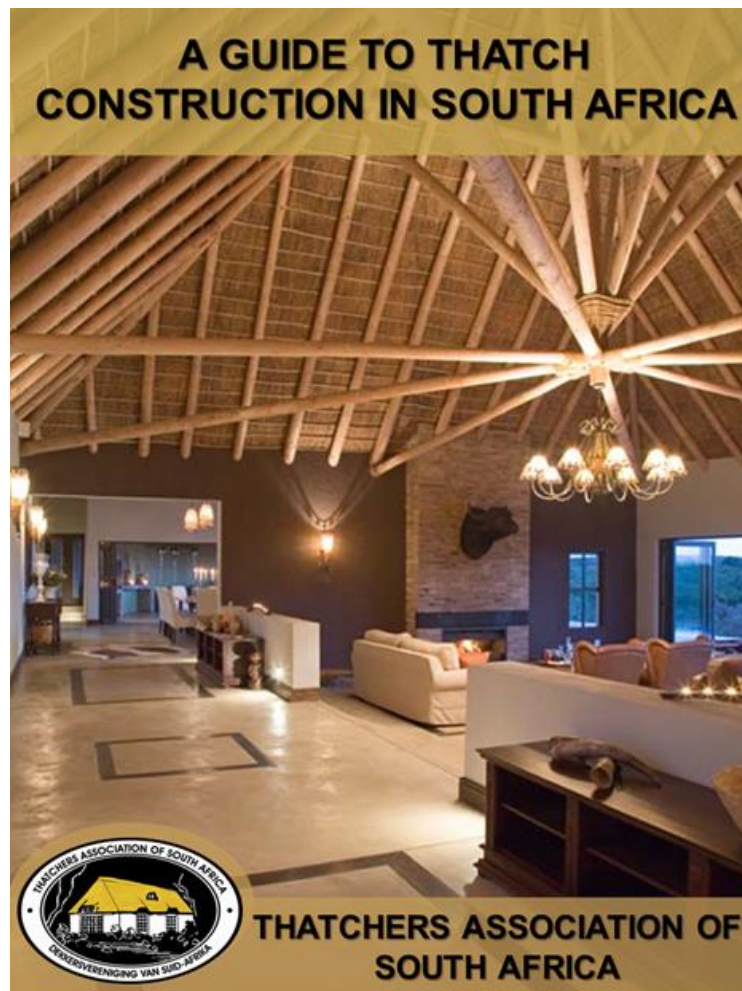


OPEN BOOK TEST FOR NEW APPLICANTS





OPEN BOOK TEST FOR NEW APPLICANTS

It is a requirement that new applicants for TASA membership complete the open book test based on "A Guide to Thatch Construction in South Africa" (which explains the SANS 10407) to ensure that specification requirements relating to thatched roofs are fully understood and implemented.

DEFINITIONS

For the purposes of this guide, the following definitions apply.

DESCRIBE THE FOLLOWING DEFINITIONS

Butt end _____

Competent person _____

Deviation _____

Dress _____

Lath _____

Overlay _____

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Spray layer _____

Supporting wall _____

Sway _____

Rational assessment

Rational design (fire engineering)

NOTE: This is a generic definition, to be used where no other definition is given, or no references are made to other standards. Other parts of SANS 10400 contain definitions of a more specific nature relevant to their disciplines.

PROJECT PROCESS

REQUIREMENTS

Question: The design must comply with? _____

ARCHITECTS AND ENGINEERS

Question: Who can submit plans to the municipality? _____

Question: What is the responsibility of the registered homeowner?

Question: Why must the plan be approved by the Municipality and the structural engineer (competent person)?

Question: What is required before the Municipality will approve plans?

Question: What tarnished the image of the Thatching Industry?

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PROCESS TO A SUCCESSFUL PROJECT

Question: What is required for the issue of an occupation certificate?

Question: Of what must the contractor be aware of in quoting for a project?

Question: What is a prerequisite before commencement of the project?

CONTRACTOR RESPONSIBILITIES

Question: List the responsibilities of a contractor

CLIENT RESPONSIBILITIES

Question: List all three

THATCHING MATERIAL

Question: Thatching materials must comply with?

Question: Precautions to be taken to ensure the quality of the thatch are?

THATCHING GRASS SPECIFICATION

Question: What are the specification requirements for thatching grass?

Question: May thatch be cut and dried in the sun during the growing season. and if not, why?

CAPE REED SPECIFICATION

Question: Specification requirements for Cape Reed are?

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Question: How can it be tested that Cape reed and thatch grass was not cut during the growing season?

STORAGE OF THATCH ON SITE

Question: Thatching materials shall be stored such that:

CLEANING AND BUNDLING

Question: Describe the process of bundling.

