



Safety recommendation no. 156

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Safety deficit	<p>On 11 February 2016 at around 3:20 pm, an empty four-seater chair on the Obersäss-Stelli circulating chairlift in Flumserberg crashed to the ground during the descent. The crash occurred in the vicinity of the third pylon from the top, No 16. Noone was injured. The chair that crashed, No 36, was damaged in the event.</p> <p>The chair crashed owing to a clamp failure. During the last clamp revision, the operator installed a non-compliant heavy-duty dowel pin. The mechanical loads and weathering in combination with the properties of the heavy-duty dowel pin resulted first in longitudinal cracks followed by transverse fractures. As a result, the bolt in the pin joint moved against the clamp housing wall and prevented the clamp from closing completely. The clamp thus no longer gripped the cable forcefully and tightly. At pylon No 16, the clamp was forced open and detached itself from the cable.</p> <p>Contributing factors to the accident were:</p> <ul style="list-style-type: none">• The operator was not aware of the requirement to use surface-treated heavy-duty dowel pins.• The heavy-duty pin used was not dacrometised (surface treatment in the form of a zinc flake coating for corrosion protection), so under corrosive conditions longitudinal cracks were more likely to form.• The required maintenance work on the clamps was not carried out as specified (one quarter of the clamps each year, or last maintenance in 2015).• As a result of the wedged clamp design, an exceptional condition occurred in which the faulty condition was not detected in the spring force test. <p>A further risk was identified during the investigation: If cableway operators, manufacturers and distributors do not report to the supervisory authority new findings that may have an influence on installation safety, the authority cannot check in its supervisory activities whether the undertakings concerned have taken measures to remedy the defects.</p> <p>During the safety investigation, it was found that the manufacturer did not notify the supervisory authority of findings concerning installation safety. It was therefore not possible for the FOT, in its supervisory activities of the cableway companies, to identify changes made on the basis of significant findings and to examine the precautions taken.</p>
Safety recommendation	<p>The Federal Office of Transport (FOT) should ascertain whether safety-relevant information from new findings is consistently passed on in the safety network between manufacturers, distributors, operators and supervisory authorities.</p>

Addressees

Stage of the implementation	Partially implemented. As part of its market surveillance activities, the FOT draws the relevant legal provisions to the attention of manufacturers, distributors and operators in writing. The communication channels are defined and communicated to all parties involved. Active feedback is required.
Investigation report concerning the safety recommendation	<u>Schlussbericht</u> <u>Vorbericht</u>
