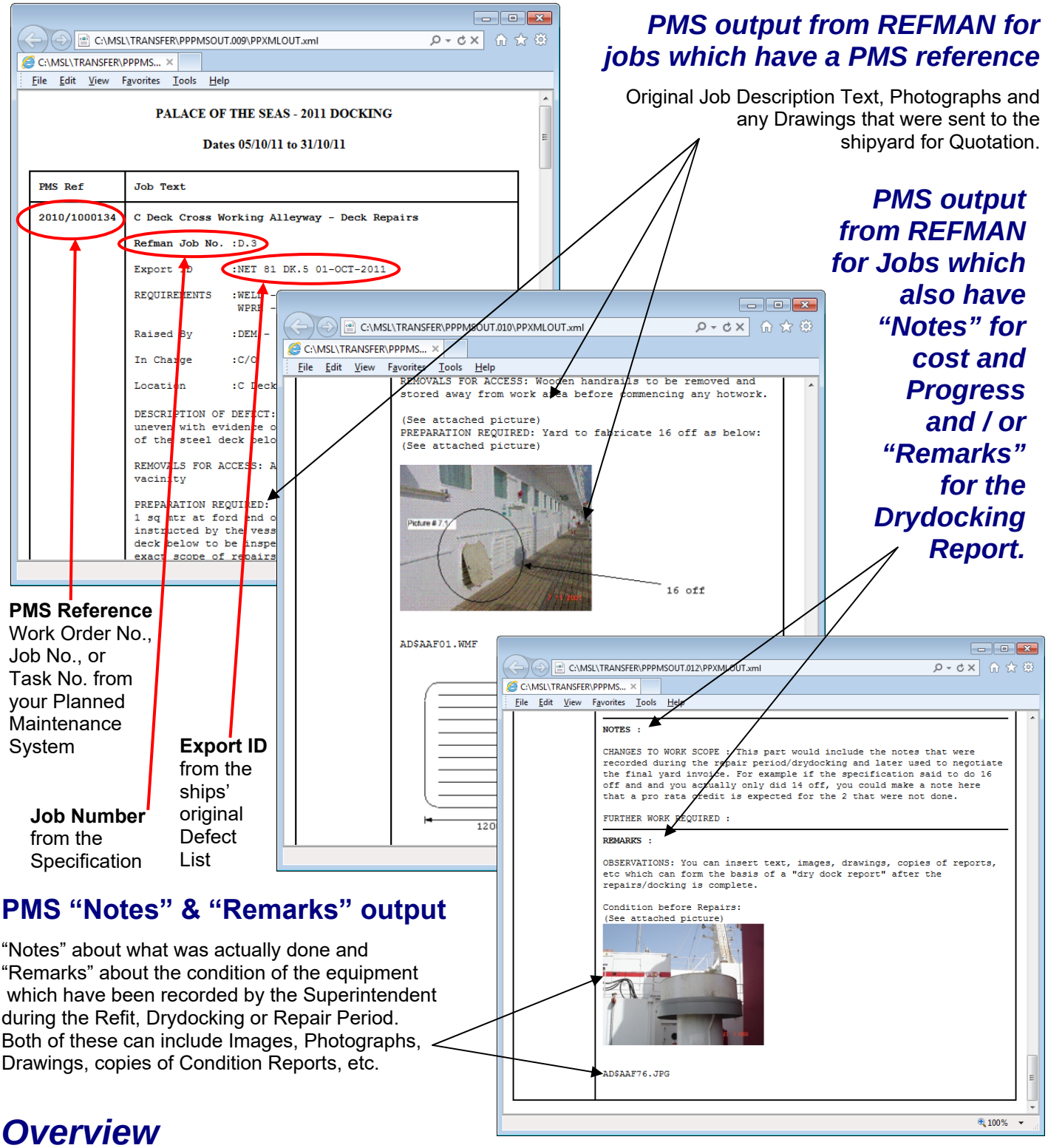
REFMAN for windows

Interface to Planned Maintenance System (PMS)



PMS output from REFMAN for jobs which have a PMS reference

Original Job Description Text, Photographs and any Drawings that were sent to the shipyard for Quotation.

PMS output from REFMAN for Jobs which also have "Notes" for cost and Progress and / or "Remarks" for the Drydocking Report.

PMS Reference Work Order No., Job No., or Task No. from your Planned Maintenance System

Job Number from the Specification

Export ID from the ships' original Defect List

PMS "Notes" & "Remarks" output

"Notes" about what was actually done and "Remarks" about the condition of the equipment which have been recorded by the Superintendent during the Refit, Drydocking or Repair Period. Both of these can include Images, Photographs, Drawings, copies of Condition Reports, etc.

Overview

This interface is designed to help reduce the amount of work needed after a docking to reconcile the information which is held about jobs in a REFMAN Drydock or Refit Specification, with the records which need to be maintained by an onboard Planned Maintenance System (PMS). In particular, it is designed to make it easier for ships' staff to update the PMS Maintenance History, which in practice, often contains little or no information about jobs completed in a Drydock or Refit.

With this module, when a defect or job is recorded in REFMAN which relates to equipment normally maintained under a PMS, a Reference Number can be recorded which cross references to the PMS (i.e. Work Order, Job or Task No., etc). This reference makes it easy to identify PMS related work in REFMAN, but more importantly, at the end of a Drydock or Refit it can be used to extract all of the information which is held about jobs in REFMAN so that this can be used to update the PMS Maintenance History.

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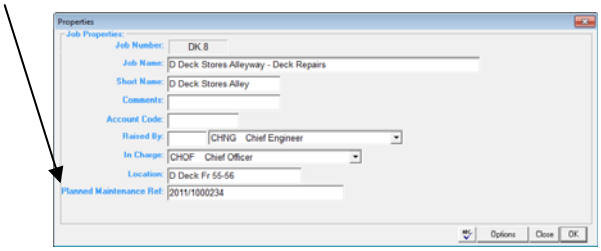
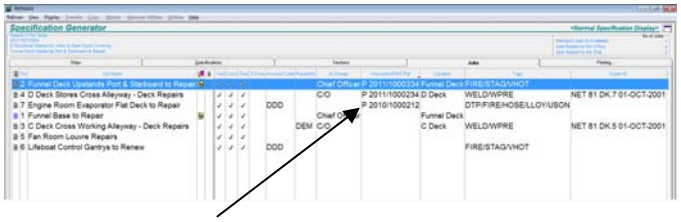
"Manual" Interface to your PMS

Each time a defect is recorded onboard or a job is added to a specification in the office, an option is available to allow a "Reference" to the corresponding Work Order, Job or Task in the Planned Maintenance System to be entered.



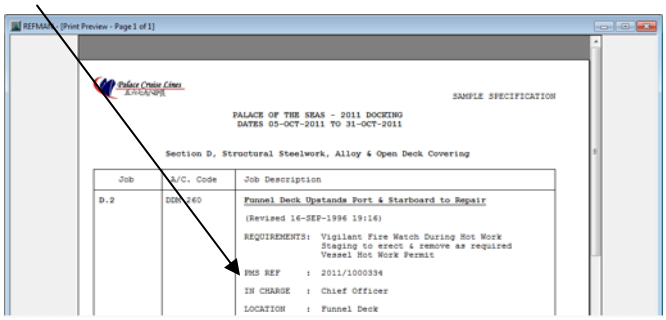
"Planned Maintenance Ref" can be replaced by Work Order No., Job No. or Task No. to reflect whichever Planned Maintenance System you use.

This PMS Reference will be stored permanently against the job and will be transferred to the office as part of the normal transfer process. This means that it can be displayed on the screen (both in the office and onboard) alongside the normal REFMAN job information.

