COLD IRONING AS AN INNOVATION IN THE MARITIME TRANSPORT - TECHNICAL AND ECONOMIC ASPECTS

Summary

The growth of international trade has resulted in corresponding rapid growth in the amount of goods being shipped by sea, which directly correlates with ports' cargo turnovers and the level of pollution's emissions. Based on the 2005 Emissions Inventory, ships represent over 80% of the particulate emissions at the port. With the increasing pressure to clean up the environment and save energy cost, owners and ports have been seeking alternative methods for vessels to turn off their engine and plug into the shore gird while at port.

This paper brings closer to the concept of cold ironing, which is receiving a great deal of interested in ports around the world. Shore side power allows ship-owners to shut down the vessel's auxiliary engines and plug into electrical power. Using cold ironing cuts emissions by more than half and by as much as 97%, while emissions are practically eliminated.

Advantages and disadvantages of cold ironing system are also determined, as well as some problems connected with its implementation, as for example, the different voltages and frequencies found on ships while on shore or the lack of the international standard harmonising the application of shore-side power.

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