THATCHERS ASSOCIATION OF SOUTH AFRICA
DEKKERSVERENIGING VAN SUID-AFRIKA

Newsletter 7/2014
30 October 2014

NEWSLETTER

Dear member

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The year is now rapidly nearing its end and many of our members are rushing to complete their projects before the Christmas holiday season begins.

„A Guide to Thatching in South Africa“

We are confident that when the TASA's "Guide to Thatching in South Africa" is introduced to the Industry, Banks, Insurance Companies, Public, Government Institutions, etc., our members will recieve more exposure. It should also contribute to ensuring that the said institutions may insist on business being conducted only with TASA members.
It should also be lead to more thatching contractors applying for membership

At the time the TASA was revivied during October 2004, it was decided to accept all contractors who applied for membership in order to enable the TASA to function. However, it resulted in contractors being accepted who had almost no experience in constructing a thatch roof.

The TASA was not just inundated with complaints, but we also lost a lot of "good" members in the process, due to the fact that they were not prepared to be associated with an Association where this kind of practice took place.

The proposal by SATAS (South African Technical Auditing Services) that prospective members undergo a selection process prescribed by the TASA before membership is accepted, will be discussed during the next National Executive meeting.Serious efforts are being made to restore TASA's name and to establish its position in the wider Industry. We cannot afford to make the same mistakes again.

Sponsorship

SAWPA (South African Wood Preservers Association) sponsored the cost to prepare the TASA's "Guide to Thatching in South Africa" for publication. SAWPA and SATAS‘ (South African Technical Auditing Services) involvement in this publication is of immeasurable value for the TASA and their support and cooperation is greatly appreciated.

TASA's Office relocation

The TASA's office will relocate during December 2014 to Uitsig, Durbanville in the Cape. The new street address and postal address will be published as soon as it is finalized. The current postal address will still remain in effect until the end of February 2015 when the lease expires.
This move should not cause any disruption, or inconvenience as everything else stays exactly the same.

Articles

The TASA do everything possible to put as much emphasis on the quality of workmanship and specification requirements applicable to all thatched roofs being built, to hereby enable the public, building inspectors, banks, insurance companies, etc. to make informed decisions.

Here is an example of an article which will appear in the 2015 Trademax year book.

TASA ARTICLE ABOUT TECHNICAL MATTERS

***Please note* that in some respects different methods are used with roofs thatched with grass and those thatched with Cape reed. Where applicable, this is indicated.**

The profit driven capitalistic system, with all its benefits such as creativity and entrepreneurial incentives, lends itself unfortunately also to exploitation to the detriment of the client who is on the receiving end. It is just not possible for Joe Public to be conversant with all the intricacies and technicalities involved in the product he is buying.

The huge shortage in expertise especially in the pole construction facet of the Industry compels us to enlarge our membership basis so that we not only draw on established Thatch Contractors but also include other role players. Associate membership provides all the benefits of full fledged membership. The only exclusions being the right to vote as well as not being able to serve on TASA management.

TASA can now provide the Industry with a Guide to Thatching in South Africa, explaining the Specification requirements as set out in the SANS 10407:2014 (Thatched Roof Construction) Specification which forms part of the National Building Regulations, SANS 10400.

The abuse of TASA‘s registered Trade Mark and sub standard workmanship forced the Association to find means to counter the above and protect its members. Banks, Insurance companies, municipalities and clients will value the use of this Guide.

This in turn will afford Certified members an enlarged exposure, pre-qualification for contracts, more business etc.

TASA has a huge responsibility towards its members, the public and the Industry to provide a valuable service. We therefore call on all bona fide Thatch contractors and role players in the Industry to get involved to protect and further the interests of all concerned.

The need for regulating bodies to protect the consumer is therefore of utmost importance. Think of the Bureau for Credit Control as an example as well as various other organizations which have the same main objective in mind.

The purpose therefore, of the regulatory body, is to create credibility and establish standards as well as to unify the participants in the specific market niche. The importance of establishing unity is to be able to speak with a unified voice especially to government bodies as well as provincial and local authorities. It also creates creditability in the market place.

