

OWNERS INFORMATION LEAFLET

Concerning the IVR Engine Registration System (ERS)

ERS

WHY ERS

When a crankshaft breaks once it's an accident, twice a coincidence but the third time one starts to wonder if it might be a structural failure.

Thus the basic idea behind IVR's ERS data-base is finding the 3rd time.

All individual surveyors carry out their daily inspections and surveys not knowing that the crankshaft failure they are inspecting is factually the 3rd, but the other 2 are being dealt with by other surveyors. All unaware of the fact that they are looking at the 3rd similar damage. If they would have known, their approach would have been much more detailed, focused on the exact why, discussing modifications, possibly demanding guarantee or financial compensation for owner and/or insurer.

Because engine damages form a big part of the negative result of insurers and have a negative effect on premium and coverage. Insurers were interested in statistics and finding these possible structural failures. Not to exclude engine make or type form coverage, but to create awareness amongst manufacturers, owners and surveyors of structural failures and action for prevention.

This wish, forwarded to IVR ended up in developing ERS in close co-operation with IVR.



HOW DOES IT WORK

The system is quite simple and works with four set identification criteria being: **kind / make / type / damaged item**.

As **kind** are presently identified: Main engine / Auxiliary engine / Gearbox / Thruster / After treatment plant.

Make is of course the manufacturer, as is **type** the type-number of the respective machinery. **Damaged item** is a set list of items of which one can be chosen to indicate which part is factually damaged.

To further identify the damage two causes must be chosen, being:

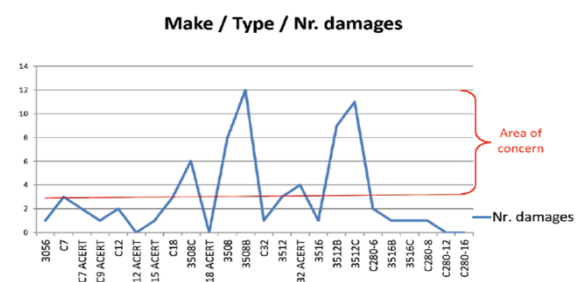
- the **technical cause** (for instance : *coolant/cooling system related or fuel/fuel system related*).
- The **related cause** (for instance: *cavitation or incorrect mounting or structural failure*)

The ERS database is filled by surveyors entering a claim handled by them accordingly in the database. The database is only accessible for ERS registered surveyors. These ERS surveyors can search the data-base for similar claims, whereby of course the personal data of owner and vessel cannot be viewed. Only the technical data. As such surveyors can enhance their experience and knowledge.

All surveyors member of a recognized marine Association, such as NIVRE, NAMS, FEMAS etc. can become an ERS surveyor by sending a request as such to h.arntz@ivr-eu.com.

THE RESULTS

Every week the system automatically generates statistics. Like shown in the right graph these statistics are analysed by IVR to see if there is any question of a possible structural failure.

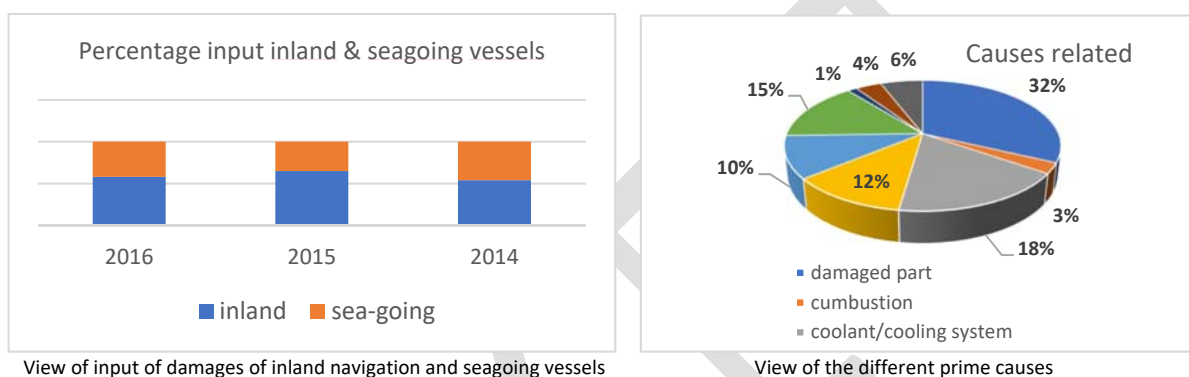


The IVR/ERS board of surveyors will in case of a presumed structural failure, investigate the related technical data and a pre-alert is send out to all ERS surveyors if there is a suspicion of structural failure, in order to get more information.

If a factual structural failure is observed, ERS experts are informed by an ERS-alert message, informing them about some details of the found structural failure and actions to be undertaken by IVR towards manufacturer. IVR than contacts the manufacturer to discuss possible damage prevention measures and/or modifications to be carried out, as well as communication of the problem to users. All ERS experts and participants are then informed about the discussions outcome and solutions achieved with the manufacturer.

ERS has shown its value already in several cases in the past where structural failures were established an where, in good consultation with manufacturers, solutions were found and future similar damages were avoided. Thus saving claim costs for insurers and owners.

Also statics are generated of which some examples are shown below.



This way ERS participants also have a more extensive information flow on damage statistics, structural failures and damage preventive technical information. The past has learned that this is not used to exclude machinery coverage or reject claims, but on the contrary, gave insurers the confidence that surveyors giving input to ERS are well informed about structural failures and damage preventive technical information.

THE PLATFORM FUNCTION

Apart from informing ERS participants and surveyors about alerts, IVR also informs ERS sSurveyors through the **ERS damage prevention platform**, on technical leaflets received directly from engine manufacturers or via ERS urveyors, concerning items which require attention to prevent damages, maintenance issues and modifications. Recently for instance through the platform surveyors were informed about MAK's February 2017 Service letter no. 0003M20 stating details and explanation concerning the importance of Lubrication Oil Care at M20C engines running on HFO and possible damage consequences.

In this way ERS not only helps and informs the surveyor, but also is able to, through insurers and surveyors, make vital technical information available to owners, thus avoiding damages and idle time of the vessel due to a damage.

OWNERS PARTICIPATION

If owners would encourage the surveyors and brokers to contribute claims into the ERS database this would help in increasing the scope of information, statistics and the chance of finding more structural failures. If owners are of opinion they are confronted with a structural failure in their machinery they can ask their surveyor to search in the ERS database for similar claims or to inform IVR about the supposed structural failure, for IVR to investigate if this indeed is the case and start up the proses of a pre-alert or even an alert.

When you as owner want to learn more about ERS, please have a look at the ERS website www.ers.ivr-eu.com, view the information film on the site or contact IVR h.arntz@ivr-eu.com.