1 FAULT

During the continuous checks of installed elevator installations in the field, deformations and cracks were discovered in some cases in the upper area of the side beam on the TCS 25 Car sling in conjunction with an elevator car connection (insulation) at the side beam.

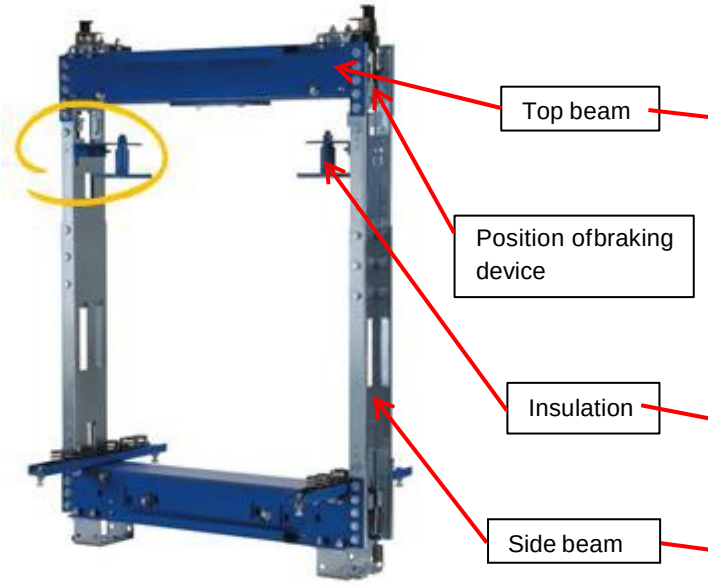

Fig. 1: TCS 25 car sling

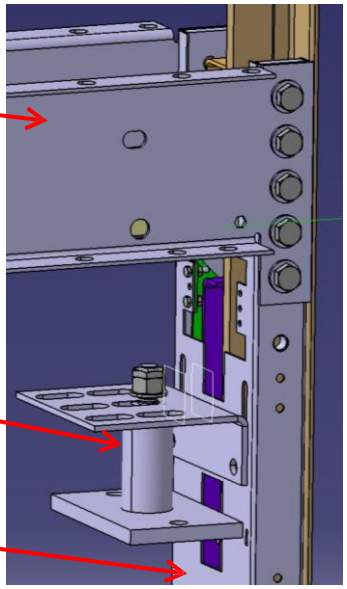

Fig. 2: Insulation on the side beam

The deformation and cracks appear at the upper lateral tab (orange arrows/circle) and/or in the lower corner areas of the cutout on both sides of the car sling, starting at the red arrows (red circle).

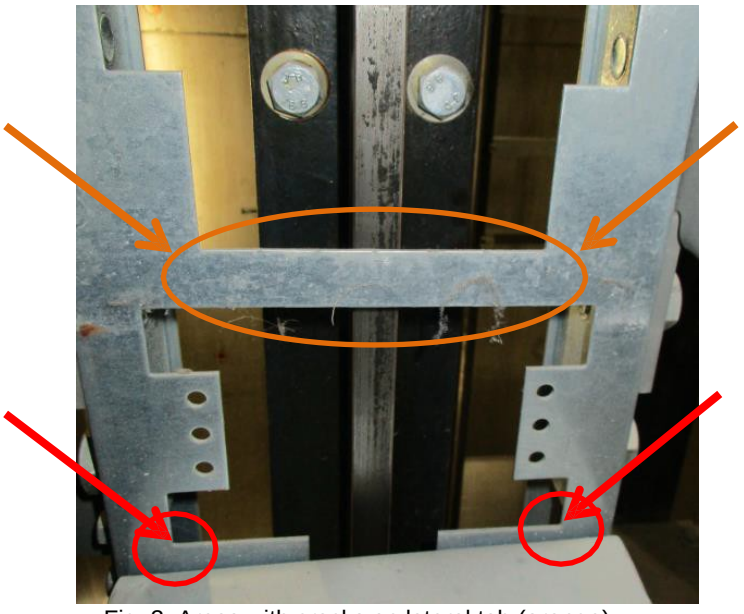

Fig. 3: Areas with cracks on lateral tab (orange), possible crack starting in lower corner areas (red)

In addition, there might be deformations on the top beam.

