

# 打捞沉船

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1. 相关归属问题, 法律说明
2. 如何打捞, 打捞成本
3. 打捞具体过程
4. 打捞案例
5. 打捞收获
6. 切割法

## 为什么打捞沉船这么难?

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1.

整体打捞, 解体打捞

非整体打捞

## 法律

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1. The **law of salvage** is a principle of [maritime law](#) whereby any person who helps recover another person's ship or cargo in peril at sea is entitled to a reward commensurate with the value of the property saved.
2. Laws Of Salvage – 10 Things You Must Know; <https://marineinsight.com/maritime-law/laws-of-salvage-10-things-you-must-know/>
- 3.

## 素材

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1. [http://www.xinhuanet.com/world/2015-12/13/c\\_128524407\\_2.htm](http://www.xinhuanet.com/world/2015-12/13/c_128524407_2.htm)
  1. 1998 年8 月, 印尼政府批准德国人沃尔特方的打捞申请 [http://www.xinhuanet.com/world/2015-12/13/c\\_128524407\\_2.htm](http://www.xinhuanet.com/world/2015-12/13/c_128524407_2.htm). 黑石号
  2. 世越号打捞, 振华30号起重船
  3. 1998年, 英国政府提出和美国知名海底探险公司奥德赛公司合作寻找该沉船, 奥德赛公司4年后就发现了沉船地点并展开打捞工作。
  4. 根据双方达成的协议, 如果打捞出来的财宝价值在2800 万英镑以下, 奥德赛公司将得到这批财宝的80%作为报酬; 如果超过2800 万英镑, 双方各得50%; 一旦财宝价值达到3.19 亿英镑, 英国政府所得的份额就上升到60%。
2. <https://www.marineinsight.com/maritime-law/laws-of-salvage-10-things-you-must-know/>
3. [https://m.thepaper.cn/newsDetail\\_forward\\_19526679](https://m.thepaper.cn/newsDetail_forward_19526679)
4. <http://www.54seaman.com/mob/blog/blogdetail/id/134387.html>

## 例子

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1. 找"莱茵堡"
2. 南海一号
3. 苏, 奥德赛
- 4.

search + raise + protect

## 据统计,

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属人原则 + 属地原则 + 先到先得原则

根据Wreck Site的数据,

大家好, 今天我演讲的题目是, 如何打捞一艘沉船?

自从人类使用船进行航行以来, 就无法避免沉船. 原因包括但不限于: 操作不当, 船舶设计问题, 船只碰撞, 战争等. 总的来说: 船舶沉没都是由于海水进入船舱使得船舶浮力不足而沉没. 根据The wreck site, the world largest online wreck database, we have 211,560 wrecks in the world, 其中 180,980的沉船位置是已知的. 但人类会考虑 经济, 环境, 交通, 战争等因素, 有选择的将他们打捞上来. 作为普通人的我们, 或许经济因素是最重要的, 那我们要如何通过打捞沉船呢?

Hello everyone, today the topic of my presentation is how to salvage a sunken ship.

Since humans began using ships for navigation, the occurrence of shipwrecks has been inevitable. Reasons for shipwrecks include, improper operation, design issues, collisions, and warfare. In general, ship sinking occurs when water enters the hull, causing insufficient buoyancy and leading to the vessel's submersion. According to The wreck site, the world's largest online wreck database, there are 211,560 wrecks worldwide, with the locations of 180,980 sunken ships known.

However, humans consider factors such as economics, the environment, transportation, and warfare when selectively salvaging these wrecks. As ordinary individuals, perhaps economic factors are the most important for us. So, how can we go about salvaging a sunken ship?

首先, 我们需要博览群书, 获得必要的资料用于找到有价值的沉船. 例如, 1987年, 英国的一家海洋探测公司的员工就在荷兰图书馆查到了东印度公司的一艘名为"Rijnsburg"的沉船, 书中记载说该船载有大量白银和锡锭. 这就需要在目标海域进行地毯式的搜寻, 难度很大, 虽然他们最终也没有找到Rijnsburg号, 不过却因祸得福, 意外发现了另一艘的沉船, 而且通过船周围散落的金饰品发现这同样是一艘"宝藏船".

Firstly, we need to extensively study relevant literature to acquire necessary information for locating valuable sunken ships. For instance, in 1987, an employee of a British marine exploration company discovered information about a sunken ship named "Rijnsburg" from the archives of a Dutch library. The records indicated that the ship was carrying a substantial amount of silver and tin ingots. This requires conducting a meticulous search in the target area, which can be quite challenging. Although they didn't ultimately find the Rijnsburg, they stumbled upon another sunken ship unexpectedly, and, through scattered gold ornaments around the ship, realized it was also a "treasure ship."

第二, 如果我们已经明确了沉船的大致位置, 我们还需要充分了解法律, 明确归属权, 避免竹篮打水一场空. 对于沉船的归属问题, 主要有三个原则, 属人原则, 属地原则, 先到先得原则. 对于有明确所有人的船只, 我们可以提供打捞技术, 商量与船主分成. 例如苏克塞斯号沉船, 英国政府就和负责打捞的美国奥德赛公司团队达成协议: 如果打捞出来的财宝价值在2800 万英镑以下, 奥德赛公司将得到这批财宝的80%作为报酬; 如果超过2800 万英镑, 双方各得50%; 一旦财宝价值达到3.19 亿英镑, 英国政府所得的份额就上升到60%. 如果我们不和船主合作, 那么就需要等待足够的时间, 在有些国家的法律规定, 如果船主在一定时间内没有打捞, 则沉船物品不再私有. 有时最好与政府合作, 达到独立打捞的目的, 避免多个团队的竞争, 造成成本的不可控.

