

Slate.

Our profession, our passion. Our world.

In a time dominated by hectic pace and high-tech, constant values and traditions have a very special significance.

The architecture as an expression of lifestyle and as a cultural benchmark is certainly one of these special values. It connects tradition with the future, aesthetics with functionality. Natural enduring materials are gaining significance. And slate has always been part of it. Originating millions of years ago. A material coming directly and unspoilt from nature. Generations of architects and craftsmen creating architectural styles, works of art and culture with it.

This tradition with the exceptional quality and beauty of the product slate has a future. That is very close to our hearts.

We are lucky that in the marine deposits and the folding of the earth in the region of today's Mayen there existed especially favourable conditions for the formation of slate. To these circumstances we owe our **Moselschiefer**® – slate of top quality lying deeply below ground.

With these resources of high value we have special assets at our disposal, we also see them, however, as a special responsibility.

As one of the largest slate suppliers worldwide we not only market our exclusive **Moselschiefer**®, but also mine and sell slate from the best international deposits under the trademarks **InterSIN**® and **ColorSkient**®. During the quality control of these slates we orientate ourselves strictly to the high standards we apply to our **Moselschiefer**®.

For more than 200 years we have been collecting knowledge and experience around slate in order to be a partner to everybody knowing how to appreciate its special value beyond the pure delivery: builders, planners, architects, the roofers as well as the specialised retailers. Because one of our mottos means: "Slate connects – and commits". A motto we practice internally and also consequently implement towards the outside.



Time travel.

At the beginning there was the sea.

For the Creator it was certainly only a triviality. But the interaction of many conditions that in the primeval times dominated some places of the earth created the preconditions for the formation of roofing slate.

About 400 million years ago deposits with the finest grains of masses of clay slurry were formed on the bottom of primeval seas. On account of the high vertical push these masses solidified more and more into mudstone. During the later formation of the mountains the layers of stone were then folded up by the lateral pressure.

During these developments the original minerals arranged themselves along the finest shearing surfaces and crystallised under pressure and heat into flat minerals. The rock received a new structural element: the slaty cleavage.

On account of the even orientation of the minerals parallel to the slaty cleavage, by its denticulation with each other and by the formation of many microscopically fine glimmer layers the cleavability was created that is typical for slate.

Different conditions naturally existed at any place where slate was formed: other compositions, other temperatures, other movements. Therefore there are differences in the character and optics of the slate depending on the specific deposit.

The **Moselschiefer**® only found in the region around Mayen is considered as one of the world's best slate qualities on account of its extraordinary durability, its brilliance and its deep blue-grey colour.

Slate deposits of a similar high quality are also found in other regions of the world. Thus for example in Spain where we mine our **InterSIN**® slate in our affiliated company CAFERSA.

Other geological preconditions during the primeval formation of the slate created in some places of the earth slate deposits in fine shades of red and green. We market this coloured slate from selected deposits under our trademark **ColorSklent**®.

Slate in the fine colours of nature.
An evidence of the history of earth, formed in millions of years.



Heat, water, pressure, movement – a lot of factors have to act in combination so that slate could be formed in some places of the earth. For this process nature needed millions of years.



The history of slate is also the history of the genesis of our earth.





Peak of a volcano in the rising sun.
A typical picture of the Eifel landscape.



Roots.

A heart of slate beats in the Eifel.

The **Moselschiefer**® is at home in the expressive volcano landscape of the foothills of the Eifel. The ancient Romans already knew how to estimate this robust building material and mined it here.

For more than 200 years we have mined „the black gold of the Eifel“ in both **Moselschiefer**® mines "Katzenberg" and "Margareta".

The slate mining in Mayen is for the first time verified by a document from the year 1362 where the Mayen roofing slate – Leyen – thus the historical term for slate – from Katzenberg is mentioned. The original transport route via the Moselle River in about 1588 already gave the much sought-after material its name. **Moselschiefer**® is thus worldwide one of the oldest trademark terms and up to today it stands for roofing slate in top quality from Germany.

We feel obliged to slate. And also to our region that is marked by this unique natural resources.

Many historical buildings with roof landscapes made of **Moselschiefer**® show a long tradition of the local slate mining. More than half of the German architectural monuments that are mentioned in the UNESCO List of the World Heritage Site bear slate roofs – to a large extent made of **Moselschiefer**®. Up to date these valuable cultural monuments are traditionally restored with the same material.

Modern architecture also uses the high-quality characteristics and the natural charm of the slate. Because slate complies with all the requirements of modern building physics and thanks to the modern installing techniques and its durability it is extremely economical.