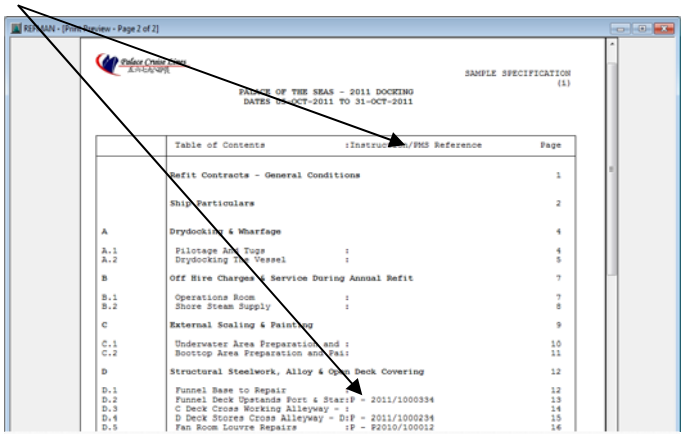


Sort jobs by PMS Reference by clicking on the 'PMS' column heading.

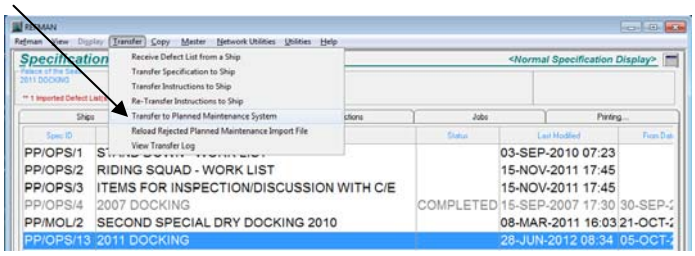
The PMS Reference will also be printed as part of the job description.



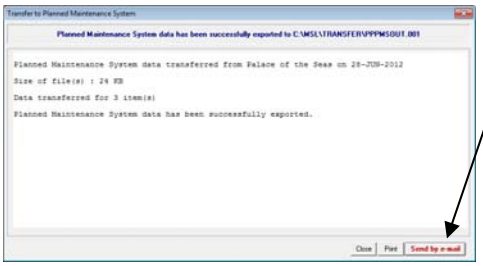
There is also an option to show the PMS Reference on a Table of Contents to provide an index to all the PMS related work.



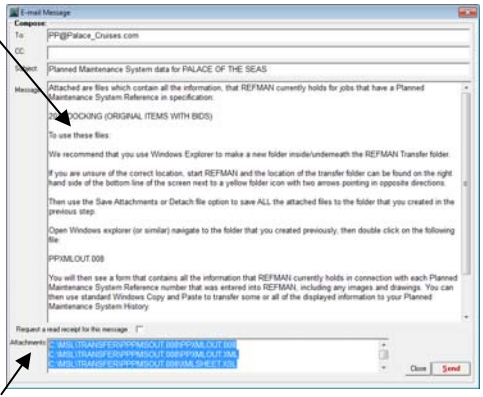
A new option "Transfer to PMS" has been provided for use at the end of a Drydock or Refit which extracts all of the information which REFMAN holds (job Description, cost Notes, condition Remarks along with all associated drawings, photographs, images, etc.,) for jobs that have a PMS Reference. This information is written out to a file that can be sent to the ship and used as a *source document* to update the PMS Maintenance History.



A "Send by e-mail" option is also provided which automatically creates an e-mail to the ship and attaches the necessary files to update the PMS Maintenance History:



The e-mail contains full instructions to tell ships' staff how to use the attached files:



Files which needed to update the Maintenance History are attached to the message automatically.

Ships' staff can then "manually" update the PMS Maintenance History using standard Windows "Copy & Paste" functions to transfer the information that has been extracted from REFMAN.

"Automatic" Interface to your PMS

It is possible to fully automatic this interface so that a REFMAN job can be initiated automatically from within a PMS and the relevant information passed to REFMAN. Also, so that the output from REFMAN will be used automatically to update the PMS Maintenance History onboard. However this needs to be developed in co-operation with the supplier of the specific Planned Maintenance System that you use.

System Requirements: As per REFMAN's Shipboard Defect Recording or Specification Generator module as appropriate.

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REFMAN for windows

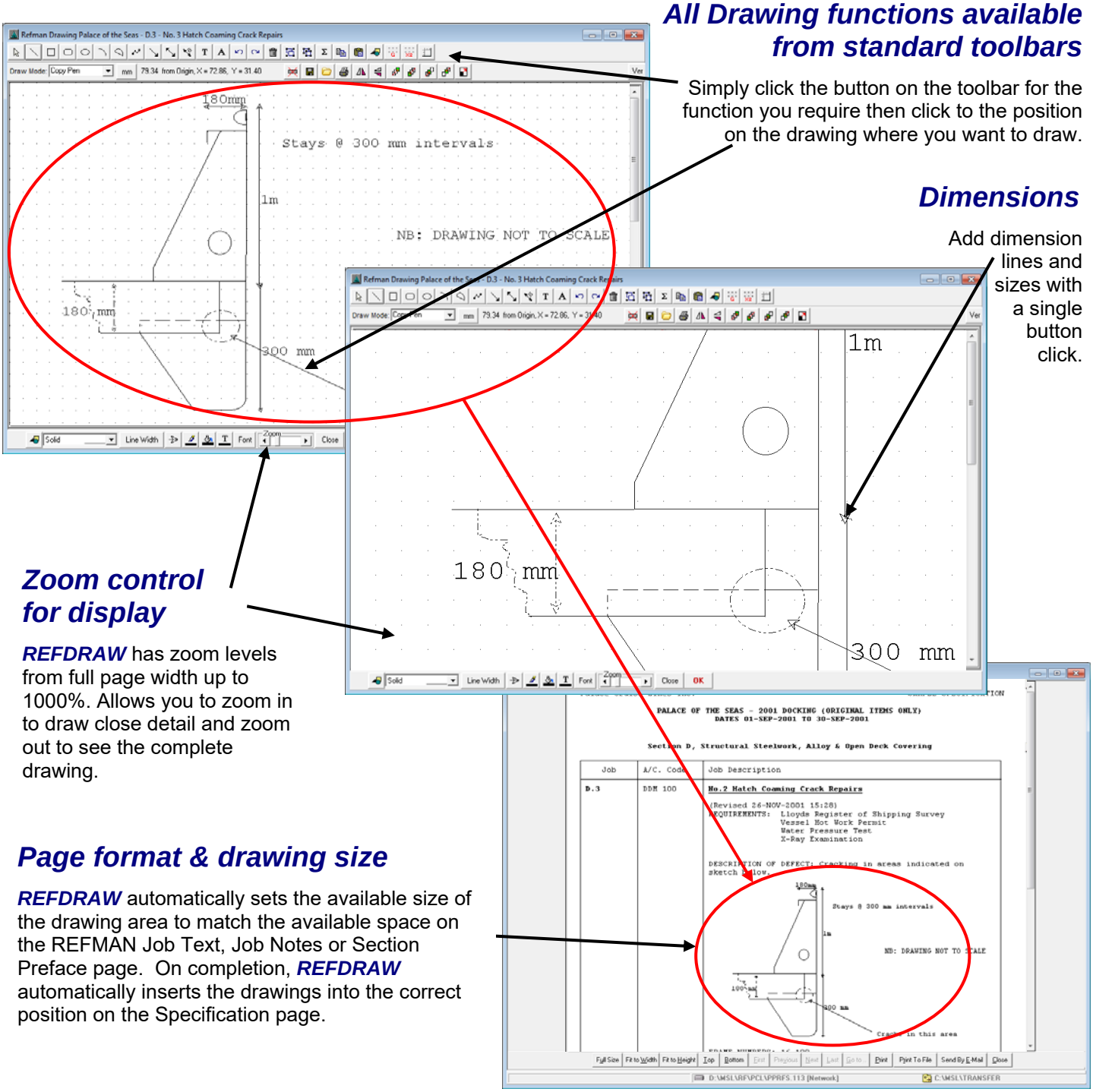
REFDRAW Drawing Module

All Drawing functions available from standard toolbars

Simply click the button on the toolbar for the function you require then click to the position on the drawing where you want to draw.

Dimensions

Add dimension lines and sizes with a single button click.



