

WHAT'S NEW

AFRICA CUSTOMER MAGAZINE



MOROCCO - SOLAR POWER PLANT

SIKA AT WORK

ANGOLA, CAMEROON, EGYPT, ETHIOPIA, KENYA,
SOUTH AFRICA, SENEGAL, MOZAMBIQUE
MOROCCO, TUNISIA, NIGERIA. IVORY COAST

SIKA NEWS

SIKA ACADEMY IN AFRICA
ENGINEERS DAY IN TANZANIA

SIKA INNOVATION

PRODUCT FOCUS : STRUCTURAL STRENGTHENING

SIKA EVENT

SIKA PRODUCTS ONLINE
BATIMATEC ALGER
ASK SIKA

English version

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BUILDING TRUST





Welcome to the second edition of What's New in Africa magazine.

In this edition, once again we present you many unique projects we have completed with our customers all over Africa, but also about company developments such as Sika Academy and innovative solutions for structural strengthening.

"Customer first" is our main value and while making all our business activities we continue to focus to fulfill our customers needs by :

- Supporting our valued clients,
- Delivering innovative solutions,
- Continuously improving our systems and processes,
- Developing and adapting technology and best practices,
- Investing in trainings.

Year 2018 will end up again as great achievements in profitable growth in many countries and most of new companies in Africa becoming profitable or close to breakeven.

Sika Group will continue to invest in Africa expecting the area to remain one of the most profitable while increasing markets shares, strengthening local presence close to customers to keep ahead of competition.

Thank you to all for your continued support and commitment to contribute Sika becoming stronger in Africa.

ZOOM ON AFRICA



Discover the news of our many subsidiaries Sika Africa!

- | | |
|--------------|------------|
| South Africa | Kenya |
| Algeria | Morocco |
| Angola | Mozambique |
| Cameroon | Nigeria |
| Ivory Coast | Senegal |
| Egypt | Tanzania |
| Ethiopia | Tunisia |

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ANGOLA - SHOPPING FORTALEZA

Project presentation

Shopping Fortaleza is Angola's first Premium Shopping Mall, located the most noble area of Luanda.

With an area of 11,400 m², it has 80 stores, distributed over five floors, one of them dedicated to luxury brands, 3 theaters, 1 supermarket, banks and other services. There is a restaurant area with a privileged view to the of Bay of Luanda.



SIKA Solutions

Built on the basis of the most modern architectural standards, Fortaleza Shopping has five floors of shops and first-class services. Sika has provided technical solutions in compliance with the high standards of the project.

- **SikaHyflex 305 EU for bonding the Alucobond panels of the façade,**
- **Sika Boom for assembly of panels and doors frames,**
- **Sikaflex 11 FC in a variety of bonding applications,**
- **Sika FireStop on fire doors,**
- **SikaSil WS-605 sealing of glass facades.**

Participants

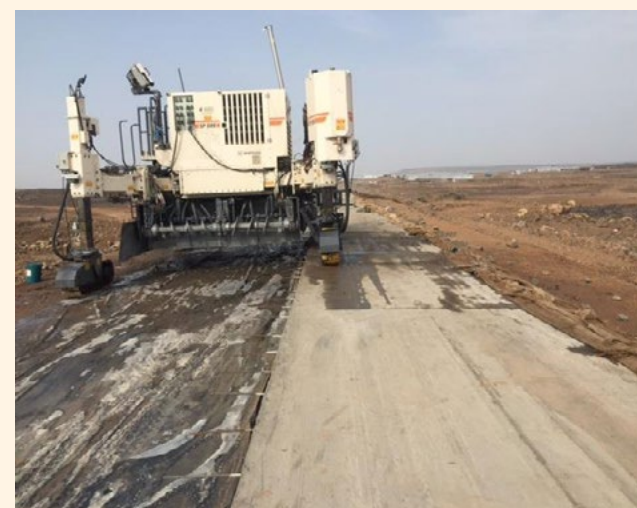
- Owner: SOPROS group
- Consultant: DAR
- Contractor: Griner and Soares Da Costa

ETHIOPIA - DITCHOTO GALAFI JUNCTION

Project presentation

Concrete road Ditchoto Galafi junction / Dobi - Elidar - Belho is the starting point in the North-Eastern part of Ethiopia of Afar National Regional State and the last point is the village Belho which is part of the Republic of Djibouti at an offset distance of 6 to 7 km from the border line with Ethiopia.

