

Seaworthiness of autonomous vessels and remote operation center in the context of marine insurance

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المستخلص:

كانت صلاحية الإبحار قضية هامة في التأمين البحري منذ القرن الثامن عشر في القانون الإنجليزي. حالياً، تقوم المنظمة البحرية الدولية (IMO) بإعداد قانون MASS، الذي يُعتبر بموجبه مراكز التشغيل عن بُعد امتداداً للسفينة، حيث يقوم الأشخاص الذين يشكلون طاقم السفينة المستقلة بالتحكم في السفينة عن بُعد من الشاطئ. هذا يغير الصورة القانونية الحالية تمامًا مقارنة بالقوانين السابقة التي يعتمد عليها القانون الإنجليزي. ومع ذلك، فإن خطة التأمين البحري الإسكندنافية لم تطبق مفهوم صلاحية الإبحار منذ عام ٢٠١٣، وتعمل فقط بمفهوم اللوائح الخاصة بالسلامة. تقارن هذه المقالة بين هذين النهجين السائدين في أسواق التأمين البحري اليوم. تختلف ردود فعل المؤمنين في ظل هذين النظامين القانونيين بالنسبة للشحن المستقل، الذي سيكون واقعاً في حركة النقل الدولية اعتباراً من عام ٢٠٢٥، عندما يدخل قانون MASS غير الإلزامي حيز التنفيذ تحت اتفاقية SOLAS.

الكلمات المفتاحية: التأمين البحري، صلاحية الإبحار، اللوائح الخاصة بالسلامة.

Abstract

Seaworthiness has been an important issue in marine insurance since 18th century in English law. The IMO is currently preparing the MASS code under which remote operation centers are considered as an extension of a ship as the persons which form the crew of an autonomous vessel are onshore navigating the vessel from distance. This changes the existing legal picture completely in relation to the previous case law in which the English law is based on. However, the Nordic Marine Insurance Plan has not applied the concept of seaworthiness since 2013 and only operates with the concept of safety regulations. This article compares these two approaches which are dominating the marine insurance markets of today. The reactions of the underwriters are very different under these two legal regimes in relation to autonomous shipping, which will be a reality in international traffic since 2025 when the non-mandatory MASS code enters into force under the SOLAS.

Keywords: MASS, SOLAS, Marine Insurance, Seaworthiness, Safety Regulations.

1- Introduction

Remotely controlled vessels can be controlled either from another vessel (mother ship) or from a remote control centre. According to the draft MASS code currently being prepared,

fully autonomous vessels (IMO level 4) will also be continuously monitored either from a remote control centre or from the mother vessel so that they can be transferred to active remote control if the situation so requires. Different names have been used in the literature for remote control centres, but in the preparation of the MASS code, the terminology has been confirmed by referring to them as Remote Operation Centres, or ROCs.

In terms of seaworthiness, defining the status of the remote control centre as part of the whole is a relevant question as part of marine insurance as a whole. If the remote control centre is located on land, the question to be resolved is: what is the legal relationship between the ROC and the seaworthiness of the ship? The question has been raised by several legal scholars of whether, for example, the incompetence of the remote-control operator or structural problems with the ROC would make the vessel unseaworthy? If the ROC is considered an extension of an autonomous or remotely piloted ship, the manning, design and maintenance of such centres can inevitably play an important role in determining the seaworthiness of the ship.

The MSC 108 working group preparing the MASS code unanimously decided to propose this interpretation by recording it as "ROC is an extension of the ship (i.e. company and flag have oversight over a ROC)". In the light of current regulation and case law, this entry – if it is no longer amended when code 2025 is finally adopted – means that the insurer could also question the seaworthiness of the remote control centre and refuse insurance compensation on that basis. In the absence of case law in this regard, interpretation will have to be awaited from the English courts.

Two business models have been proposed in the preparatory work for the MASS Code, the first of which is that a shipping company/operator owns and operates a centre for the control of several vessels in its fleet, or the independent ROC provides services to various shipping companies as an independent contractor. During the preparation of the MASS code, it has become clear that the supervision and certification of such centres will be the responsibility of the flag State of the vessel, even if vessels flying more than one flag are operated from the centre.

2- ISM Code as a model for MASS Code and ROCs

There has been discussion about whether the ISM code can also be used as a model for ROC acceptability certificates. In any case, the MASS working group in May 2024 continued to take as its starting point a solution whereby each flag State whose vessels are controlled by the remote control centre in question must audit the centre for the operation of its own vessels. The emphasis on the role of the flag State in the control of ROCs is thus comparable to the control carried out on conventional ships with regard to their ships and bridge, and with regard to the ISM code, both with regard to the ship and the safety management system of the company. Thus, from an operational point of view, it is difficult to find grounds for not considering a unit that plays a key role in the navigation of a ship as part of that unit for determining its suitability to navigate at sea.

