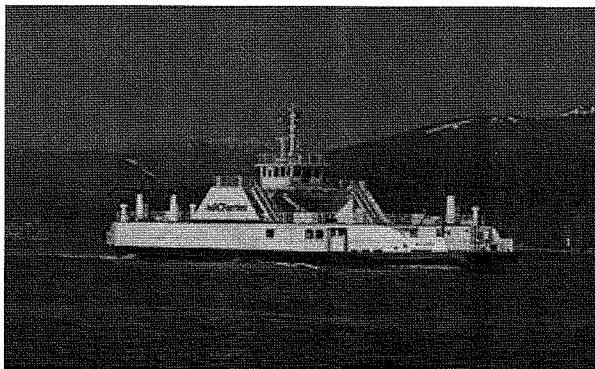




M.V. KUPER FIRE RESPONSE AND EVACUATION PROCEDURE



A license: (269)
B license: (150)

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Revision: May 28, 2010

4/2/2013

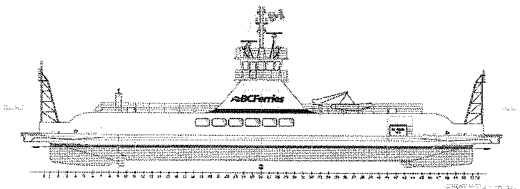
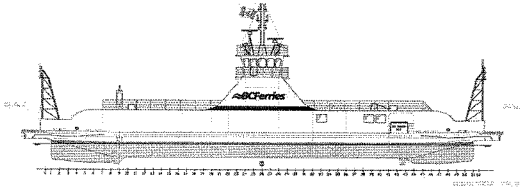
M.V. KUPER FIRE RESPONSE AND EVACUATION PROCEDURE

Official Number 830819
Year Built: 2006
Overall Length: 52.21 metres (171 feet)
Ship Breadth (Extreme) 16.77 metres (55 feet)
Gross Tonnage: 537 tons
Car Capacity: 32
Passenger & Crew Capacity: A license: (269)
B license: (150)
Lif jackets 310 adult and 30 children
Service Speed: 9 knots
Propulsion: 354 kW (475 hp) x 2 Detroit Diesel series 60 main engines
Class HT IV
Lifesaving Equipment ESS, rescue boat

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Note:

The MV Kuper is a sister ship to BC Ferries' three K-class ships, the MV Kahloke, MV Klitsa and MV Kwuna.



Vessel Profiles

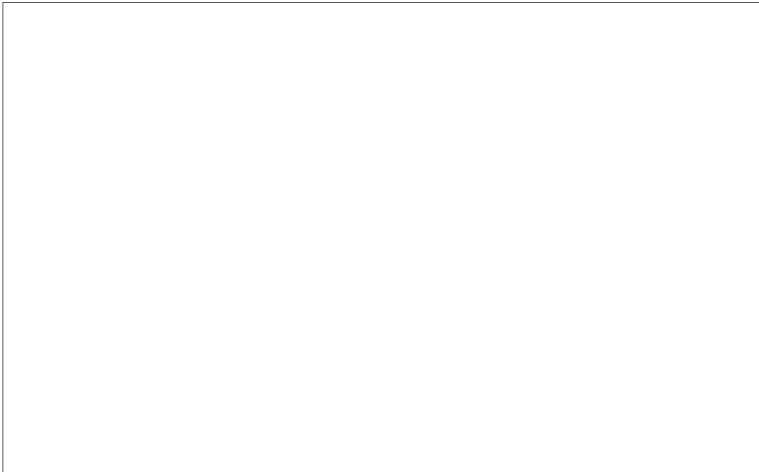
M.V. KUPER FIRE RESPONSE AND EVACUATION PROCEDURE

Fire Equipment



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Fire Pumps



M.V. KUPER FIRE RESPONSE AND EVACUATION PROCEDURE

Fire Response –

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M.V. KUPER FIRE RESPONSE AND EVACUATION PROCEDURE

Fire Response –

detailed diagrams

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M.V. KUPER FIRE RESPONSE AND EVACUATION PROCEDURE

Fire Response

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detailed diagrams

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M.V. KUPER FIRE RESPONSE AND EVACUATION PROCEDURE

Description of Evacuation Equipment

1. [Redacted]
2. [Redacted]
3. [Redacted] lifejackets located in [Redacted]
4. [Redacted] emergency evacuation slide units, [Redacted] platform, [Redacted]
5. [Redacted]
6. [Redacted]
7. [Redacted]
8. [Redacted]
9. [Redacted] emergency boat [Redacted]
10. [Redacted]