This road project is intended to increase the efficiency of the road transport network specially an access to the port of Tadjoura which is at about 120 km from Belho. The project includes the design and construction of the road and major drainage structures.



SIKA Solutions

For this 80 km segment, the contractor used more than 200 000 m³ of concrete applied at high temperature and high speed wind.

Sika has proposed a complete solution for :

- **The concrete mix design with SikaMent NNR, SikaTard ET and Sika Antisol E,**
- **The expansion joints sealing with SikaSil 728 SL,**
- **The corrosion protection of dowel bars with SikaTop Armatec 110 Epocem.**

Participants

- Owner: ERA, Ethiopian Road Authority
- Specifier: DCE, Defense Construction Entreprise and AAIT, Addis Ababa Institute of Technology
- Contractor: DCE, Defense Construction Entreprise

EGYPT - SANDOUB NEW BRIDGE

Project presentation

Sandoud Bridge is located in El Dekhila Governorate El Mansoura City.

Its primary purpose is to solve the crisis of the traffic congestion throughout the day.

Its estimated cost is 640 Million EGP. Sandoub Bridge consists of a numbers of slabs by length of approx. 5600 meter. The bridge includes two traffic lanes for each direction and a metal bridge for pedestrians.



SIKA solutions

The main requirements for the projects were:

- Concrete with high workability.
- Flowable concrete with ultra-high strength.
- Grouting materials for bridge supports.

Sika has proposed complete solutions :

- **Sika Viscocrete 3425 which represents Sika third generation super plasticizer,**
- **Sikament R2004 a high range water reducing and set retarding concrete admixture,**
- **Sika Fume - HR a concrete additive of a new generation in powder form, based on Sika silica fume technology.**

Participants

- Owner: Army Engineering Authority
- Consultant: ACE, Arab Consulting Engineers
- Contracting Company: El Soadaa

CAMEROON - REHABILITATION OF A STADIUM

Project presentation

The Roumde Adja Stadium in Garoua, North of the country will be renovated and his capacity extended from 25 000 to 30 000 seats according to FIFA standard.

The construction also includes an annex stadium for trainings.



SIKA Solutions

For the customers the choice depended on quality, durable and aesthetic products available on the local market.

Sika Cameroon has proposed complete solutions for :

- **Concrete and waterproofing (Sikament NNG, Sika hydrofuge FC, SikaSwell S2),**
- **Refurbishment (Sika Monotop 612, SikaGrout 234),**
- **Flooring (Chapdur Premix).**

Participants

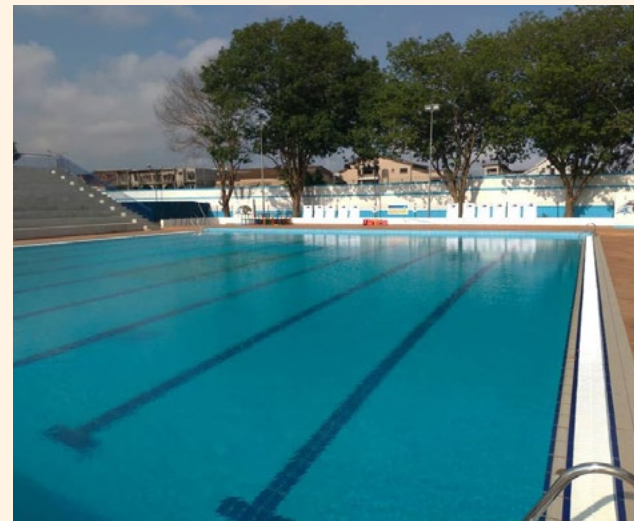
- Owner: Ministry of sport
- Architect: AMA Consultant
- Contractor: Mota-Engil

IVORY COAST - SWIMMING POOL OF THE SCHOOL

Project presentation

For its sports activities, the Abidjan American High School has built a swimming pool 25 m long, 22.5 m wide, average height 1.80 m and a total capacity of 1 000 m³.

For the construction of the basin the owner asked for a waterproof concrete and a waterproofing before the installation of the finishing coating. The customer also wanted technical support during the construction period.



SIKA Solutions

Sika has proposed **Hydrofuge Sika a waterproofing admixture for concrete.**

Several casting problems resulted in rough and irregular concrete surface and honeycombs with exposed reinforcement.