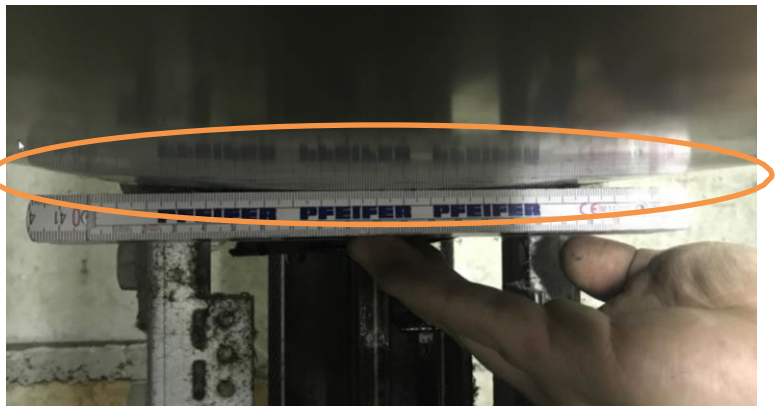

Fig. 4: Deformation on the top beam

In some cases, the crack in the lower corner area can be very difficult to detect; each corner must therefore be checked carefully. The areas must be cleaned prior to the assessment.

See illustrations: start of crack from a distance and on closer inspection (minimal crack e.g.):

Fig. 5: External inspection (not visible)

Fig. 6: Precise inspection (visible)

E.g. illustration of another occurring crack:

Fig. 7: Crack in the lower corner section of the side beam

1.1 Reason

Partial tension peaks in the corner sections in the case of certain safety gear configurations

2 CORRECTIVE ACTIONS

2.1 Plant

Changeover in current production to thicker material, 2 mm to 3 mm. Furthermore, the cutouts have been reduced in size and the corners rounded in order to reduce peaks in tension.

TCS 25 vertical angle old (2 mm):

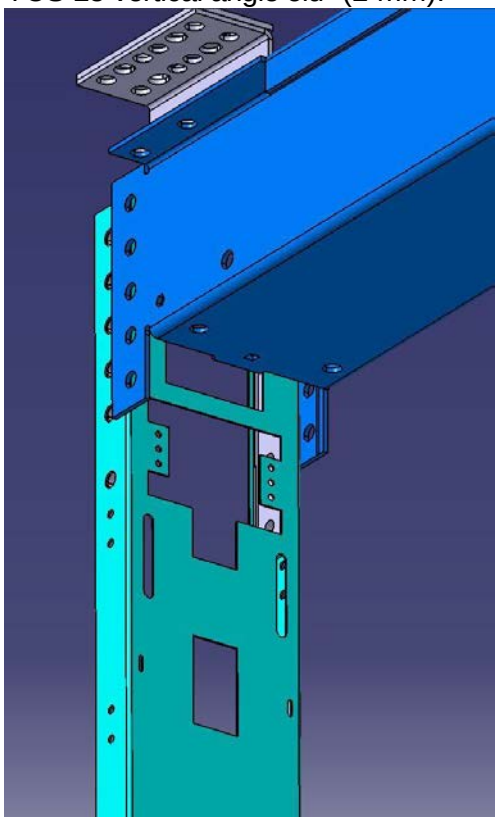

Fig. 8: TCS 25 side beam, old version

TCS 25 vertical angle new (3 mm):