A building material with character.



The Genoveva Castle.
Symbol of Mayen.

The mountain below it is the home of the "Deutsche Schieferbergwerk" – German Slate Mine – whose formation goes back to our ideas and our support towards the town Mayen and it shows the history of the slate with exciting experiences.

For everybody hungry for experiences and eager to learn, who is unable to visit our **Moselschiefer**® mines for reasons of production and too high demand.



Eiltz Castle, not far from the Moselle River.
A popular destination for tourism with a marvellous roof landscape made of **Moselschiefer**®.



Modern architecture is effectively staged by slate.



Glückauf.*

What some day should be on the roof and at the façade, lies deep in the earth.



A call to the operator of the hoisting machines takes persons or materials upwards.

You really have to go deep down in order to reach „the black gold of the Eifel“ – the **Moselschiefer**®.

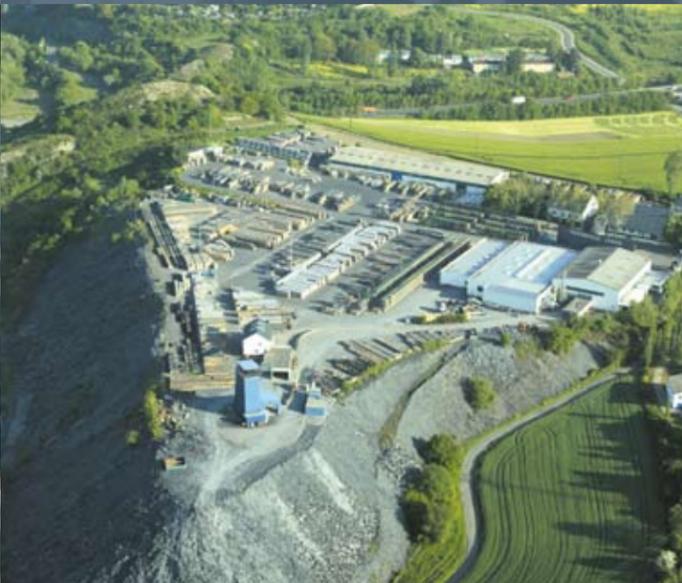
This resource does not make it easy for the miners. It hides itself behind infinitely strong rock formations that do not show the necessary quality for the rating of **Moselschiefer**®.

The experience of more than 200 years collected by experts and geologists is indispensable when it comes to tracing the minable layers called "Richte".

Only the expert has the capability to recognise in good time whether a new stope is sufficiently profitable.

Test drilling processes as well as geological and petrographical examinations help him to make this important decision.

Moselschiefer® is not a mass production but a premium product for exclusive architecture wanting to be discovered and "captured".



The **Moselschiefer**® mine Katzenberg with its symbol – the shaft tower – in the foreground. Deep below the ground lies the much sought-after **Moselschiefer**®. With a depth of 340 meters the tenth level horizon has already stayed below the sea level.

* Traditional greeting used by German miners.



Presence.

In Mayen at home – active in the entire world.

Our entire engagement is aimed at the unique natural material slate. Because of this we are probably not only the largest German slate producer but also worldwide one of the largest slate suppliers.

In addition to our headquarters in Mayen where we mine the exclusive **Moselschiefer**®, affiliated companies and marketing organisations in many countries and regions are part of our group companies. For example in Spain, France, in Switzerland, in Austria, the Netherlands, Belgium and wide parts of Eastern Europe.

We are in a close relationship based on partnership with the most important international producers.

Everywhere in the world we select the best slate deposits for mining and producing our slates which we market under our trademarks **InterSIN**® and **ColorSklent**®.

A large part of our **InterSIN**® slate we mine in our affiliated company CAFERSA – one of Spain's most important slate producers. Here in the worldwide largest slate mine "La Fraguíña" we exploit high-quality slate to a large extent.

Our employees on site also apply high standards when selecting the deposit for the **ColorSklent**® coloured slate we mostly obtain from overseas sources.



Our affiliated company CAFERSA. One of Spain's most important slate producers. Here we mine a large part of our **InterSIN**® slate.



The world's largest slate mine – "La Fraguíña" in Spain. Slate mining in a very big way.



The Rathscheck quality principle "Slate is not exactly like slate" also applies to the **InterSIN**® mining.

Progress.

Modern technique lifts ancient mineral resources.

With a gigantic diamond saw an exact "cutting pattern" is brought along the rock lines into the mountain. Thus uniform blocks can be detached with special machines.