Zoom control for display

REFDRAW has zoom levels from full page width up to 1000%. Allows you to zoom in to draw close detail and zoom out to see the complete drawing.

Page format & drawing size

REFDRAW automatically sets the available size of the drawing area to match the available space on the REFMAN Job Text, Job Notes or Section Preface page. On completion, ***REFDRAW*** automatically inserts the drawings into the correct position on the Specification page.

Overview

REFDRAW is a drawing tool designed especially for use in conjunction with REFMAN's Specification Generator and Shipboard Defect Recording modules. It has been designed to be used by anyone who needs to insert images or create simple drawings in a REFMAN Job or Defect Description.

The emphasis throughout REFDRAW is on speed, ease of use and minimising file size. All the main functions are accessible either via buttons on a toolbar or directly from a standard mouse.

REFDRAW allows users to create drawings using tools to insert lines, shapes and images/pictures. Items can be referenced individually and moved, re-sized or rotated in the drawing area.

REFDRAW automatically adjusts the size of the available drawing area to match the space that is available on the REFMAN specification page so that it automatically matches 'Full Page' & 'Box Format' Job Text, Job Notes, Job Remarks and Section Preface Text format page layouts.

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REFDRAW – Refman's Drawing Module

Main Program Features:

- ***Lines*** *– draw lines with control over thickness, colour, and style.*

- ***Rectangles*** *– draw squares and rectangles of any size.*

- ***Rounded Rectangles*** *– draw squares and rectangles with rounded corners of any size.*

- ***Ellipses*** *– draw circles /ellipses of any size.*

- ***Arc*** *– draw arcs of any size and length.*

- ***Pie*** *– draw pie shapes of any size.*

- ***Chord*** *- draw chord shapes of any size.*

- ***Polyline*** *– draw polylines with an unlimited number of points.*

- ***Polygon*** *– draw polygons with an unlimited number of points where the last point is automatically joined to the first point making a complete polygon.*

- ***Text*** *– insert text which matches the text size and style used in the Specification or Defect List.*

- ***Insert Pictures/Images*** *– .BMP, .JPG, .GIF, .PNG, .WMF, .EMF,.DXF (AutoCad) & PDF (Adobe Acrobat) format files. Other formats can be inserted via the Windows clipboard by using the Copy & Paste functions.*

-***Cropping –*** *to remove unwanted areas around inserted pictures and images.*

- ***Dimension Lines*** *– insert dimension lines at any angle and length with arrows at both ends. Enter dimension text with control over positioning next to dimension line.*

- ***Select*** *individual objects or range of objects.*

- ***Select All*** *objects.*

- ***Group*** *and* ***Ungroup*** *selected objects.*

- ***Delete*** *selected objects.*

- ***Move*** *and resize selected objects.*

- ***Rotate*** *objects. Control over rotation angle and centre of rotation.*

- ***Layers –****move layers to top, bottom, up one layer or down one layer.*

- ***Copy*** *selected objects.*

- ***Paste*** *objects that have been copied in the drawing module or have been copied in external software. Use this function to insert pictures and text from other software.*

- ***Mirror*** *or* ***flip*** *objects horizontally or vertically*

- ***Undo*** *and* ***Redo*** *function.*

- ***Colour*** *– use standard colours or define custom colours for lines, filling and text.*

- ***Page Size****. Switch between 'box format' and 'full page' layout*

- ***Unit of measurement****. Display cursor position and distance from origin (line length) in Inches or in milimetres.*

- *Drawing elements & images automatically '****snap'*** *to grid points for accurate alignment.*

- *Drawing area displayed with scalable background "****grid****" for easy and accurate positioning/alignment of drawing elements.*

- ***Not to Scale*** *– inserts a 'Not to Scale' label*

Line Style *- select from solid lines, dash lines, dotted lines, or combinations of these.*

Line Width *- select from 1 to 6 point width.*

Fill Pattern *- includes: transparent, solid, diagonal lines, and vertical lines. Used with rectangles, ellipses, circles, pie, chords and polygons.*

Zoom *– from full screen width to 1000%.*

Drawing Mode *– specify the way in which an objects attributes are combined with objects already in the drawing.*

Built in File Size Reduction Aids *– Includes on screen sizing guide points & pop-up tips to reduce the size of inserted images; image save options which ignore the source file resolution and only save the minimum amount of information which is required to reproduce the image at the size it was inserted at and optional company-wide file size limits which prevent images which exceed that limit being inserted.*

System Requirements: As per REFMAN's Specification Generator or Shipboard Defect Recording module as appropriate.

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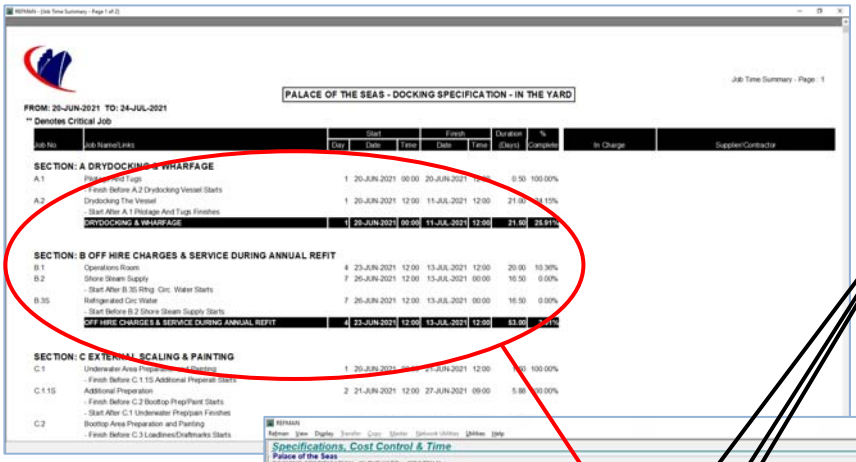
REFMAN *for windows*

Time Management

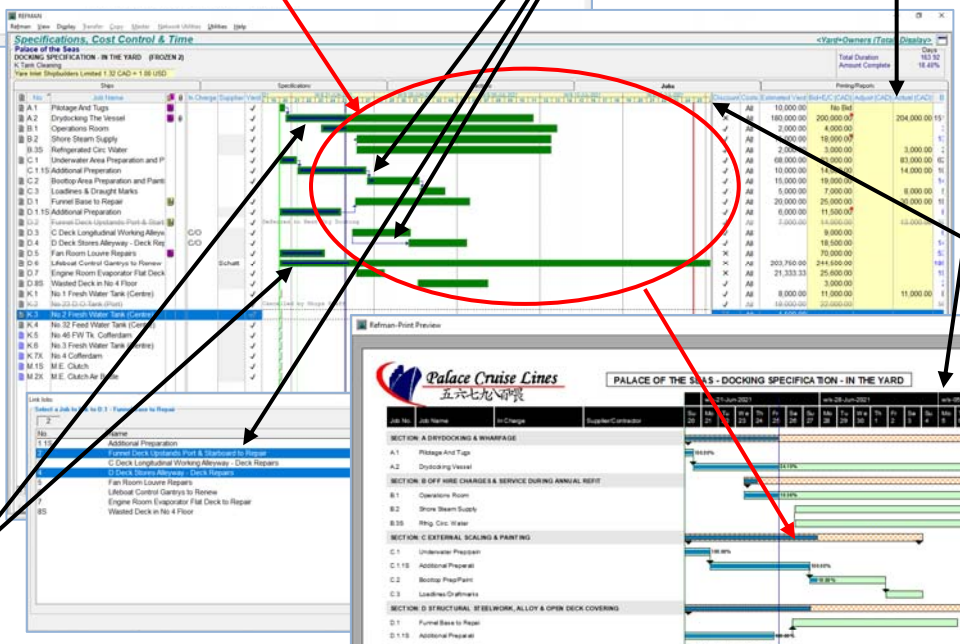


Automatic scheduling of related Jobs

Jobs that are related can be "linked" together so that a change in the timing of one job can automatically update the schedule for another.

Time scales & cost information

Available side by side in all cost views.