All these areas have been repaired with **Sika Monotop 910N, anti-corrosion mortar for reinforcement and Sika Monotop 412N, structural repair mortar.**

The reprofiling of the concrete walls and slab has been carried out **with a waterproof mortar with Super Sikalite, waterproofing admixture, applied on a Sikalutex slurry.** Finally the complete waterproofing of the swimming pool has been achieved with **SikaTop 107, flexible micro-mortar.**

Participants

- Owner: American High School
- Controller: Technical Service of American High School
- Contractor: Cornerstone

KENYA - NEW NILE BRIDGE - JINJA, UGANDA

Project presentation

The new Nile bridge which was financed by the Japanese government, is a cable stayed bridge at 500 meters upstream of Nalubaale Dam.

The 525 meter-long bridge has a central span of 290 meters, end spans of 135 meters and 100 meters on the east and west banks respectively.

It is also the first cable-stayed bridge in East Africa which connects Kenya with the Democratic Republic of Congo. The bridge was designed with a structural life span of 120 years.



Customer requirements

The customer requested a class C 60 concrete, pumpable over a long distance with an initial slump of 240 mm, an extended workability of 60 minutes and a slump at casting of 160 mm.

SIKA Solutions

- **Sika Viscocrete 10 NNB, high range water reducing concrete admixture,** made it possible to meet these specifications.

Participants

- Architect: Hyundai Corporation
- Contractor: Zenitaka Corporation (Japan)-Hyundai JV (South Korea)

MOROCCO- NOOR SOLAR POWER PLANT

Project presentation

Much of Morocco's energy depends on imports (electricity, natural gas, oil) while the country's demand increases by 5% per year. It is in this context that the Moroccan government launched the Noor solar power project, part of Morocco's ambitious goal of 42% renewable energy by 2020.

The Noor solar complex in Ouarzazate is the largest in the world and covers an area of 3,100 hectares with a total capacity of 560 MW. Four stages are planned Noor I, II, III and IV. Noor III will be operational by the end of October 2018.

Noor III uses central tower technology and is equipped with 7,400 heliostats that direct solar radiation to a receiver at the top of a 250 m tower. Each heliostat includes 54 mirrors on a total surface of 178 m².



SIKA Solutions

More than 22 tons of **Sikasil AS 785, quick setting silicone adhesive**, were used to mount the mirrors. This high-performance structural adhesive is weather and UV resistant for long-term performance.

Thanks to the use of **Sikasil AS 785** the production process has been optimized with a yield of 2600 units manufactured per day.

The construction of the tower, the technical rooms and the heliostats supports required 120,000 cubic meters of concrete with the **superplasticizers Sika Viscocrete Tempo 10M, 35M and SikaFluid R**.

Sika also supplied **SikaGrout 212 for the sealing** of heliostats and waterproofing systems for the technical installations, **Sika Waterbar, SikaTop 121, SikaTop 107**.

Participants

- Maitre d'ouvrage: MASEN (Moroccan Agency For Solar Energy)

MOZAMBIQUE - THERMAL POWER PLANT

Project presentation

The new Thermoelectric Plant, Natural Gas Combined Cycle, located in Maputo, the capital of Mozambique, aims to increase capacity up to 100MW. The project is budgeted at 151 million USD and was funded by the Japanese Government.

It is a Power Plant with a technology that allows the most efficient use of Natural Gas and contributes to the reduction of carbon emissions, environmental preservation, as well as the sustainability of economic development for Mozambique.



SIKA Solutions

The main requirements for the Sika solutions were Waterproofing and Aesthetics, providing premium solutions.

Interventions SIKA

Sika has proposed :

- **SikaGrout® 212, Sikaflex® PRO 3, Sikadur® AP et SikaMent® - NNG 212.**

Participants

- Owner: Eléctricidade de Moçambique, EP
- Specifier: Sumitomo Corporation and IHI Corporation.
- Contractors: Sumitomo Corporation and IHI Corporation.

NIGERIA - TOTAL RESIDENTIEL COMPLEXE

Project presentation

The TOTAL residential complex in Lagos is a project consisting of two 16-storey towers with 140 apartments, a clubhouse, two parking levels a ground floor recreation and sports facilities to meet the needs of future residents.

It is located on Victoria Island at the edge of the ocean and this situation has been an important parameter in Sika solutions : very high water reduction for concrete, waterproofing and joints treatment.



SIKA Solutions

Sika has proposed :

Sika Viscocrete Tempo 10, a superplasticizer with a very high water reduction to meet the needs of the project in terms of concrete performance and durability of the structure.