Whilst setting standards such as construction specifications; rules of conduct and codes of ethics are also laid down to which members are obliged to conform.

A body such as TASA also serves as a forum for discussion and training. Contractors share information and their experiences in certain aspects of the trade. Workshops are also arranged and professionals obtained to deliver papers on various aspects regarding the trade and policies.

A regulatory body also serves as forum for complaints which in itself is an important feedback to establish the level of conformity and conduct. Although it will not interfere in disputes, it provides guidance in solving disputes.

The credibility of participants as members of the controlling body is also at stake as bad behaviour and poor reputation will cause them to lose credibility and will cost them membership of the association.

In the case of TASA, accreditation and the usage of the advertising material and logo has become well known in the market. Prospective clients contact TASA to obtain names of creditable contractors. This therefore, becomes a very strong marketing tool with which to promote your business. The reverse is also true.

On the material supply side quality is watched with a hawk's eye. Inferior quality of products such as poles and thatch grass or reed has a tendency to slip in; for example immature grass and reed cut during the growing season which will lead to premature rotting if used.

Without these rules and regulations in place, chaos will result and the rules of the jungle will apply. The trade mark of a disciplined society is vested in the way they organize themselves and abide by these principles. The latter obviously also reflect in any reputable industry.

"A Guide to Thatching in South Africa"

This Guide is based on the SANS 10407 (Thatched Roof Construction) Specification which is part of the National Building Regulations (SANS 10400). It is the exclusive property of the TASA.
The Guide among others aims to make the Specification requirements more understandable and accessible for not only professionals, but also for the general public by utilizing photographs and sketches.

The ultimate goal is to offer it for sale to municipalities, professionals, contractors, clients, etc. in an effort to raise the standard of the thatching industry. As a result of the many complaints and inquiries received, it is increasingly obvious that contractors lack sufficient knowledge to erect thatch structures and thereby causing enormous harm to the industry.

The "A Guide to Thatching in South Africa" a publication of the Thatchers Association can be ordered as an e-book from TASA at admin@sa-thatchers.co.za at R500. On receipt of the proof of payment, the book in PDF format will be e-mailed. It is expected to be available for sale during January 2015.

Weight of a thatched (grass) roof

A thatched roof with poles weighs 80 kg per square meter (it is dead weight)
A thatch wind load (roof surface with a slope of 45 degrees) can go up to 121 kg per square meter
One square meter of grass (only the grass alone) weighs about 42 kilograms.

Density of a thatch (grass) roof.

The density of a thatch roof is by far the most important factor. The photos below show that there seems to be no difference between treated and untreated roofs when it comes to fire. What is more important is to have adequate fire fighting equipment.

Thatch roofs which have been compacted to more than 42 kg per square meter on slope, thus ensuring a tight and compact oxygen free roof cover proved through the years that density is the decisive factor. Experience has been that a tightly compacted roof only smoulders and therefore, allows one enough time to apply fire extinguishers to the roof.

Proof of this was also experienced during a demonstration held during the International Thatching Society's Congress held in Cape Town early this year (2014).

The prerequisite is of course that only thatch grass and reed harvested according to the specification requirements are used. Thatch grass and reed full of seeds and leaves harvested during the growing season will rot and shorten the roof's lifespan.

All Thatchers thatch to varying densities and can be controlled by a simple hook scale test.

Method for roofs thatched with grass:

Hook around twine pull until twine parts from lath and take reading. The tension should be greater than 8 kilograms.

The above test should be performed soon after completion of a roof after all scaffold poles have been removed.

Testing of Fire Retardant Systems

The definition regarding fire retardant systems as contained in the National Building Regulations are as follows:

"Fire-retardant: (Thatched roofs)
Means a product, method, or system employed to reduce and delay the spread of fire between buildings, building materials or components of a building. (Smoke detectors, fire blankets, drencher systems, fire extinguishers, etc)"

The ASTM E108 testing method is replaced by the SANS 10177/12 – Ed. 1 (2014) (Fire Testing of Materials, Components and Elements Used in Buildings) which has been developed and designed exclusively for South African conditions. It also aims to provide a uniform testing method for the different testing laboratories. All fire retardant systems shall be tested, or retested according to this specification.