What formerly had to be painfully wrung from the mountain by drilling and blasting is today achieved with modern technique in an environmentally friendly way.

The minable slate is sawn with a diamond saw along the geological conditions into exact modular grids. Then the slate is carefully taken out of the mountain block by block with special machines.

After millions of years of "ripening" the slate in the **Moselschiefer**® mine Katzenberg sees daylight for the first time.

At CAFERSA the **InterSIN**® slate is not only mined below ground but also above ground.

The **Moselschiefer**® mine Margareta shows a highly modern innovation in the slate mining technique. Here a serpentine tunnel leads downwards and it is used by trucks for direct loading.

In our affiliated company CAFERSA in Spain highly modern mining technique is also used. Here the **InterSIN**® slate is not only mined underground in the gigantic mine but also in quarries.

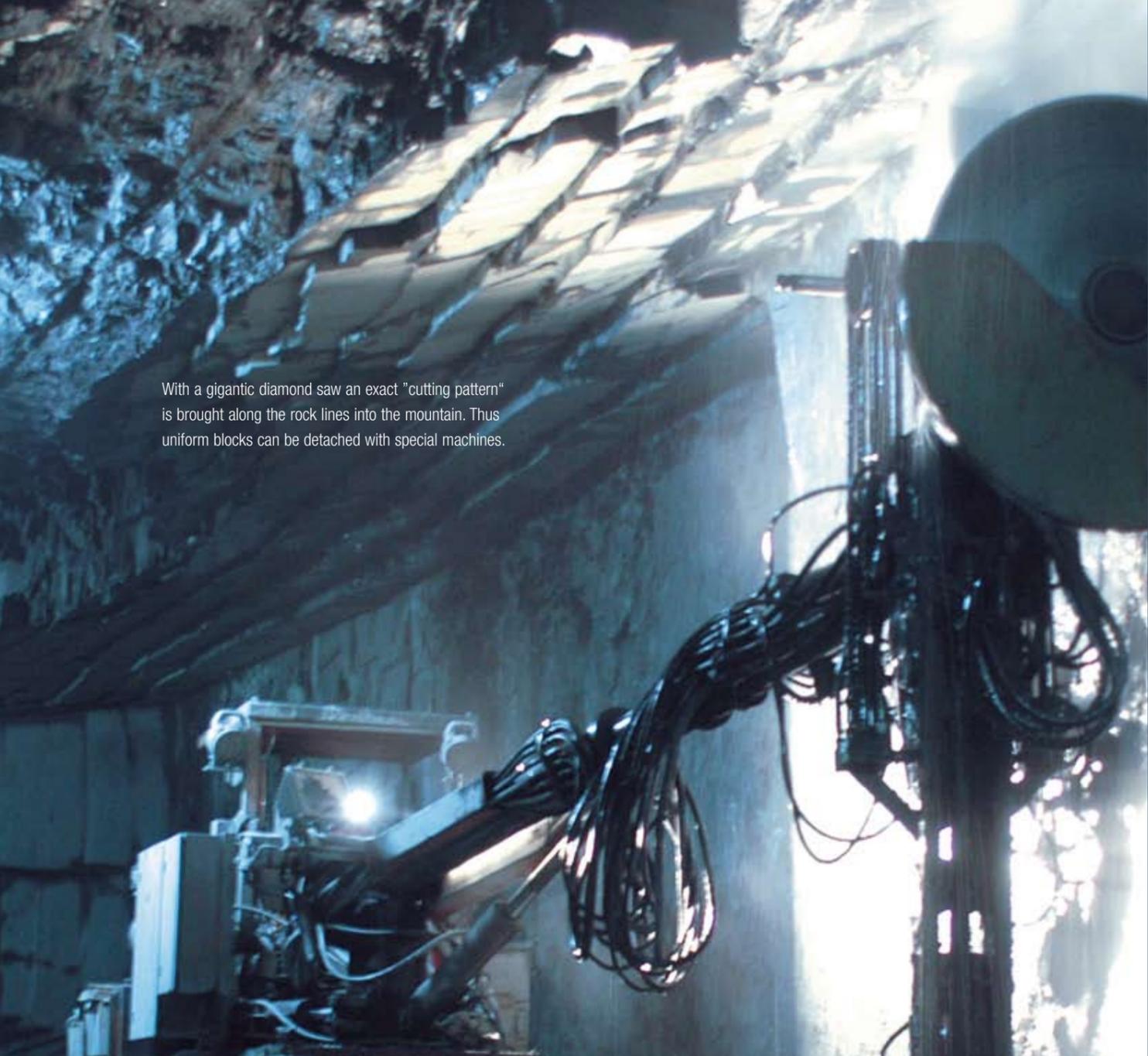
The fully mechanically sawing extraction makes work easier for the miners above and below ground and contributes to a careful handling of the precious rock.

