



SHIP SAFETY BULLETIN

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Ship Safety Bulletins provide safety-related information to the marine community.

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Subject: INAPPROPRIATE APPAREL IN ENGINE ROOM

A ro-ro passenger ferry recently suffered a series of furnace explosions in an auxiliary boiler. As a result, two non watch keeping officers received burns of varying intensity requiring hospitalization. Neither, unfortunately, was wearing coveralls or clothing suitable to work in the engine room, but had on their standard issue uniforms with short sleeve shirts. The uniforms were made from a combination of natural but mostly synthetic fabrics. In one case this fabric contributed to the severity of the burns.

Research has shown that outer and inner garments made from natural fibres, such as wool and cotton, provide good protection against an ignition source, do not melt and are more resistant to radiant heat. Many synthetic fibres burn very easily and when they burn, melt down very quickly sticking to the skin. Research has also found, the more the body is covered, the better protection is afforded against fire, radiant heat, etc.

The objective of having and wearing protective clothing is to protect employees from the risk of injury by creating a barrier against, in this case, engine room hazards. Protective clothing is not a substitute for good engineering, administrative controls or good work practices, but should be used in conjunction with these controls to ensure the safety and health of workers. Even when used appropriately, protective clothing has its limitations.

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Keywords:

1. Engine room
2. Explosion
3. Protective clothing

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Owners of commercial vessels, registered and licensed, automatically receive Bulletins.

Ship owners and operators need to take into consideration workplace hazards and risks when providing clothing and protective equipment. Regulations in place presently are general in nature, but do require that the level of risk be considered when determining the type of clothing to be worn, specifically the *Canada Labour Code - Part II*, section 125(1) <http://laws.justice.gc.ca/en/L-2/index.html> and Occupational Health and Safety – Marine Regulation 10.1 <http://laws.justice.gc.ca/en/L-2/SOR-87-183/index.html>. The *Safe Working Practice Regulations* of the *Canada Shipping Act* <http://www.tc.gc.ca/acts-regulations/GENERAL/C/csa/regulations/050/csa057/csa57.html> also outline the need for employees to wear such articles of clothing as are intended for the employee's protection.

All shipboard personnel are advised to examine the risks inherent in their work place, especially the engine room and other machinery spaces and wear the protective clothing provided. Special care needs to be taken that clothing and other protective items, that are more than suitable in one area of the vessel, may be totally inappropriate in another area of the vessel.