However, prior to May 2024 and the discussion of the MSC, there has been no consensus among the countries involved in the IMO work on this issue, and some of those looking at the matter from the point of view of English law have previously considered the seaworthiness of the remote control centre to be too far-fetched and considered that the seaworthiness requirement cannot be extended to a land-based remote control centre. As is often the case in the preparation of international conventions, only time pressure to conclude an agreement will lead to a consensus between the parties.

3- Nordic Marine Insurance based on Safety Regulations

The Nordic Marine Insurance Plan has not applied the concept of seaworthiness since 2013 and only operates with the concept of safety regulations.

Safety regulations related to marine insurance mean that the insured must comply with certain requirements aimed at reducing the risk of accidents. If the insured violates these requirements negligently, and the violation leads to an accident, the insurer is exempt from liability. Since the concept of safety regulations incorporates most of the existing provisions affecting ship safety directly into the marine insurance contract, this is a very important tool for improving maritime safety.

The concept of safety regulation in the context of insurance is a Scandinavian invention and does not apply to other insurance schemes. E.g. The English ITCH terms and conditions do not contain rules that directly concern the insured person's obligation to comply with safety legislation.

A Safety regulation is a loss prevention order issued by an authority, provided for in an insurance contract required by an insurer on the basis of an insurance contract or issued by a classification society.

From the point of view and perspective of the Nordic law, the matter concerning the personnel of the ROCs of autonomous vessels is simpler, because the protection guidelines can be applied to both land-based and sea-based activities on the basis of Nordic insurance contract laws. As explained above with regard to the ISM Code, it is equally regarded in the Nordic countries as Safety regulations in the insurance clauses are linked to both the ship's and the company's safety management system, the violation of which may result in loss of compensation. As such, this Nordic model is also suitable for use in connection with autonomous vessels and their remote control centres. In the English system, the current insurance conditions do not lend themselves to this as such.

4- ROC personnel and the new risk regime in autonomous shipping

Turning our attention to the staff working for ROCs and looking at the extent to which they are covered by the standard cascade insurance clauses of the English system, it is clear that adding ROC to the equation introduces new risk factors that are understandably not addressed by current insurance clauses. In this context, the obvious question is whether the

loss caused by RCO's 'negligence' is recoverable. Conventions and national regulations lay down requirements for the qualifications and training needs of the staff of such centres for conventional ships, but there is a legal vacuum in this respect for legally autonomous ships. This vacuum also needs to be resolved before such ships are put into service, but the MSC has still not given a mandate to the working group currently reforming the STCW Convention, because it has hitherto been considered premature. The problem with the STCW Convention is that it applies exclusively to work on board ships. It is still unclear where and how questions concerning the qualifications of ROC employees will be regulated.

5- Conclusions

The Work of MSC regarding the MASS Code continues during autumn 2024 and the voluntary MASS Code will be accepted in the spring 2025. Many countries are expected to begin with national and international traffic with autonomous vessels when it enters into force. The technology has been ahead of the legal regime for a long time and the lack of seafarers in several countries is leading to increased autonomy in near future. This article has raised the question how the problem with traditional seaworthiness regime in marine insurance context will be handled. The English marine insurance law still demands that the vessel has to be seaworthy in order to be entitled to compensation when the vessel is lost or damaged. The Nordic Marine Insurance Plan does not apply the seaworthiness demand, but instead it follows the Safety regulation regime established in Nordic Marine Insurance law.

Especially the relation of the ROCs personnel concerning the issue of seaworthiness and safety regulations is an issue which will come to the spotlight when the owners of MASS vessels are choosing their insurance regime. If I would be the owner, I would choose the regime which clearly applies to the issues raised by the new situation where the personnel of the vessel are situated in the ROCs on land instead of a bridge at sea. It is expected that also English law will be adjusted to the new situation with several new clauses in the insurance contract. But still the legal precedents concerning seaworthiness in the English legal system might raise some doubts how the clauses will be interpreted. The English legal system has shown that it can adjust to changes. However, the changes are nowadays faster than ever when the long-awaited regulation of MASS vessels is to be implemented. Therefore, my conclusion is that the Nordic Marine Insurance Plan has a clear advantage in this respect when compared to the English hull clauses.