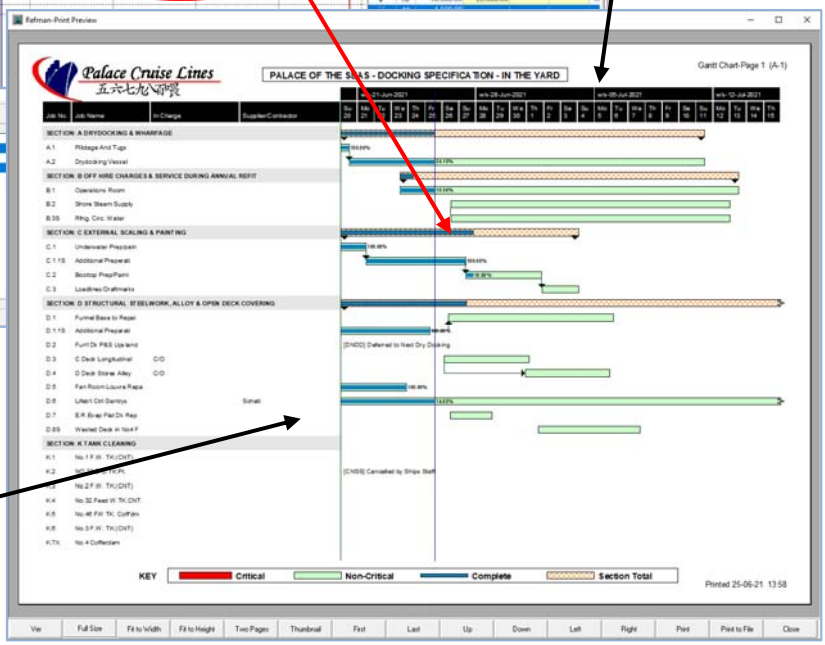


Choice of Timescales

Months & Weeks
Weeks & Days
Days & Quarters
Days & Hours

Progress of each Job displayed on screen

See at a glance which jobs are complete, which have not been started and which are in progress along with the proportion of work that has been completed.



Printed time bar (Gantt) chart

Generated automatically with choice of presentation (with/without links, with/without grid lines, etc.).

Overview

REFMAN's Time Management Module has been designed to provide people who are not project management 'experts' with a quick and simple means of keeping track of the progress of jobs during a repair period.

To achieve this, REFMAN automatically creates the framework for scheduling jobs and project planning as the specification is created and is updated automatically whenever jobs are added, deleted or cancelled from that specification. REFMAN also provides a means by which shipyards can supply the estimated start dates and durations for each job electronically so that these can be loaded automatically. Times and durations for other jobs which are to be carried out by sub-contractors, specialists or ship's crew can then be added. REFMAN's Time Management module then combines this to produce a simple time bar (Gantt) chart which gives a pictorial representation of when each job is expected to start, how long it should take and when it should be finished.

All the Superintendent needs to do to keep this up to date during the repair period is to record which jobs are complete, which jobs are behind schedule and use the built-in "Update" option to set an approximate percentage complete for the remainder. The built-in "Reschedule" option can then be used to produce an up to date time bar (Gantt) chart showing exactly what is outstanding.

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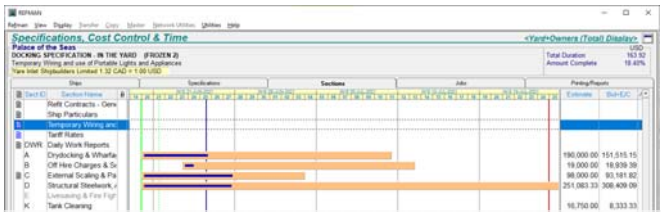
REFMAN - Time Management Module

Provides the Superintendent or Port Engineer with facilities to schedule and monitor the progress of all jobs in a REFMAN specification. For each job it is possible to record start date & duration and optionally, specify which jobs must be completed before the next job can start, which jobs must at least have started before the next job can start and which jobs must be finished before the next job can be completed.

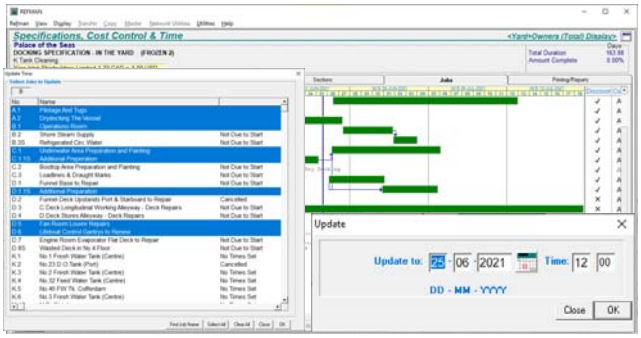
Features

- *Complete monitoring of the progress of jobs without the need to learn complicated project management software.*



Section progress summary shows overall progress (on its own or alongside cost information in Cost Views).

- *Facility to enable the Shipyard to supply the estimated duration and start day (an actual date or a "day number" during the docking) electronically. This information can be requested as part of REFMAN's electronic 'Yard Quotation Package' and loaded up automatically.*
- *Schedule and monitor jobs carried out by owner's contractors, other specialists and ships crew.*
- *Full range of links including "later job cannot start before earlier job finishes", "later job cannot start before earlier job starts" and "later job cannot finish before earlier job finishes".*

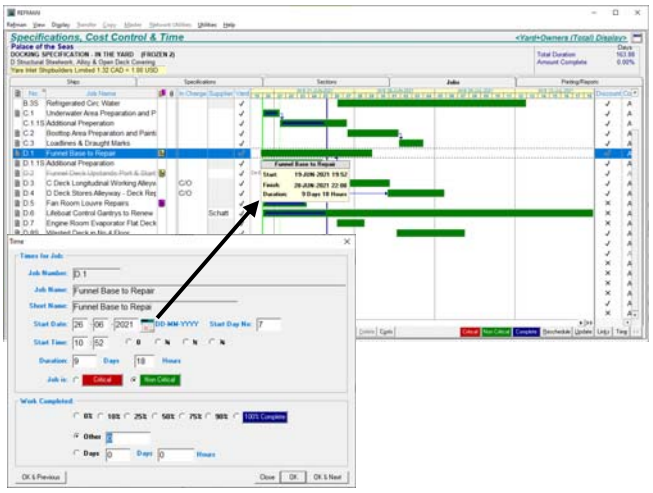


See the progress of each individual job with automatic updating.

- *Automatic updating of "Percentage Complete" for jobs that are "on schedule". Update just selected jobs; "all" jobs in a single section; all jobs in "selected" sections or all jobs in "all" sections in a specification.*
- *Automatic "Rescheduling" of incomplete jobs. Reschedule just selected jobs; "all" jobs in a single section; all jobs in "selected" sections or all jobs in "all" sections in a specification.*

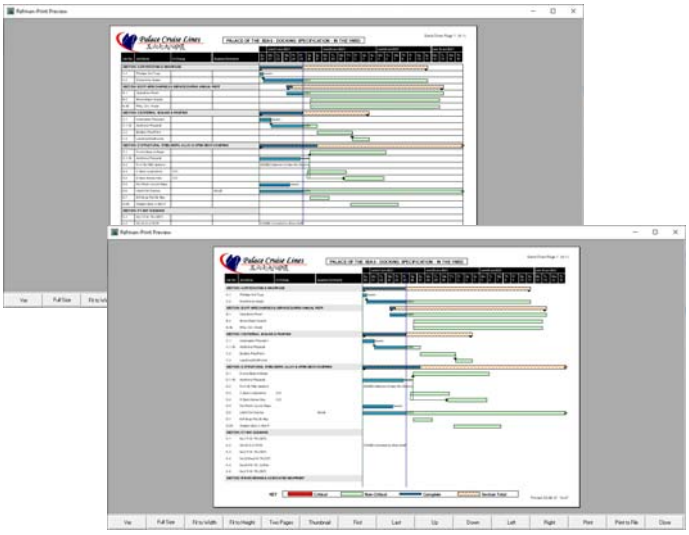
… ideal companion to REFMAN's Specification Generator & Cost Control Modules.