The many technical progresses in most recent times facilitate an efficient mining and today make slate an affordable material – to the delight of many building owners.

In the mine "La Fraguíña" as well as in the **Moselschiefer**® mine "Margareta" trucks can drive down into the mine and gather the slate.



With test drilling processes one can read in the rock where the most lucrative deposits are hidden.



Special wire saws divide the gigantic slate blocks into even square stone blocks.





Care.

A long way from the slate block to the roofing slate.



The completed roofing slate. Everyone of them was carefully mined, processed and checked.

It requires a lot of skill and careful action until the massive slate blocks turn into the valuable slate for roof and façade. Slate that give every roof and every façade the aura of something special.

The specialists participating in the mining and production come from more than 30 professions. Many female and male employees are trained and further educated at Rathscheck Schiefer via a training programme over several years developed by Rathscheck themselves.

Because in spite of all the automations a large part of the shaping processes still requires qualified manual work.

For example splitting the stones to their

final thickness of approx. 5 mm. Hereby the tool has to be set specifically to the naturally created mica layers in order to achieve a clean splitting.

The roofing slates receive their real shape during processing. Depending on which type of covering the stones are processed for, there are here essential differences. So the exclusive old German style covering **Moselschiefer®** is manually processed stone by stone. A task requiring major skill, experience over many years and a good eye for shapes and sizes.

On the other hand **InterSIN®** for the various template coverings are shaped mechanically.

Moselschiefer®:

The raw blocks are constantly kept on the moisture level of the mountain and carefully moved by machine power to the sawing line where they are divided into handy blocks (1).

Along the natural mica layers the stones are split with pneumatic hammers into plates with a thickness of approx. 5 mm (2).

The finishing of the slate for the classic old German style covering is carried out with free hands. A high art because the measurements and shapes vary finely according to certain patterns and have to be precisely exact.

After an intensive final check for size, form, thickness and quality the roofing slates are awarded the rating **Moselschiefer®** (4).

InterSIN®:

The **InterSIN®** production in Spain is carried out on a large scale. A double sawing line precuts the blocks (5).

Splitting of the handy blocks is carried out manually (6).

InterSIN® is mechanically processed for various types of covering. For example for the various rectangular coverings, the fish-scale covering and different types of covering that were developed by Rathscheck. On account of mechanically processing one talks about "template coverings" (7).

No stone leaves the production without a final check. Because our quality requirements are high (8).



1



2



3



4



5



6



7



8



A lot of experience and know-how is required in order to assess the quality of the slate.



The Rathscheck Quality System

The Rathscheck Quality System exceeds by far the required national and European test standards and is based on many decades of experience in the production of slate for roof and façade. These resulted in a test system for assessing the worldwide slate qualities. Only the best slate deposits comply with our strict requirements.

With test methods developed by ourselves, by constantly checking our own production processes on site as well as the productions of our international strategic partners we take care of the observance of the Rathscheck quality criteria. At the same time we are supported by independent test institutions.

- Best slate only from tested deposits.
- Continuous check of the rock quality.
- Constant supervision of the production processes.
- Strict selection of the finished roofing slate.

Insights.

The best is just about good enough.

In addition to the carefulness during the processing, the consistency of the rock is decisive for the quality of the roofing slates. In order to guarantee a constant high standard, samples are regularly undergoing petrological and chemical tests in the Rathscheck laboratory and in independent external laboratories.

Thus the durability and the resistance of the slate are tested with official and self-developed test methods – for example by bending tests, temperature and acid tests as well as by company-internal special practice tests.

In addition to the constant quality samples from our **Moselschiefer**® mines, slate samples from all over the world are examined in order to guarantee a constant overview of quality.

For testing the qualities from international deposits we maintain organisations on site. Thus, for example, the RAPIDASA, whose employees constantly test the quality of our affiliated company CAFERSA in Spain as well as the additional strategic partners and communicate our requirement criteria.

This is the only way to enable us to take care of our slate showing itself at its best on the roof and at the façade.



Wind suction confirm the extraordinary resistance against storm of slate coverings (up to 4600 N/m² for the classic old German style covering with **Moselschiefer**®).



When the slate passes all the tests it will soon ennoble the roof or the façade of a proud building. Slate is not only aesthetically the finest. It can also hardly be beaten regarding durability and toughness.



