

INSTITUTE FOR TIMBER CONSTRUCTION SOUTH AFRICA (ITC-SA) FACTS ABOUT ROOF TRUSSES: DON'T BE TEMPTED!



SITE-MADE ROOF TRUSSES

VS



PRE-FABRICATED ROOF TRUSSES

DEFINITION

Handmade Timber Roof Trusses connected with bolts and nails OR Site application nail plates at the joints. BEWARE OF THESE!

Prefabricated Timber Roof Trusses based on SANS 10160, 10163 & 10243 and connected with an accredited Engineering System's nail plates as per their design & supplied by an accredited ITC-SA Fabricator.

DESIGN

Has to comply with the tables in SANS 10400 or the details in the National Home Builders Registration Council's "Home Builders Manual". These details limit the truss shape, roof slope and are for a maximum span of 8 meters. If these details are not complied with, in any way, then the roof structure is ILLEGAL and the design must be checked by a Professional Engineer. All structures with hips and valleys MUST be designed by an Engineer!

Designed using ITC-SA Accredited System Supplier. The metal connector plates used must be supplied by the specific engineering system that is being used. In addition, these plates must be the correct size, and positioned in the right locations as per the standard methods and tolerances.

MANUFACTURING

Handmade and cut on site with manual carpentry tools. Assembled on site using nails and bolts. Timber member sizes, number of bolts and bolt sizes as well as number of nails and sizes are contained in SANS 10400 and the NHBRC's Home Builders Manual.

Cut to precision with Specialized Automated Machinery, Manufactured and assembled in a controlled environment with specialized equipment with jigs for specific purpose using Engineered nail plates in accordance with SANS10163, 10243 and all relevant specifications and regulations. The ITC-SA accredited Fabricator will issue you with a Manufacturing Certificate to confirm that your structure was manufactured in accordance with all the relevant specifications and regulations. Your structure is also covered by the accredited Fabricator's Product Liability Insurance.

NON COMPLIANCE WITH STATUTORY REQUIREMENTS IS VERY COMMON AND LEADS TO EXTENSIVE REMEDIAL WORK.

ERECTION

Has to be done strictly in accordance with;

1. The Design intent
2. NHBRC's Home Builders Manual and SANS 10243

The erection of site-made roof trusses is generally done by persons that are NOT accredited by the Institute for Timber Construction South Africa (ITC-SA) and may be incompetent! NO HIPS AND VALLEYS ALLOWED.

Has to be done strictly in accordance with;

1. The Design intent
2. SANS 10243,

By a professionally competent company and / or person accredited by the Institute for Timber Construction South Africa (ITC-SA)

INSPECTION AND SIGNING-OFF OF TIMBER ROOF STRUCTURE, AS PER NATIONAL BUILDING REGULATIONS TO OBTAIN AN OCCUPATION CERTIFICATE FROM THE LOCAL MUNICIPALITY

Has to be inspected for compliance with Regulation A19 of the National Building Regulations, the Design intent and specific regulations and specifications related to Timber Roof Trusses, where a Registered Professional Person (registered with the Engineering Council of South Africa) will take responsibility for the said structure. Once the roof is completed to the satisfaction of the Engineer, a Completion Certificate will be issued that will allow the owner to obtain an Occupancy Certificate from the Local Municipality.

COMPLIANCE WITH THE REQUIREMENTS IS OFTEN PROBLEMATIC.

Has to be inspected for compliance with Regulation A19 of the National Building Regulations, the Design intent and specific regulations and specifications related to Timber Roof Trusses, where a Registered Professional Person (registered with ITC-SA and the Engineering Council of South Africa) will take responsibility for the said structure. Once the roof is completed to the satisfaction of the Engineer, a Completion Certificate will be issued that will allow the owner to obtain an Occupancy Certificate from the Local Municipality. By issuing an A19 Completion Certificate the Engineer takes responsibility for the structure and therefore the structure is covered by the Engineer's Professional Indemnity Insurance!

CONCLUSION

Statistics obtained by the Institute for Timber Construction South Africa show that 90% of these structures do not comply with relevant regulations and specifications as required by the National Building Regulations. They are found to be around ± 20 - 40% more expensive than Prefabricated Timber Roof Trusses. Should there be any problems, you will generally have no recourse for remedy and will end up in tedious and costly Civil Litigation! Any savings that your builder may have wrongly advised you of will be negated many times over!

If these structures are erected by an accredited ITC-SA Roof Erector, you are guaranteed a Roof Structure that complies 100% and you have the peace of mind that, should you have any problems, there is recourse for remedy via the ITC-SA's Disciplinary Procedures for all its accredited members.

**CERTIFICATION BY AN ITC-SA ACCREDITED ENGINEER
WILL GIVE YOU PEACE OF MIND FOR MANY YEARS.**

A SAFE - LEGAL ROOF, FROM DESIGN TO CERTIFICATION WITH THE INSTITUTE FOR TIMBER CONSTRUCTION OF SOUTH AFRICA



The Institute for Timber Construction South Africa's ITC-SA mission is to:

- ✓ To raise standards in the Nail Plated Timber Roof Truss Industry through the development and supportive enforcement of appropriate technical, quality and ethical standards
- ✓ Monitor adherence by ITC-SA members of relevant industry related standards, SANS specifications and Codes of Practice and in so doing act as protector of consumer interests.
- ✓ To foster and promote all ITC-SA members interests through appropriate advertising and publicity by [militating training and lobbying at all relevant levels and forums]



The ITC-SA Engineering Systems have all developed computer software capable of designing timber roof structures in compliance with the relevant design codes of practice.

The Systems ensure competent use of their design software through training of their licensed fabricators.

The Systems also manufacture and supply the connector nail-plates and other necessary brackets and hardware upon which the software design criteria is based.



ITC-SA gives recognition to engineers with substantial experience and proven competence in timber engineering by accepting them as Engineer members. In order to ensure full compliance with all the provisions of both the Building Act [Section 14(A)] and National Building Regulations [Clause A19] these engineers may appoint and train and regularly re-train Inspectors to inspect erected Timber Roof Structures on their behalf.



Fabricators are licensed by the Engineering Systems suppliers to design and manufacture pre-fabricated, mono-planar nail-plated roof structures. They are audited by the ITC-SA on an annual basis to ensure compliance with ITC-SA requirements and the National Building standards and regulations.

To further assist in developing the standards within the industry, ITC-SA presents an estimator/designer course which upgrades the quality and competency of personnel in truss plants.



ITC-SA approves Erectors who have undergone work evaluations and training in order to achieve a Certificate of Competence. Of particular relevance is their understanding and correct application of the bracing rules as contained in the Roof Erector's Handbooks Volumes 1 & 2, which are continuously re-evaluated and updated through ITC-SA facilitation. These bracing details have been included in SANS 10243 (The manufacturing and Erection of Timber Roof Trusses).



ITC-SA approved Engineers appoint and train Inspectors to inspect roof structures. The Engineers accept responsibility for the design and structural stability of the roofs after inspection and approval of the roofs by the Inspectors. This process is in compliance with Regulation A 19 of the National Building Regulations, which then enables the home owner to obtain an occupancy certificate from the Local Authority.



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