Waterproofing in wet rooms was achieved with **Sikalastic 200W and Sikaflex 11 FC sealant was used to seal joints.**

Participants

- Owner: TOTAL
- Contractor: ITB NIGERIA LTD

SENEGAL - EXTENSION OF THE AIRPORT MOTORWAY

Project presentation

After the inauguration of the new Blaise Diagne airport in Diass, connected to Dakar by a first stretch of motorway, work continues with the section Diass - Thiès which gives access to the north of the country.

This project is part of an infrastructure program that should lead to a 520 km motorway network in 2020.

The lot covers 14 km with 2 traffic lanes in each direction separated by extruded concrete guardrails and three bridges.



Customer requirements

The client was requesting high strength concrete with a smooth surface siding and a 5 cm slump at the cone.

SIKA Solutions

Sika has developed the concrete mix design in collaboration with a local laboratory, Technosol and has proposed the **admixture Plastiment BV 40 and SikaPlast Techno 7** as well as **Sika AER 5** to promote extruder slip and concrete thixotropy

For the demoulding of extruded concrete, the contractor has used **Sika Decoffre Mineral.**

For bridges, **Sikadur 31** was used for concrete segments bonding, **SikaGrout 217** for wedging of bridges supports and **Sikatop 121** for surfacing and protection of concrete.

Participants

- Project owner: Senegalese State
- Control Office: SACI
- Contractor: HENAN China

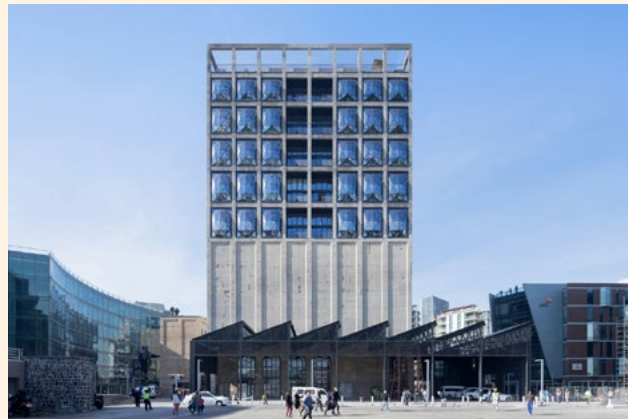
SOUTH AFRICA - ZEITZ MUSEUM

Project presentation

The world acclaimed Zeitz Museum of Contemporary Art Africa is a modern art museum located at the famous V&A Waterfront in Cape Town, South Africa.

The initial phase of the project included the restoration of the Silo behind the main Museum building.

The repairs needed to fit in seemingly with the original structure to decrease the visual effect of the refurbishment.



SIKA Solutions

Sikagard-706W Thixo was applied to the old concrete of the Silo's as a protective coating and water-repellent impregnation. The external façade of the old silos were covered in **Sika Ferrogard-903**.

For the main Museum building, concrete barriers were grouted sturdily in place with **SikaGrout-212**. **Sikaflex AT-Façade**, sealant was the most effective solution to seal the joints.

SikaTop-Armatec-110 EpoCem, provided an effective anti-corrosion coating on reinforcing steel before epoxy applications for new concrete adhesion against old concrete. **Sikadur-31 CF Normal** was used for doweling on site of the rebar. The roof top was coated in the Sikalastic-8800 acts. The entire face of the square building in front of the silos was coated with **Sikalastic-152**.

The staircase and landings, of the building, were coated with **Sikafloor-263 SL**, **Sikafloor-264** and **Sikafloor 66ZA** matt used as a top coat. The main timber floor running throughout the museum was coated with **Sikafloor Comfort Floor**.

Participants

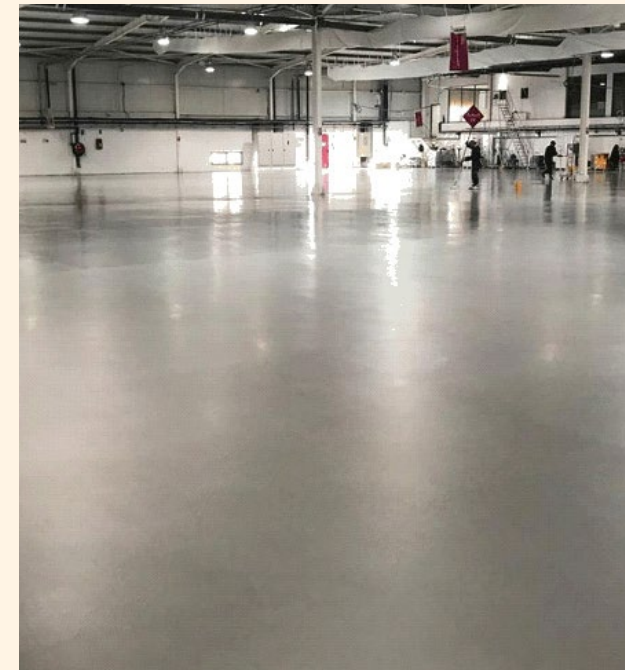
- Project owner: Zeitz Museum
- Engineer: Sutherland and Associates
- Contractor: WBHO

TUNISIE - YAZAKI AUTOMOTIVE

Project presentation

Yazaki is a market leader in the area of automotive wiring harness systems and supplies all major OEMs in in over 45 countries worldwide.