Treatment of Thatch Roofs

It is re-iterated that TASA does not take a stand on the chemical treatment of thatched roofs. The onus rests with the manufacturers to prove the effectiveness, influence and impact it has on the thatch.

The efficacy of any treatment depends on the quality and condition of the thatch and the stability of the structure as a whole. Treatment is not compulsory and not all Insurance Companies ask for that. New thatch roofs require no pre-treatment, whereas weathered roofs need to be serviced properly to remove loose and weathered thatch before treatment is applied. Thatch roofs should be provided with a fire-retardant system only if required.

Chimneys must be correctly installed and it is good to install a ceiling in the kitchen. In the case of large thatch roofs a lightning conductor must be provided only where the flash density is more than 3. Lightning conductors must be installed according to SANS specification requirements.

Insurance of a thatch roof

Typical questions that an Insurance Company will ask:

- What is the name of your Thatching Company?
- What is the present condition of the roof?
- Has the building been rewired?
- Construction of the walls (brick & mortar, timber)?
- Does the kitchen have a concrete ceiling?
- Does the building have a chimney?
- If YES, does it extend above the roofline?
- Do you use open fires, fuelled by solid fuels (e.g. wood)?
- Are the chimneys fitted with spark arrestors?
- Does the building have an approved lightning conductor?
- Has the thatch been treated with any of the following? Fire blanket / Chemicals
- Is the building protected by a drencher system?
- Is any fire fighting hose reels installed at the premises?

Minimum requirements are conditions of cover:

- Installation of a 4,5 kg dry powder fire extinguisher in the kitchen
- Clearance of bush, jungle, grass & weeds up to 25 m from the premises (excluding garden cultivation)

Some of the most common cons in the Thatching Industry

Many clients, architects and engineers cannot identify common cons in the industry. Some of the most common are as follows:

The measurement of poles

Many roofs are built with undersized poles and the responsible person is unaware as they are led to believe a pole is measured on the thick end. Keep in mind the minimum pole diameter that may be used for thatch structures is 100-125mm, as per SANS 10407.

The thick end diameter of the pole varies, but an accepted norm is that the pole tapers by 7.5 mm per meter on average.

Thatch layer thickness

Many Thatchers will lay an eaves layer that is 200 mm thick, then taper the layer to the ridge where the thickness ends up as little as 75mm. It is not obvious once the roof is complete as all that changes is a slight change of angle on the thatch surface. Gable ended roofs are more difficult to cheat as the taper then becomes obvious. On completion of the thatching the thatch layer thickness should be checked randomly over the entire roof surface. SANS 10407 specifies a minimum layer of 175 mm.

Bolted structural connections

Structures are built and on inspection it seems that the main stress connections are bolted, however on closer inspection it is sometimes found the connection is actually a 150mm wire nail fitted with a washer and nut. The fraud connection is very often not seen from ground level but seen only on closer inspection.

Rafter spacing

SANS 10407 dictates a maximum centre to centre spacing of 900mm. Many roofs are built where this maximum is exceeded.

Lath spacing

The spacing of laths is determined by the average length of grass used. SANS 10407 tables the maximum lath spacing for a given grass length. Closer spacing than tabled is acceptable. The more often a bundle is stitched to the structure the more durable the thatch layer.

Stitching.

(Roofs thatched with grass)
Only tarred sisal twine or stainless steel wire is to be used with a maximum spacing of 100mm.

(Roofs thatched with Cape reed)
Usually galvanized wire is used but if the roof is near the shoreline, stainless steel wire is used.

Roof slope

The minimum ***general*** roof slope is to be a minimum of 45 degrees. The reason for this is that any valley or hip is always approximately 10 degrees flatter than the general roof slope giving the minimum roof slope of 35 degrees allowed. The general roof slope impacts dramatically on the slope area of the roof. A major saving can be made by the Thatcher by building the roof a few degrees flatter than specified.

Free standing roofs

These roofs are supported by columns. The footings of these columns affect the overall stability of the roof and adequate footings, preferable specified by an engineer, be installed. Many columns are planted in the ground too shallow and without the necessary concrete footing the size of which is determined by the roof load and soil conditions. Concrete footings should not encase the bottom of the pole as this will accelerate rotting by not allowing drainage.

