

This document is a translation of the original assessment in Swedish by SHK of the response to the recommendation. In case of discrepancies between this translation and the Swedish original text, the Swedish text shall prevail in the interpretation of the assessment.

Martinsons Byggsystem AB
Riddaregatan 8
90336 Umeå

SHK's assessment of the recommendation response from Martinsons Byggsystem AB

On 29 July 2021, the Swedish Accident Investigation Authority (SHK) published the final report RO 2021:01, which addresses the collapse of the roof of a sports hall in Kiruna, Norrbotten County on 7 March 2020.

A total of five safety recommendations were issued in this report, three of which were directed at Martinsons Byggsystem AB (Martinsons). Martinsons submitted a response to SHK's recommendations on 1 November 2021.

Recommendation RO 2021:01 R3

Martinsons was recommended to implement the measures necessary in order to ensure that stability is considered in an appropriate manner when the load-bearing capacity of sub-tensioned wooden structures is being dimensioned.

Martinsons' response to the recommendation

In its recommendation response, Martinsons has stated that it set up a working group containing internal and external experts shortly after the roof collapse. The aim was to gain greater understanding of the construction principle. This work has resulted in a principle solution for increasing the stability of halls similar to Tarfalahallen and that the calculation methodology is under development. A process has also been initiated together with the trade organisation Swedish Wood in order to, among other things, update handbooks. Furthermore, it is stated that instructions for assembly of perforated mounting plates is being clarified and that the information for the designer of load-bearing plates has been improved.

Recommendation RO 2021:01 R4

Martinsons was also recommended to examine the dimensioning calculations for the stabilising secondary structures in glulam frames already delivered to customers.

Martinsons' response to the recommendation

The recommendation response indicates that the dimensioning methodology has been reviewed for a number of frames. This has resulted in more in-depth investigations following suspected deficiencies. Martinsons has begun a survey of

delivered frames in order to identify objects that are at risk. Following this survey, an analysis will be conducted of how the review of previously delivered glulam frames will be conducted. It is also pointed out that this work is time-consuming because the problem that was discovered following the roof collapse has been unknown in the entire industry for a long time and a large number of frames have been delivered.

Recommendation RO 2021:01 R5

Finally, Martinsons was recommended to inform the property owner of any deficiencies in order to enable the necessary measures.

Martinsons' response to the recommendation

In the recommendation response, Martinsons states that they have been in contact with the majority of property owners and clients. In conjunction with this, factors including safety recommendations and revised instructions for snow clearing have been handed over. Martinsons also points out that they have sent out information letters to some clients in order to minimise the risk of new collapses. Furthermore, Martinsons states that reinforcement measures have been planned in several cases where deficiencies have been established. They also intend to continue contacting clients and property owners if deficiencies are noted.

Assessment

All in all, SHK makes the assessment that the action taken implements all of the recommendations issued and that the response from Martinsons is therefore deemed satisfactory. (Concluded – satisfactory response)

Best regards,

Kristina Börjevik Kovaniemi
Chair Accident Investigations