THE ROOF STRUCTURE

SETTING OUT OF THE STRUCTURE

Question: How to make sure the angles are at 90 degrees?

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Question: How to plot the hip and rafter layout?

Question: How is the rafter spacing calculated?

Question: What is the minimum pitch for a thatch roof? _____

Question: What is the minimum pitch for a dormer window? _____

TIMBER REQUIREMENTS

Question: Name the requirements for timber poles

Question: Laths and battens shall comply with? -

Question: On which side of the pole is the thickness of the pole measured?

PLANTING POSTS

Question: It is essential to allow for what when a treated post is planted in the ground?

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Question: What should the classification of a pole planted in the ground be?

Question: If concrete is used what must be allowed for and why?

Question: Why must a structural engineer be consulted in planting poles?

Question: Which measures can be taken to prevent poles planted in the ground from rotting at the soil surface?

UPRIGHT COLUMNS (VERY IMPORTANT FOR LAPAS)

Question: Specification requirements for upright columns are?

KING POSTS

Question: What must be attached to all king posts and why?

Question: List the requirements for uprights

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Question: What is the diameter for poles used as rafters and measured where?

RAFTER SPACING

Question: What is the correct rafter spacing and measured from?

TRUSS SPACING

Question: What is the maximum truss spacing? _____

TIE BEAM SPACES AND POSITIONING

Question: Why is tie beam spaces and positioning important? _____

RING BEAM CONNECTIONS

Question: List the three main reasons for ring beam failures

Question: Explain the correct method of bolting and connection of the ring beam unto the upright

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Question: Are only nails allowed?

Question: What can be done to support the lower ring beam?

Question: What is the minimum ring beam thickness and what will cause the thickness to increase?

DEFLECTION

Question: What causes deflection of poles and how can deflection be alleviated?

WIND BRACES

Question: What is the purpose of wind braces and how can one strengthen it?

BATTENS AND LATHS

Question: Explain the installation of battens or laths

Question: What kind and size of nails to be used?

Question: Sizes of battens and laths?

VALLEYS

Question: How are thatch valleys formed?

Question: Why is additional material laid in a valley?

Question: List the different valley liners, their thickness and their use.

HIPS

Question: Factors to be considered regarding hips.

Question: What is an acceptable alternative to the problems caused by the 90 degrees angle?

VERGES

Question: What should be maintained for the full sweep of the roof?

CHIMNEYS

Question: How should chimneys be designed and built?

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Question: What must the thickness be of the masonry wall?

Question: How high must the top of the chimney be above the roof?

Question: How to install a spark arrestor and the size thereof?

Question: How can water leaks be prevented?

STEEL FLUE PIPES

Question: To what should the flue pipe not be connected to?

Question: What requirements must a flue lining meet?

Question: How to correctly install a flue pipe?

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CHIMNEY STACKS

Question: What must the width of the flashing be?

Question: What should be considered when installing flashing?

Question: Why should the thatch layer never be in contact with the top and the two sides of the chimney?

Question: How to prevent any possible leaks?

THATCH ROLLS

Question: How to make a thatch roll and what is the purpose thereof?

Question: What can replace brick or mortar beam filling?

THATCHING

SPRAY LAYER "SPREI LAAG"

Question: What is the thickness of a Cape reed spray layer?

Question: How is thatch grass prepared for a spray layer?

Question: How are the stalks cleaned before installation?

Question: How a comb is made and why should the bundles be pulled through the comb?

THATCH BINDING

Question: Which materials shall be used?

Note:

Stainless steel wire (0.9 mm) at the coast and galvanized wire 50 km and further inland in the case of thatch reed. In coastal areas, tar treated sisal twine can only be used on the inside of a thatch roof.

According to SANS 10407 **Polypropylene is not allowed to be used.**

Question: What is the maximum spacing of stitching?

Question: What is the diameter of stainless steel and galvanised wire?

BINDING SPACING

Question: What is the correct binding spacing?

TWINE BINDING TENSION

Question: After combing and within 6 months of compacting what is the minimum reading for tar treated sisal twine with a hook scale?

SWAY

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Question: Sways shall consist of either?

Question: Galvanised wire sway minimum diameter?

THATCHING OVER SWAYS

Question: The thatch cover over the sways depends on?

THICKNESS OF THATCH LAYERS

Question: The thickness of the finished layer for thatch grass and thatch reed?

Question: The functional thickness of thatch above sways?

LAYING OF THATCH

Question: Bundle length to span must be at least?

Question: What will shorten the lifespan of the roof?

Question: What is the optimal length to ensure maximum roof life?

Question: Why should the length of common thatching grass not exceed 300 mm?