- *If an earlier job is re-scheduled and this affects other later jobs (i.e. "linked" jobs) then the later jobs will be re-scheduled automatically. If a later job is re-scheduled which is affected by a link to an earlier job, the user will be prompted whether or not to remove the link.*



Easy to use, just "drag and drop" to set times & durations.

- *Choice of conventional numerical input for "dates & times" or simple to use on-screen "drag and drop" for both scheduling jobs and setting durations.*
- *On-Screen indicator in section view with pop-up information box to indicate that one job is linked to other jobs in different sections of the specification.*
- *Automatic Generation of time bar (Gantt) chart for the entire specification or just the jobs in a particular section.*



Options to control appearance and scale of printed time (Gantt) chart.

- *Flexible printing options which allow time bar (Gantt) chart to be printed with a choice of timescales, with or without links & with and without "gridlines" on the text and/or on the time bars.*

System Requirements: As per REFMAN's Specification Generator or Cost Control modules.

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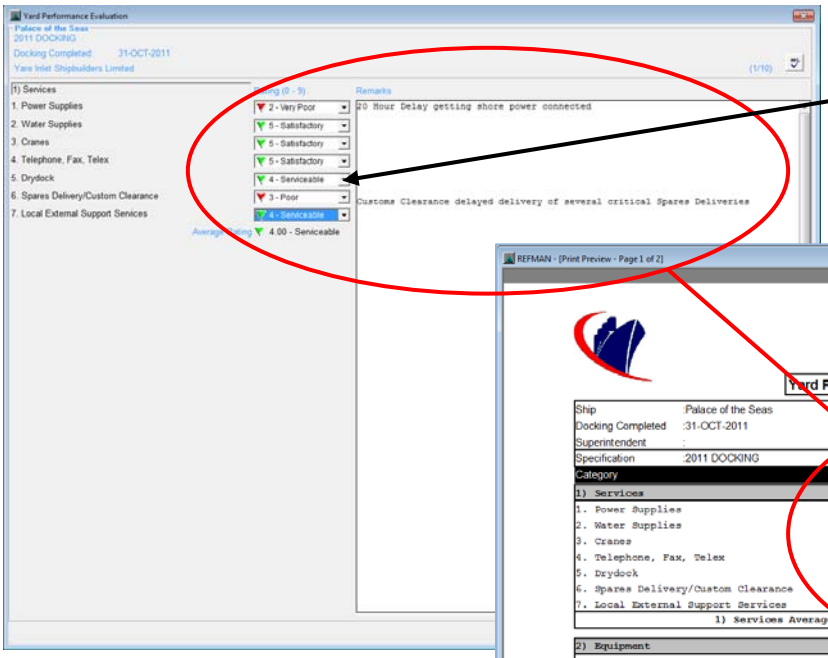
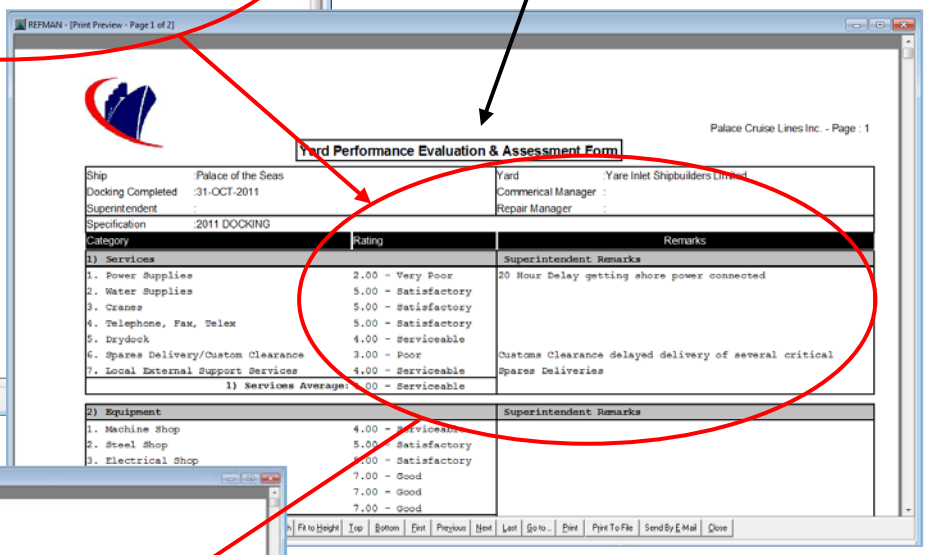
REFMAN *for windows*

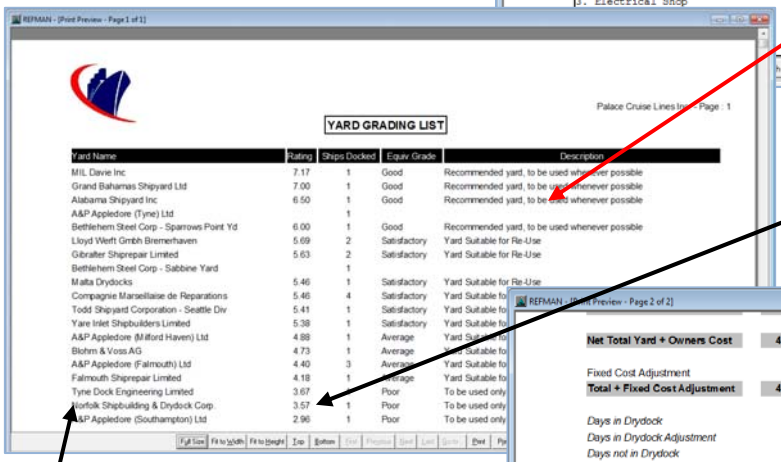
Shipyard Performance Evaluation Module



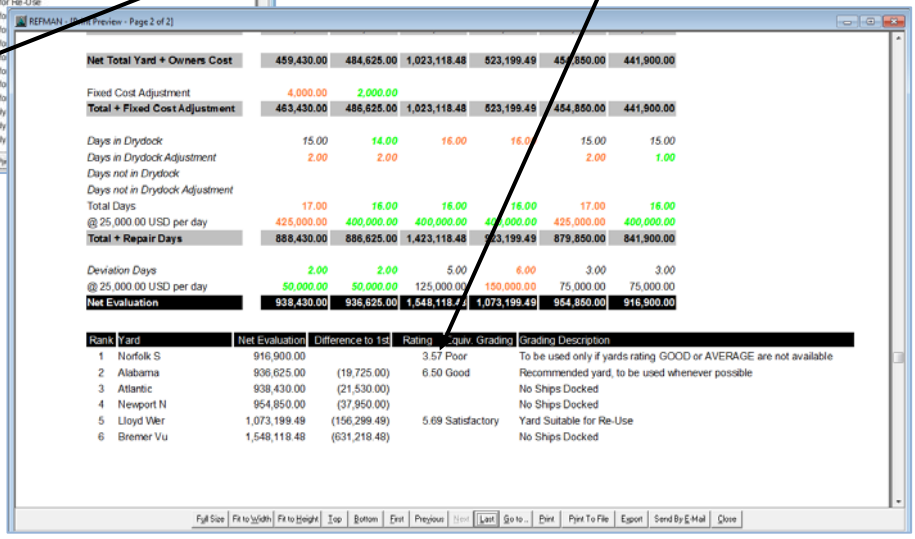
Superintendent "rates" the shipyard's performance

Simple on screen form for the Superintendent to record the "Yard Performance Evaluation" under user defined headings.





Overall rating shown on Yard Bid Comparison.



Ranked list based on shipyard's overall performance

Based on all previous dockings, or last "X" dockings or all dockings since a specified date.