Bad design

Never allow overlapping thatch surfaces. The drainage water falling from the higher roof onto a lower thatch surface accelerates rotting on the lower surface as the penetration of water into the layer is deeper and takes longer to dry. In general the drainage of water from thatch roofs is an important factor in the design of thatch roofs as all drainage areas such as valleys will degrade faster that general roof slopes.

Thatch roofs with ceilings

Many Thatchers will not install a ceiling or "sprei" layer in thatch roofs fitted with ceilings. This results in an under surface with the fines of the thatch bundles exposed which in the advent of a fire will accelerate burning. Ceiling grass should always be installed irrespective of normal ceilings being fitted.

The R & U Values for Thatched Roofs

Thatch is by far the most natural product to use on your roof as it is harvested off the land and used without going through processes to create an actual roof covering. With the high thermal values of thatch there is no need for ANY other products to create insulation.

Due to global warming, temperature variations in seasons are becoming more extreme. More insulation products are brought onto the market regularly but thatch still remains the most natural and eco-friendly solution. Aesthetically it is one of the most pleasing roof construction finishes. There is no other product which has these two characteristics as a raw product. With high thermal values, energy saving is guaranteed, dramatically reducing usage of heating and cooling. With talk of ever increasing electricity costs and possible power failures, a thatch roof impacts dramatically on energy saving.

High costs for thatch roofs compared to tiled roofs have also been a myth busted in recent projects. Thatch is proving to be the most cost effective roof covering with many costing items taken into consideration. Thatch needs no thermal insulation, guttering systems, fascias, soffits, ceilings, painting etc and thatch provides extra ceiling space due to the 45 deg pitch giving a building a strong sense of volume. With all these items taken into consideration a thatch roof is cheaper than any other roof on the market.

Another myth about thatch which is being busted on a regular basis is the cost of insurance. With various ways to incorporate fire protection systems into the roof, insurance is brought down drastically by insurance companies.

Becoming "green" one needs to consider opting for more natural solutions to construction methods and materials. There is no overnight cure to restoring our planet, but by opting for a thatch roof one is definitely on the right track to making a difference.

The information below regarding covering layer thickness may change somewhat. The regulation (SANS 10400 XA) in which they are recorded, is still in draft form and may have changed somewhat since now. During the last meeting of this committee, a proposal was submitted that the country rather be divided into (12) twelve zones and not (6) six.

Requirements of SANS 10400-XA:2011

A thatch roof shall receive the minimum total R Value specified in table 1 below for the direction of heat flow.
From the results of a test report ASTM C 518-10 by TTL dated 11 June 2013, the K Value of a thatched roof is:
K = 0.056 W/(m.K)

The required thickness (D(m)) to comply with SANS 10400- XA is therefore:
D(m) = R(m2.K/W) x k(W/(m.K)

MINIMUM TOTAL R-VALUES OF ROOF ASSEMBLIES Table 1

DESCRIPTION	Climatic Zone 1	Climatic Zone 2	Climatic Zone 3	Climatic Zone 4	Climatic Zone 5	Climatic Zone 6
Minimum required R-Value (m2.K/W)	3.7	3.2	2.7	3.7	2.7	3.5
Minimum required thickness for thatched roofs (mm)	207	179	151	207	151	196
Direction of heat flow	up	up	up & down	up	down	up