RIDGES

GENERAL

Question: On both ridge constructions, the last two laths must be?

Question: What is suggested regarding cape reed and what will that ensure?

Question: What must be done to the thatch on the hip end of the roof?

Question: How to prevent that the last line of thatch does not slip out under the ridging?

Question: How to prevent damage in areas where birds are a problem?

Question: Name the different sizes of ridging:

Roofs up to a span of 4 m: _____

Roofs with span between 4 and 10 m: _____

Question: What kind of ridge can be used if the roof is not at a 45-degree angle or have very wide span widths? _____

Question: How and why must the void be filled between the ridging and the thatch roof?

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Question: Why is only every third wire fixed?

Question: What is the exception between the installation of a rondawel or square cap?

GRASS RIDGES

Question: What must be done with the bundles of ridging grass?

FIBERGLASS RIDGES

Question: Name at least five aspects regarding fiberglass ridges

SAND-CEMENT RIDGES

Question: The ridge capping will consist of?

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Question: Lapping of joints in the polyolefin membrane shall not be less than?

Question: The materials in sand-cement ridges shall comprise of?

Question: Concrete must always cover what and what must the thickness be?

GENERAL INSTALLATIONS

FLASHING INSTALLATIONS

Question: Describe the installation of flashings and what the thickness must be.

BIRD MESH INSTALLATIONS

Question: Describe the installation of bird mesh and the size of the holes.

DORMER WINDOW INSTALLATIONS

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Question: Describe the installation of dormer windows.

CEILINGS IN THATCH ROOFS

Question: Why should there be a spacing between the laths and ceiling and how large must the space be?

GEYSER INSTALLATIONS

Question: Describe the installation of geysers

Question: Regulation regarding electricity supply

THATCH ROOF SERVICING AND MAINTENANCE

Question: Why does the TASA strongly recommends that only experienced thatch contractors be appointed to install and service thatch roofs?

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Question: Presently many of the methods used reduces the life span of the roof.



Is this the preferred method of servicing a thatch roof and if not, why?

Question: Describe the preferred method of servicing a thatch roof as shown by means of the photos on these pages.

Question: Tightening of twine required when servicing a thatch roof and why?

THATCH ROOF REPAIRS – OVER/RE-THATCH

(The following does not apply to Cape Reed roofs, there must never be a second layer added to buildings thatched with Cape Reed)

Question: Describe in a few words the method of over/re-thatching of a thatch roof

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Question: Why is it important to inspect the roof structure first?

Question: How many layers are permissible on a thatch roof?

Question: When is adding a new thatch layer over the original layer necessary?

Question: What are the consequences of the exposure of the fixings?

Question: What is the minimum thickness of the cover over the sway?

FIRE SAFETY

SAFETY DISTANCES

Thatched roofs

Question: Notwithstanding the requirements of 4.12.1, a thatched lapa that has a roof plan area of less than 20 m², which is free standing and not attached to any other building shall not be erected closer than?

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Question: Who shall perform a rational assessment to determine the acceptability of erecting a thatched building against an existing building?

Question: An area with a flash density greater than 7 require what?

Question: Buildings and lapas in which conductors (wire sways) are used in the thatch layer in areas with a lightning flash density greater than 3 shall?

SERVICES

Question: What are the requirements for electrical power supply and telephone cables?

USE OF CONDUCTORS

Question: What must never be in contact with the thatch and what is the solution?

LIGHTNING PROTECTION SYSTEM (LPS)

Question: What are the requirements of a lightning mast and what is the minimum distance from the thatch?

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Question: What must be included in the zone of protection of the mast(s)?

SPARK ARRESTORS

Question: What is a spark arrestor made of and what is the minimum height above the thatch layer?

FIRE PREVENTION

Question: List the measures that can be taken to prevent the spreading of fires in and around thatched roofs

FIRE BLANKETS

Question: What is a fire blanket and what is suggested to be used as a binding material?

MINIMUM TOTAL R-VALUES OF ROOFS

(SANS10400-XA:2018)

MEASURING INSULATION PERFORMANCE

Question: What does thermal insulation refer to?

Question: Low thermal conductivity is equivalent to what?

CLIMATE ZONES IN SOUTH AFRICA

SANS 10400-XA:2018

Question: Does the different climate zones in South Africa effect the thickness of the thatch layer in different areas?

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Thank you for fully answering these questions which serve a dual purpose.

1. This enables you to know what will be expected of you.
2. It is confirmation for the TASA that you have been fully informed.

By signing TASA's Code of Ethics and Conduct, prospective members undertake to comply with the SANS 10407 (Thatched Roof Construction) specification requirements as well as the National Building Regulations where applicable.

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