The Bizerte plant in Tunisia has a surface area of 15,000 m².



Customer requirements

The project manager asked for a flooring system with high characteristics, especially acoustic comfort and a solution as economical as possible.

SIKA Solutions

Sika Tunisia has proposed :

Sika®-Deco Quartz, a decorative floor covering which create highly aesthetic coatings with an almost limitless choice of finishes. This coating based on epoxy resins combines comfort, functionality and aesthetics. The system has a total thickness of 3 mm and includes the application of :

- **Primer Sikafloor 161**,
- **Floor coating Sikafloor-263 SL**,
- **Sika Quartz sand broadcast**,
- **Topcoat Sikafloor®-169** ,
- **Sikafloor®-304 W**.

Participants

- Project owner: YAZAKI AUTOMOTIVE
- Contractor: EPOXYLUX

STRUCTURAL STRENGTHENING

Building or civil engineering structures may require changes throughout the course of their service life. Their destinations can be modified, loads can increase, and construction standards can change (like seismic standards for example).

The structure must be brought into compliance.

Sika offers complete solutions with fiber-reinforced polymer (FRP) materials, such as plates and fabrics, to solve all reinforcement problems on reinforced concrete, steel, wood or masonry structures.

Sika Carbodur and **SikaWrap** systems have been used worldwide for more than 20 years to strengthen bridges, cooling towers, silos, residential and industrial buildings ... and have demonstrated their performance, reliability and durability.

These technologies have several advantages: low weight, low thickness, adaptable to all geometric shapes, no corrosion, fast application and simple handling.

1. Sika CarboDur

The CarboDur® system consists of a pultruded carbon fiber-reinforced polymer (CFRP) plate bonded with a **Sikadur®-30** or **Sikadur®-30 LP** epoxy resin based structural adhesive.

It is used mainly for flexural strengthening reinforcement or for dynamic or static loaded structures, such as bridges, slabs or vertical walls.

This simple, reliable and powerful system is easy to apply and offers exceptional long-term durability

Bonding plates on concrete, wood or masonry substrates has many advantages: no additional protection required, no aesthetic impact, possible application on flat or curved substrates, on weak or cracked substrates.



2. SikaWrap

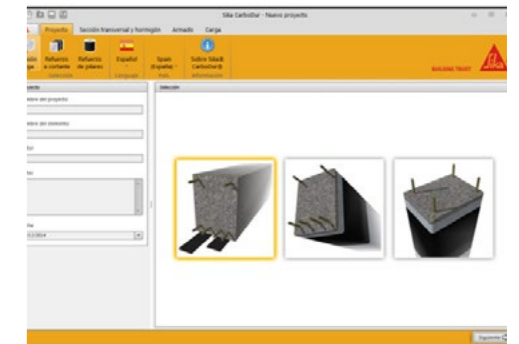
The system consists of a unidirectional fabric based on carbon fiber and an impregnating epoxy resin **Sikadur 300 or 330**.

The installation of the **SikaWrap** system is simple and can be used in many different configurations, such as confinement of columns, wrapping of joints, shear strengthening or seismic strengthening.

The fabric is applied either after pre-impregnation ("wet" application) or without prior impregnation ("dry" application) and is suitable for reinforcing irregularly shaped structures and substrates.



To help engineering and design offices in structural reinforcement projects, Sika has developed the Sika Carbodur software which contains all the information needed for structural calculations according to the latest international guidelines.



