OLD TRAPS FOR NEW PLAYERS

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In the last few weeks I have had several reports from fabricators that indicate that it is time to raise some old issues that seemed to have been forgotten or not conveyed to new people in our industry.

The first is to do with the cambering of trusses for hip ends. There are a number of points that need to be kept in mind with hip ends. For clarity I will list these in point form.

1. Design

When designing hip ends it is important to limit the amount of camber between adjacent trusses. Problems may be encountered during installation of trusses and ceiling if the camber required for the Truncated Girder (TG) truss exceeds that of the adjacent Truncated Standard (TS) trusses.

The difference in camber that can be tolerated will depend on truss spacing and the top chord size of the jack trusses. Typically the difference should be about 6 mm to 9 mm for truss spacings up to 900 mm. If the relative camber is greater than 6 mm - 9 mm the TG should be re-designed using larger chords or even a double truss.

Further information on the recommended differences in camber and the best way to resolve these problems can be found in the DataTRUSS User Guide DTUG0002 and/or Gang-Nail Guidelines No.5.

2. Construction

Large amounts of camber built into TG's also causes the extension of the jack truss top chords to over shoot the horizontal top chord of the TS trusses and may cause a misalignment with the hip top chord. ***(See diagram)***.

The larger the camber built into TG trusses the more difficult it is to pull the jack truss top chords down. However, it is very important to do this without packing the horizontal top chord of the TS, birdsmouthing the jack top chord at the TG or shifting their position of the TS trusses.

This should not be necessary if the camber of the TG truss is limited to a value similar to the TS's and standard trusses.

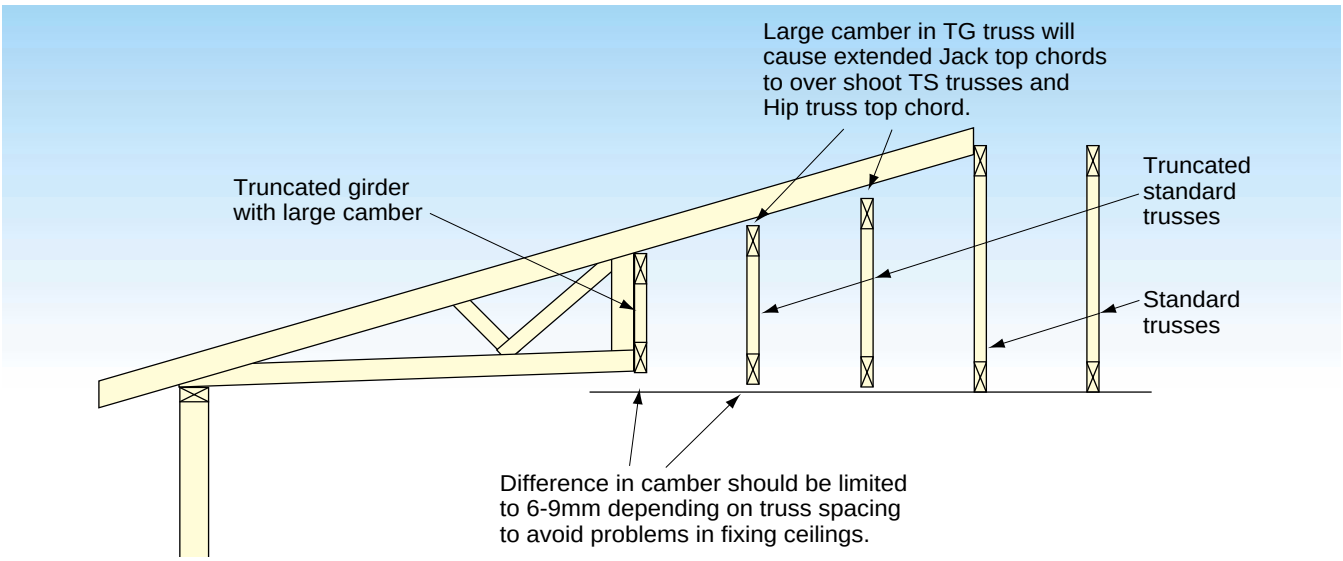
Although the components of the hip end may appear not to fit exactly in their cambered form they are designed to produce a flat ceiling shortly after the roof has been loaded.

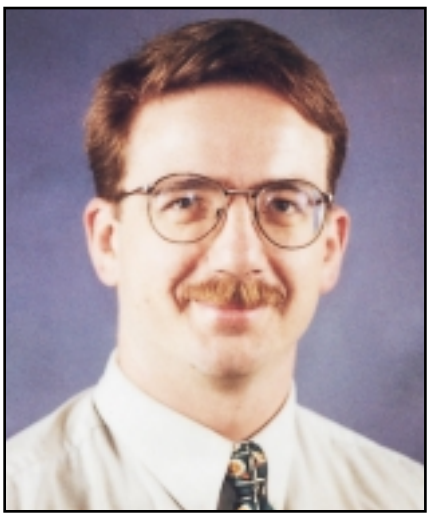
A little effort may be required to pull down the extended jack truss top chords however installers should resist the temptation to pack, cut or alter the positioning of trusses in any way.

The second common misunderstanding relates to the support of jacks trusses on Dutch Hip Girders (DHG) trusses. With all MiTek software the jacks are designed to be supported on the waling plate fixed to the side of the DHG.

The support of Jacks using Joist Hangers or Girder Brackets fixed to the bottom chord of DHG is not acceptable as the bottom chord has not been designed for the additional bending moment or deflection which this method of fixing would cause.

The reoccurrence of the above problems reinforces the need for ongoing training of newcomers to our industry. These issues are well understood and documented, however, it is up to all in the industry to ensure that the newcomers are properly trained and supervised.





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