Overview

REFMAN's Shipyard Performance Evaluation Module allows the Superintendent to "rate" a yard's performance during and after a docking. Ratings can be given under any number of user defined headings (for example, Facilities, Services, Equipment, Response Speed, Cooperation, Communication, Engine Work, Steel Work, Safety, Prices, etc.) and the Superintendent can also record comments to qualify these ratings. On completion of the docking, the completed ratings are stored centrally so that an overall average rating can be produced for each shipyard. This overall average can also be shown on the Yard Bid Comparison Report to assist in deciding which yard to nominate. You can also produce a ranked list which shows yards in order of their overall average performance which can help in deciding which yards to invite to tender when sending a specification out.

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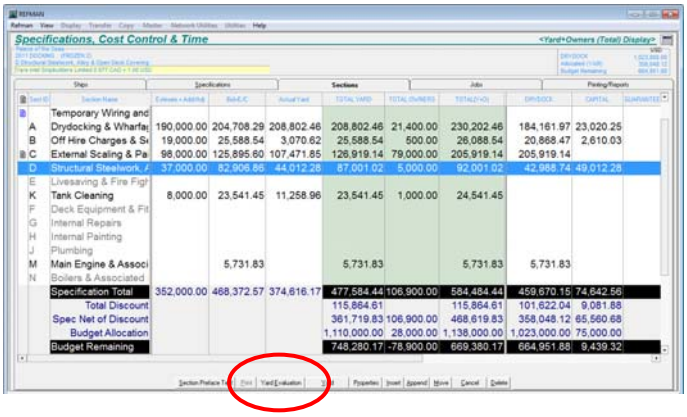
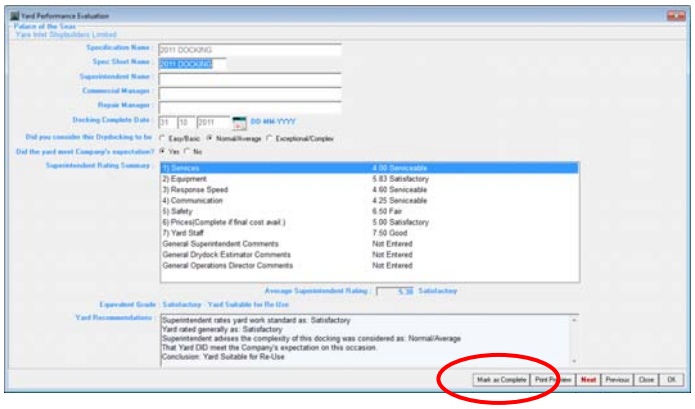
REFMAN – Shipyard Performance Evaluation Module

Provides a simple means of "grading" or "ranking" shipyards according to their performance in past dockings. Each time a ship is drydocked, the Superintendent completes a simple form giving the yard a numerical "rating" or "score" against various aspects of the Yards performance.

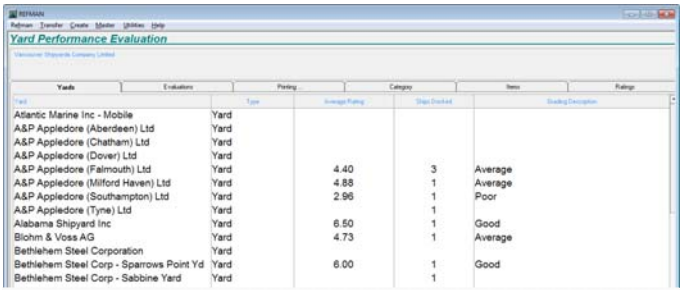
The form can be accessed from the main Cost Control screen which is used by the Superintendent to track costs so the form can easily be completed during the actual docking whilst the "experience" is still "fresh in the mind".



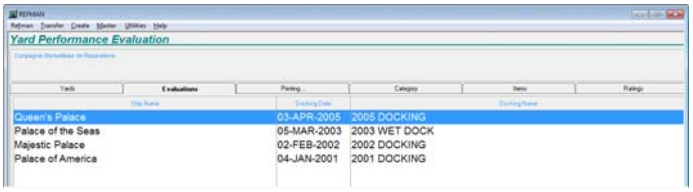
Items such as ratings relating to prices for additional work and negotiating the final bill for example can be completed later once Superintendent returns to the office.



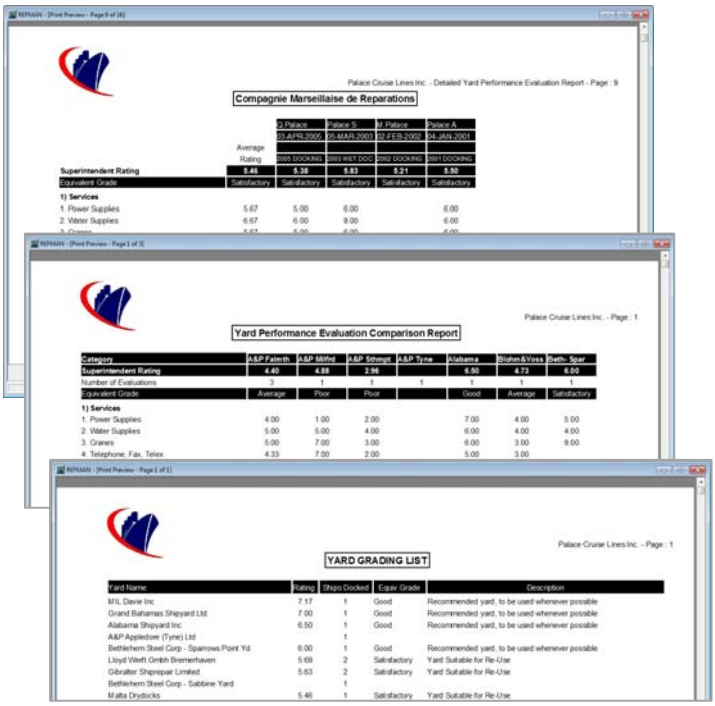
Once all the ratings have been recorded and any qualifying comments have been added, the form is "marked as complete" which posts the results against the Shipyard in the REFMAN Master database. These results are then included when calculating the overall Average Rating.



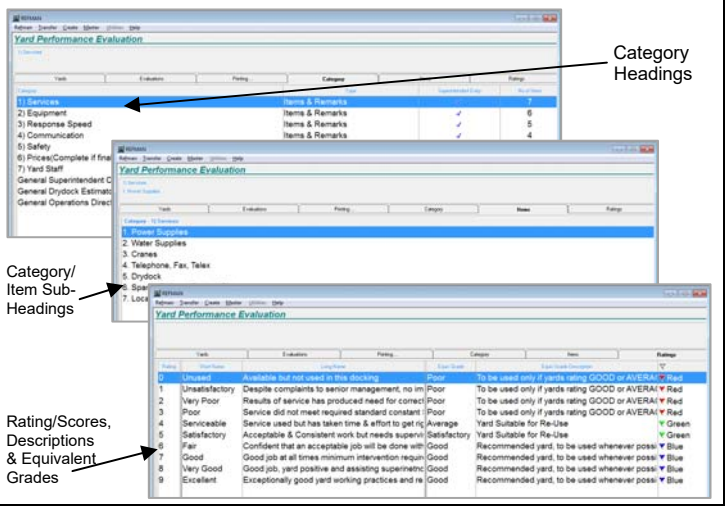
All the Evaluations that have been recorded for a particular yard are listed against the shipyard in the Evaluation module where they can be reviewed and if necessary amended. For larger companies, the module can be setup to require Evaluations to be reviewed and "Approved" by the Fleet/Technical manager or other responsible person before they can be included in the overall rating calculation.



Options are provided to print Detailed Evaluations, Evaluation Comparison and Grading Lists.



The Main Category headings, Item sub-headings, Rating/Score Descriptions and Equivalent Gradings can be tailored to suit each company. Alternatively, a standard Evaluation setup can be supplied.



System Requirements: As per REFMAN's Specification Generator or Cost Control module as appropriate.