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Lifesaving Equipment Crewing



M.V. KUPER FIRE RESPONSE AND EVACUATION PROCEDURE

Rescue Boat

--

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Special Needs Passengers

--

Lifejacket Locations

--

and will be responsible to ensure a steady flow of lifejackets is maintained.

--

M.V. KUPER FIRE RESPONSE AND EVACUATION PROCEDURE

Evacuation Procedure

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1. Passengers will be mustered [redacted]
[redacted]
2. [redacted]
will deploy their respective evacuation slides [redacted]
3. [redacted]
maintains a count of the passengers evacuated [redacted]
4. [redacted] relay the final passenger count [redacted]
5. [redacted]
6. [redacted] will relay the final passenger count to [redacted]
7. [redacted] will insure that the vessel is swept for all passengers [redacted]
8. [redacted]
9. [redacted]
10. [redacted]
11. [redacted]
12. [redacted]
13. [redacted]
14. [redacted] assigned to passenger control, [redacted]
[redacted]

M.V. KUPER FIRE RESPONSE AND EVACUATION PROCEDURE

DBC ESS Deployment



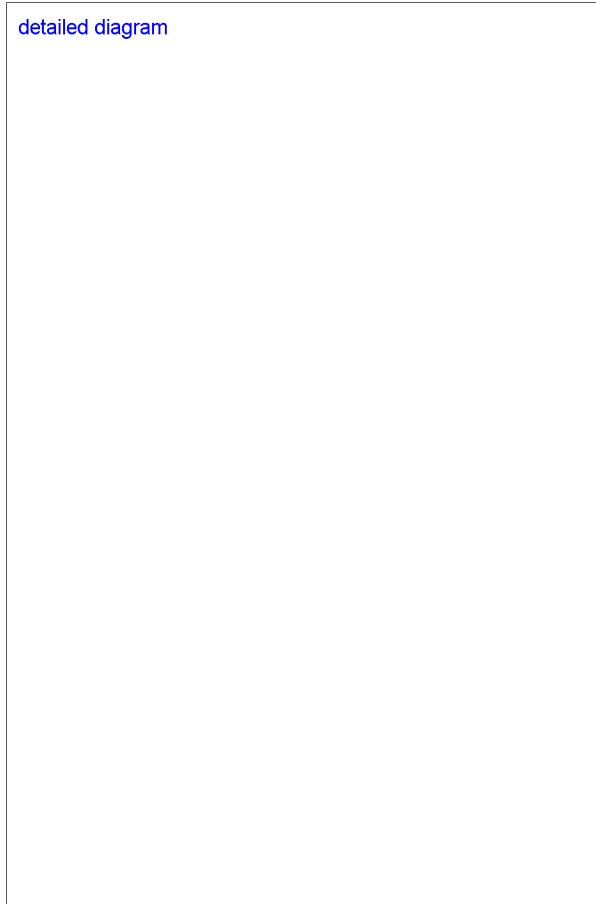
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M.V. KUPER FIRE RESPONSE AND EVACUATION PROCEDURE

Evacuation Scenario Crewing Assignments

detailed diagram

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Evacuation scenario showing crew assignments and passenger flow.

