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سازمان بنادر و دریانوردی





KHURE MUSA WRECK REMOVAL PROJECT

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Introduction

Soon after the Iran-Iraq war PMO has decided to removal of maintaining wrecks in Khure Musa region. After years of unfruitful attempts of local contractors finally PMO decided to put an engineering consultancy team on charge, and now it seems this project is reaching a stable trend.

In this new phase primarily diving, Sonar and MBES surveys for identification of 7 major wrecks were done and then regard to risk analysis, 2d and 3d modeling and based on salvage engineering methods removal of one wreck has been completed (Moira) and removal project of another wreck (A.P.J Ambika) is continuing now.

In this article we will firstly introduce different types of salvage operations and then by skimming the latest methods in these operations we will review the employed methods in Khure Musa wreck removal project.

Salvage operations and wreck removal

Based on article 1 of international convention of salvage 1989, salvage operation means any act or activity undertaken to assist a vessel or any other property in danger in navigable waters or in any other waters whatsoever. This operation contains:

- Offshore salvage
- Cargo and machinery salvage
- Salvage of Sailing vessels
- Wreck removal
- Harbor clearance

Which in article 1-7 Wreck Removal International Convention 2007 “Removal” means any form of prevention, mitigation or elimination of the hazard created by a wreck. “Remove”, “removed” and “removing” shall be construed accordingly.

Common methods in wreck removal operations

To select an appropriate method in a wreck removal project is primarily depends on special parameters on site. Although in every case in this regard hydrostatic and damage stability

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calculations are essential and considering these factors we can divide prevalent methods accordingly below:

- Refloating by watertight double bottoms
- Refloating by pontoons and airbags
- Pulling, rightening and lifting by cranes and hydraulic pullers
- Thermal cutting
- Chain cutting

Khure musa wreck removal project

Moira's project. This wreck has been removed finally in October 2011. The wreck was placed in a short distance to entrance of Khure Musa canal. Respect to serious threats for safety of navigation and waterway this wreck was the main concern of PMO and treated as the first wreck to be removed. Method which has been used in this project was a combination of thermal cutting and refloating methods.

Conclusion

Fig. 1 shows one example of the 3d model has been used for modeling of Moira wreck removal operation. We can see pontoons, airbags and watertighted double bottoms which they based on existed equipment formed the efficient operation of Moira's removal.

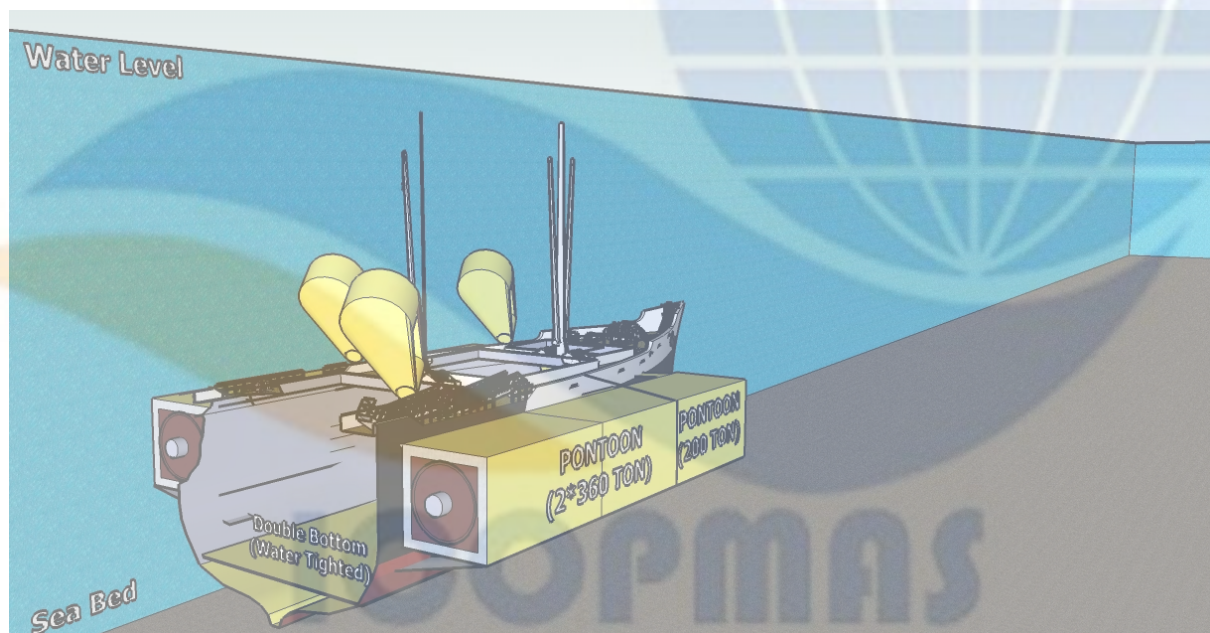


Fig. 1) Moira's fore section 3d modeling