

# Inspection of Truss Quality and Safety



- This list of criteria can only be used with Total Solutions Group manufactured trusses due to our compliance with prEN 17115 and previously BS 7905-2 . These inspection criteria should never be used on trusses not complying with these standards.
- Truss components should be inspected before use.
- They must be marked as defective and taken out of use if any of the following are found:

## General

- Bent or deformed without load applied (visual check)
- Welds are incomplete or shows signs of cracking.
- Wear on welds and welded areas.
- Repairs by welding or heat treatment without any written repair warranty from the manufacturer.

## Main members

- Reduction of the total cross-sectional surface area by more than 15%; or any local area reduction transverse to the tube axis of more than 15% (stress raiser).
- Localised bending of one or more of the main tubes viewed from the end of a section.
- Damaged, partly missing or broken tubes.
- Cracks or holes in the main tubes.
- Lasting deformation through dents, lateral compression etc. that results in a change of diameter by more than 10%. e.g. Lite Beam tube dia = 48mm; 44mm minimum and 52mm maximum.

## Lattice members

- Reduction of the total cross-sectional surface area by more than 15% or any local area reduction transverse to the tube axis of more than 15% (stress raiser).
- Localised bending of one or more of the lattice tubes.
- Damaged, missing, or broken lattice tubes.
- Cracks or holes in the lattice tubes. *Note: it is common to see a small 2mm dia. hole in the center or end of the diagonal to let welding gases escape, which is part of the manufacturing process.*
- Lasting deformation through dents, lateral compression etc. that results in a change of diameter by more than 10%.

## Connectors and connecting elements

- Deformation or elongation of the connection (fitting) fixing holes (rivets, roll pins, gusset plates) in the fittings or the main tubes by more than 10% e.g. Lite Beam  $6.25\text{mm} + 0.63\text{mm} = 6.88\text{mm}$  max. Mini Beam, GS Truss, Maxi Beam, Folding Truss  $10\text{mm} + 1\text{mm} = 11\text{mm}$ .
- Lateral deformation and / or wear to truss pin holes by more than 10%. Longitudinal deformation and / or wear of truss pin holes by more than 10%.
- Bending or deformation of any fitting part by more than 10 degrees from the axis of the main tubes.
- Reduction of the fittings (male or female) cross-sectional surface by more than 10%.
- Damaged or parts of the fitting missing.
- Damaged or missing roll pins or fixing rivets.
- Fixing rivet should completely fill holes and have close contact with the riveted surfaces
- Diameter reduction of the truss pins or fixing bolt by more than 10%.
- No Damage to the threads on fixing bolts
- Clear (galvanic) corrosion on rivets or roll pins in the fitting fixings.

## Attention

*Neglecting any of the above factors for discarding of the truss components may result in property damage or injury of people. When any of the above is noticed on a truss component, this should be clearly marked as damaged and must not be used under any circumstance until repaired by an authorized agent of Total Solutions Group*