Secondly, if we have identified the approximate location of the sunken ship, it is crucial to have a thorough understanding of the law to clarify ownership rights and avoid efforts going in vain. There are three main principles regarding the ownership of sunken ships: the principle of nationality, the principle of territoriality, and the principle of first come, first served.

For ships with clearly identified owners, we can offer salvage technology and negotiate a sharing arrangement with the shipowner. For example, in the case of the sunken ship Sussex, the British government reached an agreement with the American Odyssey Marine Exploration team responsible for the salvage. If the value of the salvaged treasure is below £28 million, Odyssey would receive 80% of the find as compensation. If it exceeds £28 million, both parties would receive 50%, and once the treasure's value reaches £319 million, the British government's share increases to 60%.

If we choose not to collaborate with the shipowner, waiting for a sufficient amount of time may be necessary. In some countries, laws stipulate that if the shipowner does not salvage within a certain timeframe, the sunken ship's items are no longer considered private property. Sometimes, it is best to collaborate with the government to achieve independent salvage goals, avoiding competition among multiple teams and preventing uncontrollable costs.

第三, 当我们找到了沉船并且获得了打捞沉船资格, 并且我们计算出打捞的财宝价值高于打捞成本后, 我们就可以考虑如何打捞了. 打捞方法可以笼统地分为两类: 整体打捞和解体打捞. 整体打捞是指将沉船尽可能完整的打捞上来, 解体打捞则是先将沉船在水中解体成多个部分, 然后分别打捞上来. 前者多用于船本身是有价值的, 后者则更多是出于疏通航线的目的且船体过重. 但无论哪种方法, 打捞过程有两个关键之处: 一是使沉船离底; 二是让沉船出水. 使船离底可以通过使用浮筒, 向船体内部充入高压空气来增加浮力, 或者用大型起重船来打捞, 比如2015年韩国的世越号该船全长146.6米, 宽22米, 高14米, 吃水6.26米, 满载排水量6835吨, 沉入水中后近万吨. 当时是动用了振华30"起重打捞工程船, 全长297.55米, 船宽58米, 具备单臂固定起吊12000吨, 才打捞上岸. 对于某些沉入海底依旧的古代木制船, 如果让船贸然离开海水环境, 船身就会加速腐烂, 以"南海一号"为例, 它是一艘几百年的木制船, 船中装满了宋朝的瓷器, 当时打捞团队是将船连周围海水一同打捞出水, 然后后续逐渐让其出水, 保护了他的考古价值.

Thirdly, once we have located the sunken ship, obtained the salvage rights, and calculated that the value of the recovered treasure exceeds the salvage costs, we can consider how to conduct the salvage operation. Salvage methods can be broadly categorized into two types: total salvage and dismantling salvage. Total salvage involves lifting the sunken ship as intact as possible, while dismantling salvage entails breaking the ship into multiple parts underwater and lifting them separately. The former is often used when the ship itself is valuable, while the latter is more common for clearing waterways when the ship is excessively heavy.

Regardless of the method chosen, the salvage process has two critical stages: lifting the ship off the seabed and raising it out of the water. Lifting the ship off the seabed can be achieved by using buoyancy bags, injecting high-pressure air into the ship's interior to increase buoyancy, or using large crane ships for salvage. For example, in 2015, the South Korean ferry Sewol, with a length of 146.6 meters, width of 22 meters, height of 14 meters, draft of 6.26 meters, and a laden displacement of 6,835 tons, sank with nearly 10,000 tons of weight. It was salvaged using the heavy-lift vessel "Hebo Lift 30," with a length of 297.55 meters, width of 58 meters, and a lifting capacity of 12,000 tons.

For some ancient wooden ships that remain submerged, such as the case of the "Nanhai One," a shipwreck from several hundred years ago filled with Song Dynasty porcelain, a cautious approach is required. If the ship is abruptly removed from the marine environment, its structure may rapidly deteriorate. In the case of the "Nanhai One," the salvage team lifted the ship along with the surrounding seawater and gradually allowed it to emerge, preserving its archaeological value.

最后, 即使我们有了找到宝藏沉船的运气, 打捞沉船的技术, 成功打捞出了宝藏, 也不能掉以轻心. 比如说2003年, 美国佛罗里达半岛发现了一艘沉船, 美国一家打捞公司确认位置后, 立刻向当地法院请求处置权. 佛罗里达地方法院认为公司对这艘沉船具有处置权, 但西班牙那边立刻就派人提出申诉, 理由是我们已经调查出来了, 这艘船叫"圣玛丽亚·自由号"是一艘西班牙船. 西班牙官司胜利, 打捞公司最终一无所获.

Lastly, even if we are fortunate enough to find a sunken treasure ship, possess the technology to salvage it, and successfully recover the treasure, we must not become complacent. For example, in 2003, a sunken ship was discovered off the coast of the Florida Peninsula. After a salvage company in the United States confirmed the location, they immediately sought disposal rights from the local court in Florida. The Florida court granted the company disposal rights, considering them legally entitled to the sunken ship. However, Spain quickly intervened, filing an appeal based on their investigation, claiming that the ship, named "Santa Maria de la Consolación," was a Spanish vessel. The Spanish legal victory resulted in the salvage company ultimately gaining nothing from their efforts.