Always on site.

The employees of our affiliated company RAPIDASA take care of and co-ordinate our **InterSIN**® production in Spain and carry out constant quality tests.



Dialogue.

There is nothing to beat a personal talk.

The natural product slate is unique. From the geology via the individual roofing slate to the individual roof or façade design it is a building material for connoisseurs and experts.

Thus slate connects all the participants – from the miner to the builder, from the technical consultant to the architect. Only a close co-operation lets the outstanding characteristics of the slate blossom.

We therefore see it as one of our highest duties to stand from the very beginning in an advisory capacity by the side of planners, architects, craftspeople and naturally also by the side of builders.

Here the continuous training and advanced vocational training of the women and men of our staff takes first place.

Regular symposiums offer architects, craftspeople and specialised roofing dealers the opportunity to extend their knowledge when dealing with slate.

And finally we stand by the side of the builders for an individual and object-related consultation on site.

We are looking for the dialogue. For a close co-operation that is finding its most beautiful expression in buildings with unmistakable character.



One never stops learning.
Rathscheck invites regularly to a large number of events for training and advanced vocational training.

Technical consultants from Rathscheck are the partners of the architects, the roofers and the specialised trade. If required they are also available on site for the builder as consultants.





Competence.

Slate makes the craft an art.

Covering roof or façade with slate is always something special – expression of an individual lifestyle and testimony of a long tradition.

This natural material for covering roofs and façades has a very long tradition in Europe going back into the times of the ancient Romans.

Slate is an essential integral part of the European building culture. A good part of home – connecting many countries.

Its good characteristics – the robustness and the unmistakable aesthetics – make slate also interesting for the modern architecture.

Slate connects tradition with modern times. And Europe's cultures with each other.

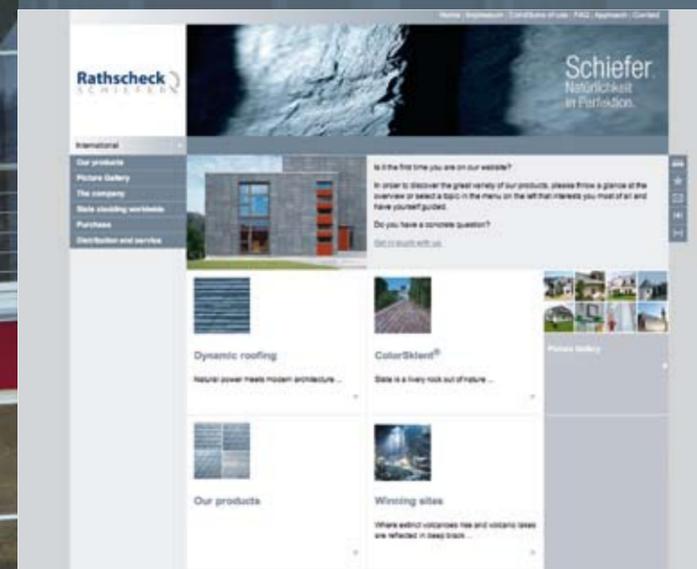
Rathscheck is in close partnership with the roofers, the planners and the architects. A whole range of special tools making laying easier for the roofer as well as systems for roofs and façades for the modern architecture are the result of this synergy. Innovations decisively improve the work with slate and thus they also benefit the builder.

Under www.rathscheck.com you will find a lot of further information around the unique building material slate. We help you with your planning, advise you in all issues and look after you during the realisation of your project.

A call is sufficient:
Phone: +49 (0) 26 51 / 955-0



All the information around the building material slate under:
www.rathscheck.com



Our name stands for slate.
Worldwide.

Aesthetics.

Slate is so beautiful and versatile.

The different types of slate roofing harmonise with all architectural styles. From classical buildings to modern architecture slate sets standards at roof and façade with its special aesthetics.

By the further development of the processing methods we made the valuable building material reasonably priced. In comparison between the purchase costs and the durability slate is extremely economical.

The development of efficient laying techniques and cap stone formats also contributes to the fact that today slate is within everybody's means. A roof or a façade made of slate is always something very special. Aesthetic, timeless, durable, robust, completely natural and full of character.

Today and in future.



Everything speaks for slate.

Rathscheck
SCHIEFER

- ▶ Natural
- ▶ Robust
- ▶ Versatile
- ▶ Modern
- ▶ Aesthetic
- ▶ Reasonably priced

Rathscheck
SCHIEFER

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Slate.

Pure nature in perfection.