M.V. KUPER FIRE RESPONSE AND EVACUATION PROCEDURE

Post Abandon Ship Crewing Assignments

[detailed diagram](#)

[ss. 15, 19](#)

M.V. KUPER FIRE RESPONSE AND EVACUATION PROCEDURE



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MARINE TECHNICAL REVIEW BOARD REQUEST

M/V Kuper
Class B Vessel

SUBJECT:

This is to request that the Marine Technical Review Board (MTRB) allow the *M/V Kuper* to be assessed as a Class B vessel under the Fire Detection and Extinguishing Regulations (FDEER) Regulation 20 (1) (b)iii, "Classification of Steamships – Class B", as it just marginally exceeds the length limit of 45.7m by 10cm.

REVIEW:

The *M/V Kuper* is a double-ended self propelled open car deck Ro-Ro passenger ferry operating primarily between Chemainus on Vancouver Island to Thetis Island and Kuper Island; this is known as Route 20 in the BC Ferry system. The ship is licenced for [] passengers and is classified for Sheltered Waters voyages. The scheduled ferry run is [] in duration. On this route the ship is never more than [] from land nor more than [] from the nearest ferry dock.

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The ship's normal operating complement is a total [] this is consistent with other "K-Class" vessels in the fleet although the *M/V Kuper* is somewhat larger with a different layout []

The operating deck crew is comprised of []

As a recent addition to the BC Ferries in 2007, the *M/V Kuper* has been fitted with the most modern safety equipment. It pioneered the use of fire monitors in the BC Ferries

All machinery compartments are protected by []

Life saving equipment on board includes [] Emergency Slide Stations

[] The ship has all the necessary, approved Transport Canada equipment and went through an intensive inspection and drill demonstration prior to entering service.

BC Ferries has voluntarily adopted the International Safety Management Code (ISM). The Safety Management System (SMS) is active and the Document of Compliance (DOC) is current. The M/V *Kuper* has a current Safety Management Certificate (SMC).

DETAILS OF REGULATORY REQUIREMENTS:

The Fire Detection and Extinguishing Regulations (FDEER) Regulation 20 (1) (b)iii, "Classification of Steamships – Class B" are defined as:

(iii) *steamships, other than launches, over 5 tons, gross tonnage, and not over 45.7 m in length fit to carry passengers and to make voyages as follows:*

- (A) *home-trade, Class III (now NC2), other than international voyages,*
- (B) *home-trade, Class IV (now Sheltered Waters),*

And where under the requirements for a "Class B" vessel, the regulations for "Passenger and Crew Spaces" (Reg. 38(1)) and for "Machinery Spaces" (Reg. 39(1)(a)) require that:

Every Class B ship shall be provided with appliances whereby a powerful jet of water can be rapidly directed upon any part of the passenger and crew spaces.

Thus a Class B only requires a fire team to provide a single jet of water as per the regulations, versus two jets of water for a larger Class A vessel.

ALTERNATIVE PROPOSALS:

BC Ferries operates a number of vessels that are marginal with respect to the length requirement, noting the rule length is 45.7m using a complex definition (see the FDEER definitions). For example, as a double ended ferry without rudders, the applicable definition for the M/V *Kuper* is either:

"length" [means

(a) in the case of a ship that is registered under the Act or required by the Act to be registered,]

(ii) if the ship has no rudder stock or has a rudder stock situated outside of the hull at the stern, the distance from the foreside of the foremost permanent structure to the aft side of the aftermost permanent structure of the ship, not including guards or rubbing strakes, or

(iii) if the ship is double-ended, the distance from the aft side of the forward rudder stock to the foreside of the after rudder stock,

Neither definition is particularly suitable and thus the rule length was taken as length on the waterline, at 45.8m. Thus the rule length is only marginally above the required length and therefore poses no additional demand on fire fighting requirements than for a Class B vessel under 45.7m.

The issue of classification of the M/V *Kuper* under the FDEER was not identified during the reconstruction of the vessel nor was it raised during subsequent discussions of crewing with Transport Canada.