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REFMAN *for windows*

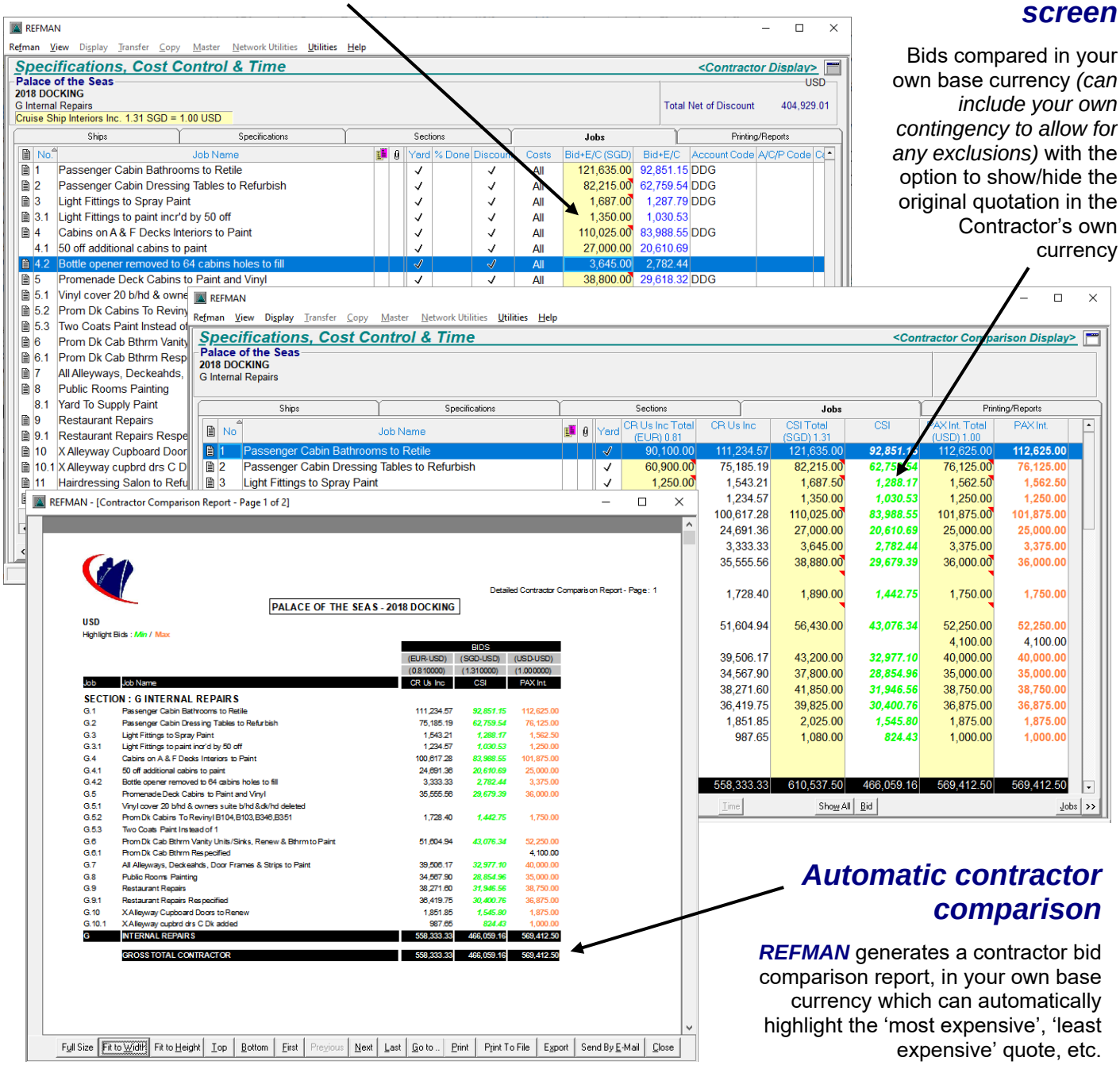
Contractor Comparison Module

Contractor display

Bids from Contractors are recorded in the Contractor's own currency or can be loaded electronically when the Contractor quotes using Refman's Contractor Quotation Package.

Compare bids from contractors directly on the screen

Bids compared in your own base currency *(can include your own contingency to allow for any exclusions)* with the option to show/hide the original quotation in the Contractor's own currency



Automatic contractor comparison

REFMAN generates a contractor bid comparison report, in your own base currency which can automatically highlight the 'most expensive', 'least expensive' quote, etc.

Overview

REFMAN's Contractor Comparison Module extends the facilities of the Cost Control Module to allow the loading/ recording of bids/quotations from specialist Contractors so that these can be compared against one another and/or compared against quotations from Yards, on a job by job basis in a mix of currencies. Quotations from equipment/spare parts suppliers can also be compared in the same way if required.

The cost of owners arranged contractors will still be included in the specification as an estimated cost in your own base currency under your chosen Owner's Cost Category, exactly the same way as they were previously. However with the Contractor Comparison Module, these costs can be obtained directly from the Contractor's original bid/quotation without the need for a "one-off" manual conversion to your own base currency.

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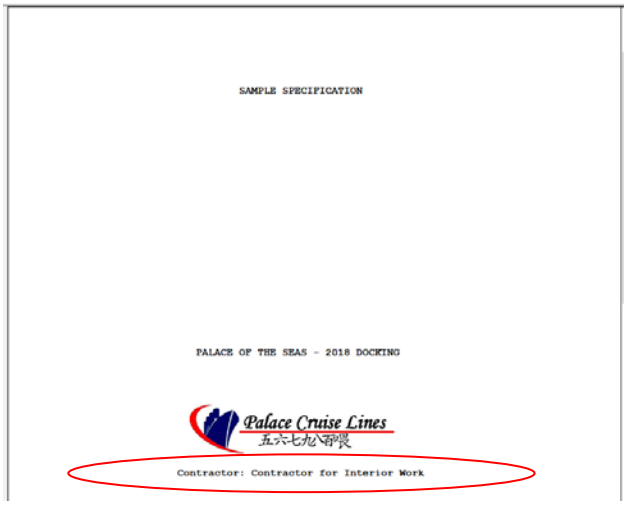
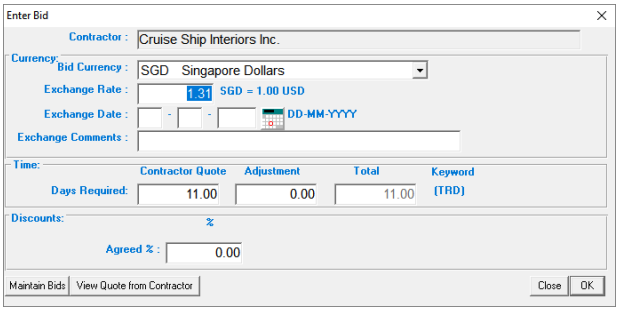
REFMAN – Contractor Comparison

The Superintendent or Port Engineer first generates a specification which contains only the jobs which a specialist Contractor is being asked to quote for.



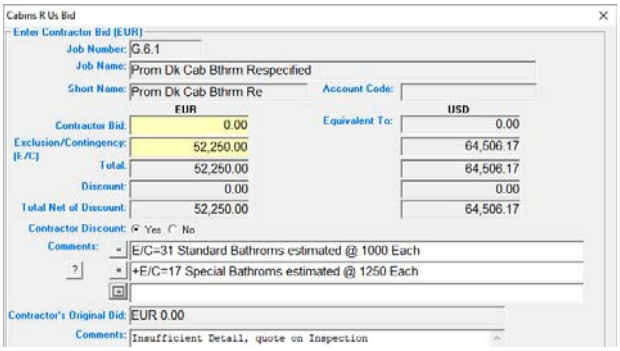
Specification for a particular type of specialist Contractor.

A Contractor Quotation Package can then be generated which contains both the specification (in PDF format) and a small program to allow the Contractor to enter their prices. This enables prices to be returned electronically and then loaded directly into the specification. Alternatively, the specification can be printed (output to PDF format with option to merge attached files built in) and sent to the Contractor, but in this case the prices you receive back would need to be entered manually.