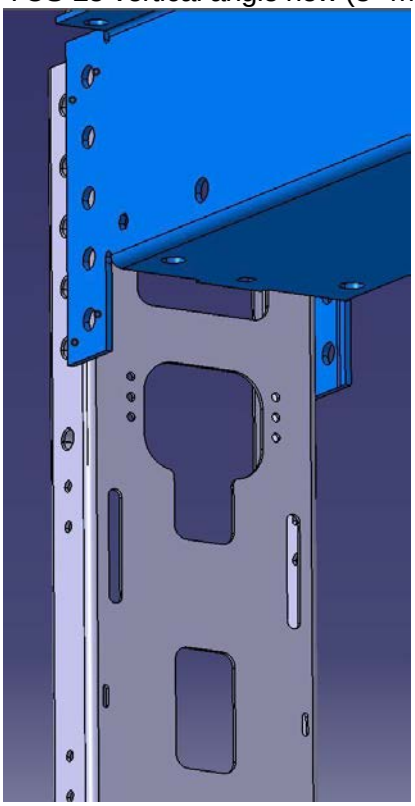

Fig. 9: TCS 25 side beam, new version

2.2 RCs (field organisation)

Check of the installations affected (see attached list of installations and inspection checklist) for deformations and/or crack formation in the endangered area.

The installations to be checked meet the following criteria for failure mode 1 and 3:

criteria	Failure mode 1	Failure mode 3
Car connection:	at side beam	at side beam
KT (car depth):	> 1.400mm	≤ 1.400mm
Q (load capacity):	> 675kg	≤ 675kg

The inspection is carried out from the car roof.

If cracks or the beginnings of cracks are determined at the lateral tab and/or deformations on the top beam, the installations can remain in operation for the moment.

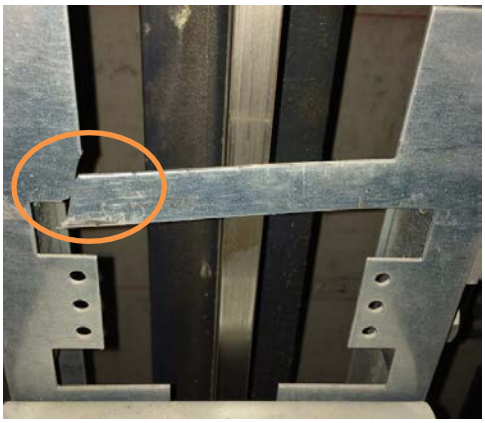

Fig. 10: Crack in the lateral tab

If cracks are determined at the lower corner sections of the side beam, there are 2 scenarios:

1. Crack up to 10mm (see dividing line) → installation can remain in operation for the moment.

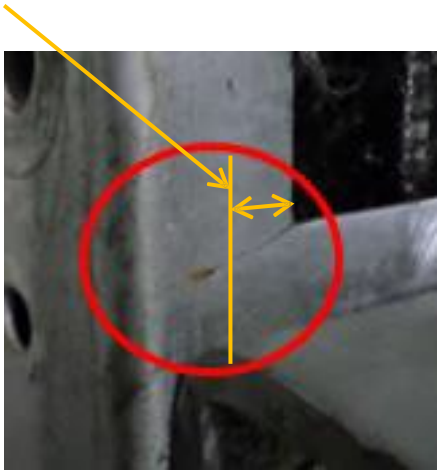

Fig. 11: Start of radius of lower corner section

2. However, if the crack is already discernible more than 10mm, the installation must be put out of service immediately.

In both of the above cases complete the checklist provided with this documentation and contact the TKE UK Call centre, Email: ServiceCentre.TkeUK@thyssenkrupp.com (and include your inspection check list). Then call the centre on free phone 0800 567 900 to order a retrofit package, free of charge, to rectify the problem.

If you have any further queries, call the above telephone number and a member of our staff will arrange for someone from the nearest branch to call you back.

3 REQUIRED MATERIAL

3.1 Field organisation

Inspection: - R4 cleaning agent
- Inspection checklist

4 MISCELLANEOUS

If there are any queries and in order to return the inspection checklist, please send a reply in writing with the system number and your contact data to our e-mail account,

ServiceCentre.TkeUK@thyssenkrupp.com

Or

Contact the Service Centre on free phone 0800 567 900

ATTACHMENTS

Inspection checklist

We apologise for any inconvenience caused.
Kind regards,
Quality Management

Author S Glover

Date 11th May 2018