REASON WHY REGULATORY REQUIREMENT CANNOT BE MET OR WHY ALTERNATIVE PROPOSAL IS PREFERABLE:

As a Class B vessel under the FDEER, the Marine Personnel Regulations 207(4)(d)/(i) and the associated Safe Manning analysis for this vessel can be defined such that the required fire team size is specified to be consistent with crewing levels required to operate the vessel, i.e. there will not be a big discrepancy introduced to address emergency duties resulting in redundant crew on board for normal operation.

REASON WHY SAFETY AND THE ENVIRONMENT WILL NOT BE COMPROMISED:

There is no basis to consider that an additional 10cm in length substantially increases the emergency response requirements. The 45.7m length limit appears to be a legacy from previous regulation where the reference in imperial units would have been 150 feet. Thus the limit is somewhat arbitrary.

In more general terms, the *M/V Kuper* is outfitted with modern equipment, is well laid out, and its crew is trained and proficient in all aspects of emergency response.

RISK ANALYSIS AND RISK MITIGATION:

The ship operates in sheltered waters on a minor route where distances from shore are short and time to sail to a refuge dock is limited. Hazards on the route are minimal. The vessel has

[REDACTED]

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The principal identified risk to the vessel is posed by fire. [REDACTED]

[REDACTED]

In this scenario, a fire monitor can be rapidly employed after initial efforts [REDACTED]

[REDACTED] fail. [REDACTED]

In this context, the FDEER Class B designation matches the crew response strategy, where a degree of multi-tasking is possible; at no point does the vessel length increase the risk of an effective response. [REDACTED]

in addition to [REDACTED] to use crew accurately in fighting a fire or directing passengers away from a danger area.

Overall the entire crew is subject to regular emergency drills. The ship and crew are inspected annually by Transport Canada when performance drills are executed. In addition to the crew communicating with the passengers and each other during an emergency [REDACTED] communicate with all onboard [REDACTED]

[REDACTED] details of the latest development in the emergency.

Attachments: General Arrangement, Inspection Certificate, Ship Specifications.

SHIP SPECIFICATIONS

VESSEL NAME:

M/V Kuper

LM.O. NO.:

9029267

OFFICIAL NO.:

830819

VESSEL TYPE: Steel Passenger Ferry

GROSS TONNAGE:

537 GT

PASSENGERS:

CREW:

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LENGTH O.A.:

49.52m

CONST. MATERIAL:

Steel

BUILT:

2006

POWER TYPE:

Diesel

HP:

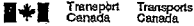
2 x 475hp

SCREWS:

2 x RAD FP

VOYAGE LIMITATION:

Sheltered Waters (limited HTIV)



Document no. - N° du document
2008-00012-505

INSPECTION CERTIFICATE

FOR A PASSENGER VESSEL TO WHICH THE SAFETY CONVENTION DOES NOT APPLY AND THAT EXCEEDS 15 TONS GROSS TONNAGE OR CARRIES MORE THAN 12 PASSENGERS

This Certificate is supplemented by a Record of Safety Equipment.

CERTIFICAT D'INSPECTION

CONCERNANT UN BÂTIMENT À PASSAGERS NE RESSORTISSANT PAS À LA CONVENTION DE SÉCURITÉ D'UNE JAUGE BRUTE EXCÉDANT 15 TONNEAUX OU TRANSPORTANT PLUS DE 12 PASSAGERS

Le présent certificat est complété par une fiche d'équipement de sécurité.

Name of vessel Nom du bâtiment	Official number Numéro officiel	Port of registry Port d'immatriculation	Gross tonnage Jauge brute	Date on which laid Date de pose de la quille (dd-mm-yyyy / [j-jjj-aaaa])
KUBER	930619	PAC - VICTORIA	537	00-00-2006

THIS IS TO CERTIFY that the above-mentioned vessel has been duly inspected in accordance with the provisions of the Canada Shipping Act, 2001, that the provisions of that Act regarding the inspection of vessels that are applicable to that vessel have been complied with and that the vessel is, subject to such limitations as may be specified herein, fit to ply on voyages not beyond

LA PRÉSENTE FAIT FOI que le bâtiment précité a été dûment inspecté conformément à la Loi sur le matériel marchand du Canada, 2001, que les dispositions de cette Loi relatives à l'inspection des bâtiments à vapeur applicables à ce bâtiment ont été observées et que celui-ci est, sous réserve des limitations pouvant être mentionnées au présent certificat, apte à effectuer des voyages dans les limites.