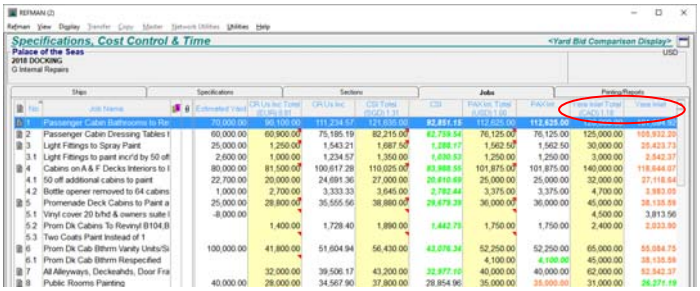
Each Contractor has their own exchange rate.

If the Contractor declines to bid for all or part of a job, then the received bid can be adjusted to allow for this by entering an exclusion/contingency so that bids can still be compared on a "like for like" basis.



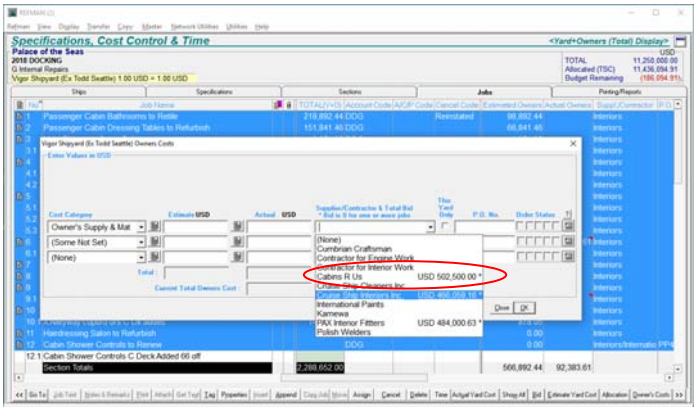
Formulas to calculate Exclusion/Contingency (also formulas for Bid and Unit Price available if required).

Once Bids for each Contractor have been loaded/entered, they can then be compared on screen.



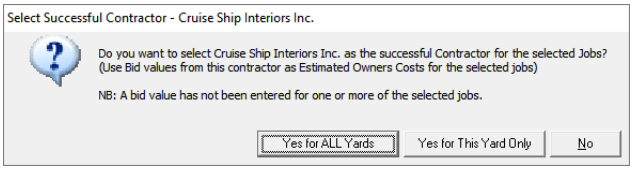
Compare Contractor Quotations against each other and/or against Yard Quotations if Contractors are quoting for the same work as Yards.

The "successful" Contractor is then set for the Job(s) they have been awarded under your preferred Owners Cost category, which then links the Estimated Owners Cost to that Contractor's original Quotation.



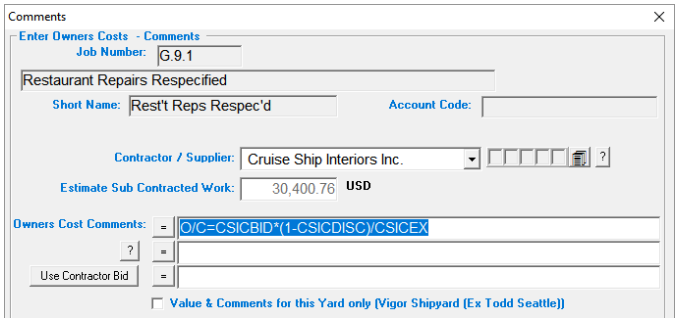
Contractor/Supplier list also shows total quotation for all the selected Jobs.

Contractor quotes can be linked to a particular yard so that they are only included as part of the costs for that particular yard, or they can be included regardless of which yard the ship eventually goes to (i.e. included for ALL Yards).



Setting the Successful Contractor for one Yard or for all Yards.

If the Contractor will do the work "instead" of the Yard, the program can automatically remove the Yard's Bid for these jobs. Alternatively, if the Contractor will do the work in conjunction with the Yard, the Contractor's bid will appear as an Owners Cost in addition to the Yard Cost.



Owners Cost is linked to Contractor bid using an editable formula which includes the Contractor's bid, discount (if quoted) and exchange rate.

System Requirements: As per REFMAN's Cost Control module.

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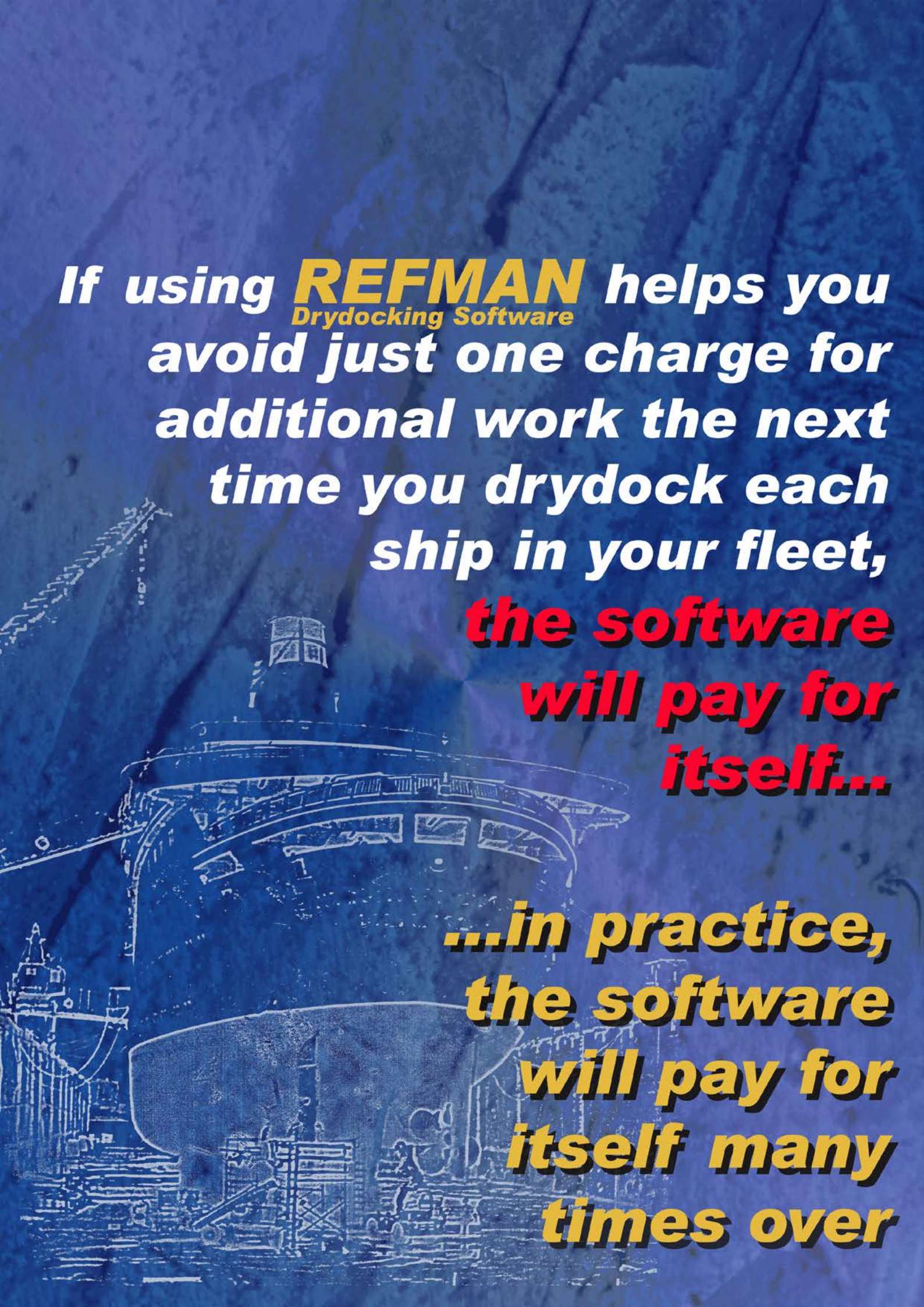
If using REFMAN Drydocking Software helps you avoid just one charge for additional work the next time you drydock each ship in your fleet,
the software will pay for itself...
...in practice, the software will pay for itself many times over