The paper describes a study on fire accidents taking place aboard container ships. In total, 39 confirmed container ship fire accidents were discovered in the period 1996-2017. An epidemiological hazard analysis disclosed four high-consequence hazardous cargos that are calcium hypochlorite, compressed charcoal briquette products, rechargeable batteries and divinylbenzene. Cause-consequence analyses of the fire accidents with the four types of cargos were carried out that explicated all possible scenarios of accident escalation starting from a cause and ending with a consequence. The frequency of experiencing major fires was estimated as well. Further, different solutions to reduce fire detection time were explored and supported by fire simulation modelling with computational fluid dynamic software. Results of the simulation for two different detection solutions are presented.

General information
Publication status: Accepted/In press
Organisations: Innovation, Engineering Systems, Department of Technology, Management and Economics, Technical University of Denmark
Corresponding author: Kozin, I.
Contributors: Callesen, F. G., Blinkenberg-Thrane, M., Taylor, J. R., Kozin, I.
Publication date: 2019
Peer-reviewed: Yes

Publication information
Journal: Journal of Marine Engineering and Technology
ISSN (Print): 2046-4177
Ratings:
BFI (2019): BFI-level 2
Original language: English
DOIs:
10.1080/20464177.2019.1571672
Research output: Contribution to journal › Journal article – Annual report year: 2019 › Research › peer-review