



SAFETY ORDER

No: SO-P4 081218 3

INSPECTION OF PASSENGER ROPEWAY TOWERS FOR WATER INTRUSION

Date of Issue: December 18, 2008

This safety order is being issued pursuant to section 31 of the Safety Standards Act. A person affected by this safety order may appeal this order, in writing, to the Safety Standards Appeal Board in accordance with Section 51 of the Safety Standards Act. It is an offence under section 72 not to comply with a safety order.

Part 1: Details of Regulated Work or Regulated Product

This safety order is being issued in relation to a regulated product – specifically **towers of hollow steel construction that support circulating above surface passenger ropeways with either fixed or detachable grips.**

An incident involving the failure of a steel support tower on a detachable 8 passenger gondola has been reported to the British Columbia Safety Authority. The incident occurred Dec 16, 2008. It has been determined that water had accumulated in the lower tower tube of a two section 15 m support tower. The lower tower tube, which is partially filled with concrete, is flanged and connected to a companion flange on the upper tube with 24 bolts. Water entered the void in the lower tube above the concrete. During an extended period of cold weather, the water in the void froze and expanded. It appears that the weld connecting the flange to the lower tube failed as a result of the upward pressure from the ice. The upper 7m tower tube, the cross arm and two combination sheave assemblies fell off the lower 9m tube. The result was a sudden detensioning of the haul rope with several 8 passenger gondola cabins coming into contact with structures on the ground. 53 passengers were riding the ropeway at the time of the incident.

Part 2: Requirement(s) of this safety order

All operators of circulating above surface passenger ropeways with either fixed or detachable grips are hereby ordered to inspect affected tower components, including tower bases, tower tubes, tower cross arms and tower splices on the installations for signs indicating the presence of water or ice inside these tower components. One example of a method that may be used to check for this condition is to use a “sounding test” by striking the side of the component with a ball peen hammer (a tower component with water or ice inside tends to exhibit a solid “dead” sound compared to a normal bell like tone). If you are unsure how to conduct these inspections please contact the manufacturer or a professional engineer licensed in BC for instructions. **All affected towers must be inspected within four days of receipt of this order.**

If any towers or related tower components are found to have water or ice in them, or the operator is unsure of what is inside of the component (e.g., concrete) the operator is hereby ordered to contact the manufacturer to determine what actions shall be taken to address the situation. If an operator finds any tower or tower related components which have been damaged by ice jacking, the operator is hereby ordered to remove those affected passenger ropeways from operation and notify the BC Safety Authority immediately. The manufacturer shall be contacted to provide repair procedures. Once repairs have been completed permission to return the passenger ropeway to service shall be requested from the BC Safety Authority.

Complete the attached response form and fax to the British Columbia Safety Authority New Westminster office (fax number 604-660-6661 c/o Greg Paddon) upon completion/verification that the above noted requirements have been complied with. Completed forms shall be received by the Provincial Safety Manager no later than December 31, 2008.



Part 3: Details of Issue (if applicable)

This safety order is being issued to all passenger ropeway operators who operate circulating above surface passenger ropeways with either fixed or detachable grips.

Part 4: Details of Ordering Safety Manager or Safety Officer – Please read following page

I certify that I am authorized to issue this safety order in accordance with section 15 (d) of the Safety Standards Act or that I have been delegated this power under section 15 (g) of the Safety Standards Act.

Greg Paddon
Provincial Safety Manager - Passenger Ropeways & Amusement Devices

Date: December 18, 2008

Safety Standards Act:

Safety Orders

- 31 (1) To prevent, avoid or reduce risk of personal injury or damage to property, a provincial safety manager may, in writing, issue a safety order.
- (2) A safety order may be issued to any person in relation to any of the following:
- (a) regulated work or regulated products generally;
 - (b) a specific class of regulated product or regulated work;
 - (c) a specific regulated product or regulated work.
- (3) For certainty, a safety order issued under this section may apply to
- (a) regulated work that meets the requirements under this Act,
 - (b) regulated work that previously met the requirements under this Act or a former Act but does not meet the current requirements under this Act,
 - (c) regulated products that meet the requirements under this Act, or
 - (d) regulated products that previously met the requirements under this Act or a former Act but do not meet the current requirements under this Act, including a regulated product that bears a certification mark.
- (4) A safety order may specify any requirement that is intended to prevent, avoid or reduce the risk of personal injury or damage to property and may include any of the following orders:
- (a) that an existing regulated work or regulated product must be made safe in compliance with the safety order;
 - (b) that a regulated product must be
 - (i) disconnected from a power source,
 - (ii) uninstalled, or
 - (iii) modified before continued use;
 - (c) that a regulated product must be operated, installed, manufactured or disposed of only as specified or that a regulated product must not be moved;
 - (d) that current or future regulated work or a regulated product must conform to the terms or conditions of the order;
 - (e) that a person take or refrain from taking any action that a safety manager considers necessary to prevent, avoid or reduce a risk of personal injury to persons or damage to property;
 - (f) that the manufacturer make reasonable efforts to recall the regulated product.
- (5) The provincial safety manager must give written notice of the safety order to the following persons:
- (a) the manufacturer of the regulated product;
 - (b) an owner of the regulated product if the identity of the owner is known to the provincial safety manager;
 - (c) the person in charge of the regulated work.
- (6) The notice must state the reasons for the decision and that the person has the right to appeal the decision to the appeal board.
- (7) Despite section 54, a safety order may not be stayed during an appeal.

References:

Safety Standards Act

For more information on the British Columbia Safety Authority, please visit our website at:

www.safetyauthority.ca



SAFETY ORDER RESPONSE FORM

The information on this form is collected to administer the provisions of the *Safety Standards Act*. If you have questions about the collection, use or disclosure of this information, contact the Records, Information and Privacy Analyst for the BC Safety Authority at telephone (604) 660-6286.

The company and/or designated representative in receipt of a safety order must fill out and submit this form to the British Columbia Safety Authority within the timeframe stipulated on the safety order.

Safety Order No: _____

Operating Company: _____

The following have been completed as required in the above safety order:
(use additional pages as necessary and attach)

Person signifying completion of safety order requirement/s: _____
(Please print name)

Position Title: _____

Signature: _____

Completion Date: _____
Month / Day / Year

Return this form to:

**Attention: Greg Paddon
Provincial Safety Manager, Passenger Ropeways & Amusement Devices
British Columbia Safety Authority
Suite 400, 88 – 6th Street
New Westminster, BC V3L 5B3
Tel: 604-660-5964 Fax: 604-660-6661**