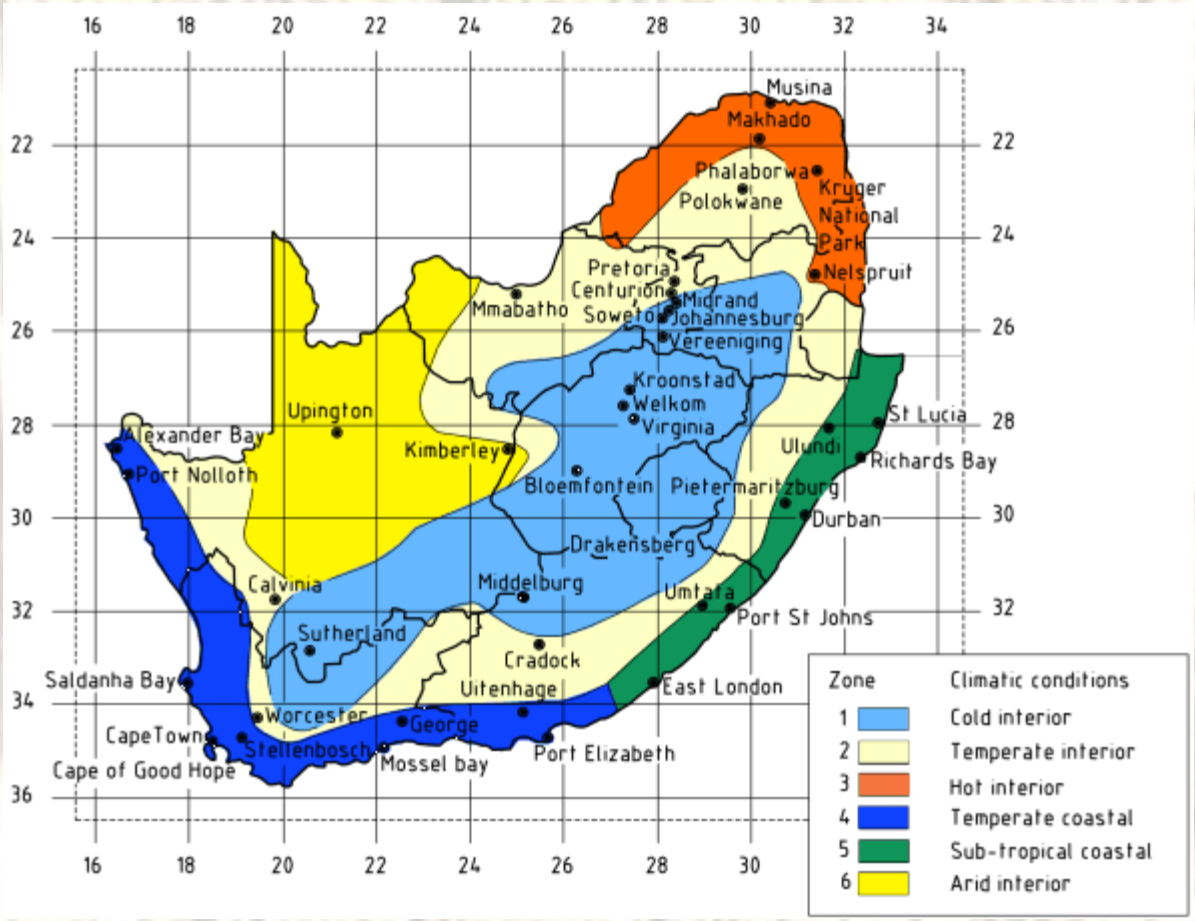
It must be borne in mind that the requirements in SANS 10407 and SANS 10400-L will over rule the thicknesses in the above table 1. For instance Zone three & five changes to 175 mm. This means that an Architect when calculating his total required thermal values for a building the thatch roof in these two zones will when thatched at 175 mm, this will attract a 24 mm credit to other materials.

Climate Zones in South Africa

The deemed-to-satisfy provisions are based on climate zones, including dry bulb temperatures; thermal neutrality; humidity and southern coastal condensation risk.

CLIMATE ZONES IN SOUTH AFRICA Table 2

OVERVIEW OF CLIMATIC ZONES		
Zone	Description	Major Centres
Zone 1	Cold Interior	Johannesburg, Bloemfontein
Zone 2	Temperate Interior	Pretoria, Polokwane
Zone 3	Hot Interior	Louis Trichardt, Nelspruit
Zone 4	Temperate Coastal	Cape Town, Port Elizabeth
Zone 5	Sub-Tropical Coastal	East London, Durban, Richards Bay
Zone 6	Arid Interior	Upington, Kimberley



Our members' participation and support is greatly appreciated and it will be appreciated if you will send interesting information and / or photos to the TASA office for publication on our website.

Kind regards

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NATIONAL CHAIRMAN

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