BC2, Limited HT4

Total number of persons for which life-saving appliances are provided: _____
Nombre total de personnes pour lesquelles des engins de sauvetage sont prévus: _____

This is a Life Raft Register - C'est un registre de radeaux: has been issued - a été délivré has not been issued - n'a pas été délivré

Category Catégorie	Number of passengers Nombre de passagers	Special passenger complement allowance applicable when the water temperature is 10°C or more Nombre de passagers supplémentaires autorisés s'applique lorsque la température de l'eau ambiante est de 10°C et plus	Number of crew including master Nombre de membres d'équipage, y compris le capitaine	Total passengers and crew Total, passagers et équipage
A				0269
B	0	s.22		
C			s.22	s.22
D				
E				

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That the vessel is marked with subdivision load line indicated as follows: _____
Que le navire porte les lignes de charge de compartimentage indiquées ci après: _____

Subdivision load line as signed and marked on the vessels side at amidships Lignes de charge de compartimentage assignées et marquées au milieu de la coque du bâtiment	Freeboard (mm) Frais-bord (mm)
LETTER OF MAX. DRAUGHT	1.496 M

Conditions of use of certificate: _____
Limitations du présent certificat: _____

CONDITIONS ATTACHED TO THIS DOCUMENT:

STUART CHANNEL BETWEEN DODDS NARROWS AND SAMSON NARROWS.

*B voyage transit voyage 0 passagers de
transit to Vancouver / Victoria HT III for
refit s.22
Steamship Inspector.*

Active Board Decisions granted to the vessel:

Décisions du bureau actives accordées au bâtiment:

This certificate is issued under the authority of the Government of Canada and is valid until:

Le présent certificat est délivré avec l'autorisation du Gouvernement du Canada et est valide jusqu'au:

25/03/2009

Date (dd-mm-yyyy / [j-jjj-aaaa])

Issued at - Délivré à: NANAIMO
(Place - Endroit)

on - le: 2008.03.26

Date (dd-mm-yyyy / [j-jjj-aaaa])

The undersigned is duly authorized by the Government of Canada to issue this certificate.

Le soussigné est dûment autorisé par le Gouvernement du Canada à délivrer le présent certificat.

s.22

Print Name - Nom en lettres écrites

Signature of authorized official - Signature de l'officier de l'équipement autorisé



Canada

VESSEL INFORMATION

Vessel's Name	KUPER
Type of Vessel	Ro/Ro Passenger
File Number	
Official Number	830819
Operator	BC Ferries
Year Keel Laid	2006
Gross Tonnage	537
Length Overall LBP	45.8 m
Voyage Class	Sheltered Waters
Voyage Distance	
Max. Distance from Land	
Voyage Duration	
Propulsive Power	708kw
E.R.-24hrs Fuel/Lube Supply	M/S / NO
E.R. - UMS Status	YES
LSER	NEW
LSER Class	V
FD&EER Class	B
# of Decks accessible to, and passengers :	
# of passenger lounges	
# of assembly stations	
Board Decisions #	MTRD request
Details: Letter to request ship to be re-classified as B Class under FD and EER.	

# of Passengers	
Height Embarkation Deck to Waterline	1.496 m
Davit-launched life rafts, capacity x number	
# of Embarkation Stations	
Throw over life rafts capacity x number	
# of Embarkation Stations	
Embarkation Ladder	
Capacity x number of life boats	
Capacity x number of MES	
# of life rafts to be brought to MES	
Type:	
Capacity x number of emergency or rescue boats	
# of jets of water	
Hose size	
Structural Fire Protection in areas of:	A60 or OTHER
Watch System	Day Vessel
	24 hours: 2-watch
	24 hours: 3-watch

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