Sika Carbodur Software

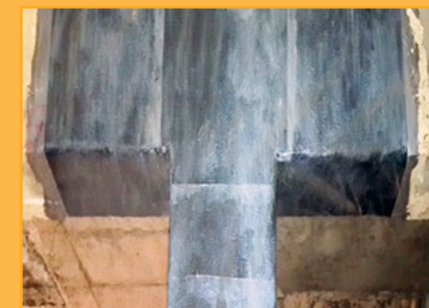
EGYPT

Rasheed Bridge: Strengthening of bridge beams to withstand excessive truck loads and increased traffic. **Sika Carbodur - SikaWrap**



ALGERIA

Hotel Azzemour - Béjaïa: Strengthening of the beams and columns of the building. **Sika Carbodur - SikaWrap**



MOROCCO

Oued Dades, Oued Aghbal and Oued Gheris bridges in Ouazzazate: strengthening to allow the passage of heavy convoys for the Noor solar power station. **Sika Carbodur**



SIKA ACADEMY



ANGOLA



CAMEROON

SENEGAL



IVORY COAST

Training and development of our customers and our teams are of strategic importance for Sika.

Sika Academy is sharing knowledge. With Sika Academy, the idea is to train professionals responsible for construction projects and partners who promote the application of Sika solutions, sharing knowledge and discussing with all interested parties about basement to roof solutions value in theoretical and practical sessions on topics such as concrete, waterproofing, refurbishment, sealing and bonding, flooring, roofing, industry.

Each event is expected to receive customers, such as dealers, specialized applicators in the construction, ready mix and precast companies, as well as architects and civil engineers, project managers or even collaborators of public and private institutions.

With Sika Academy we transfer knowledge regarding technical information. The participants benefits from practical and theoretical workshops based on their needs.

Since May 2018, more than 500 people have benefited of these training programs in different counties: Cameroon, Ivory Coast, Senegal and Ethiopia.

In view of the growing success of these meetings, other sessions are scheduled for the following months.

Ask your local Sika Company!

ENGINEERS DAY IN TANZANIA



The Annual Engineers Day is the biggest annual event for all engineers from all fields.

Annual meetings of engineers are traditionally organized by the Engineers Registration Board (ERB), a special statutory body established to monitor and regulate all engineering-related activities in Tanzania.

This forum gives all Tanzanian engineers an opportunity to share their ideas and experience in the engineering practice.

The traditional major activities of the meeting include presentation, discussions, and technological exhibitions. A special theme is chosen by the Engineers Registration Board annually.

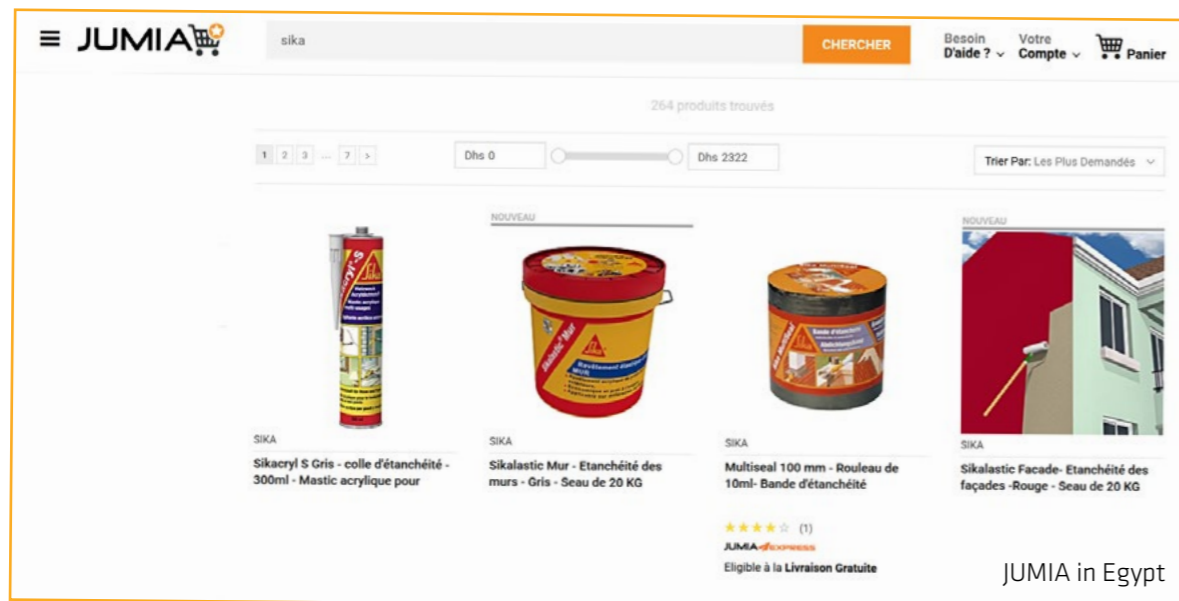
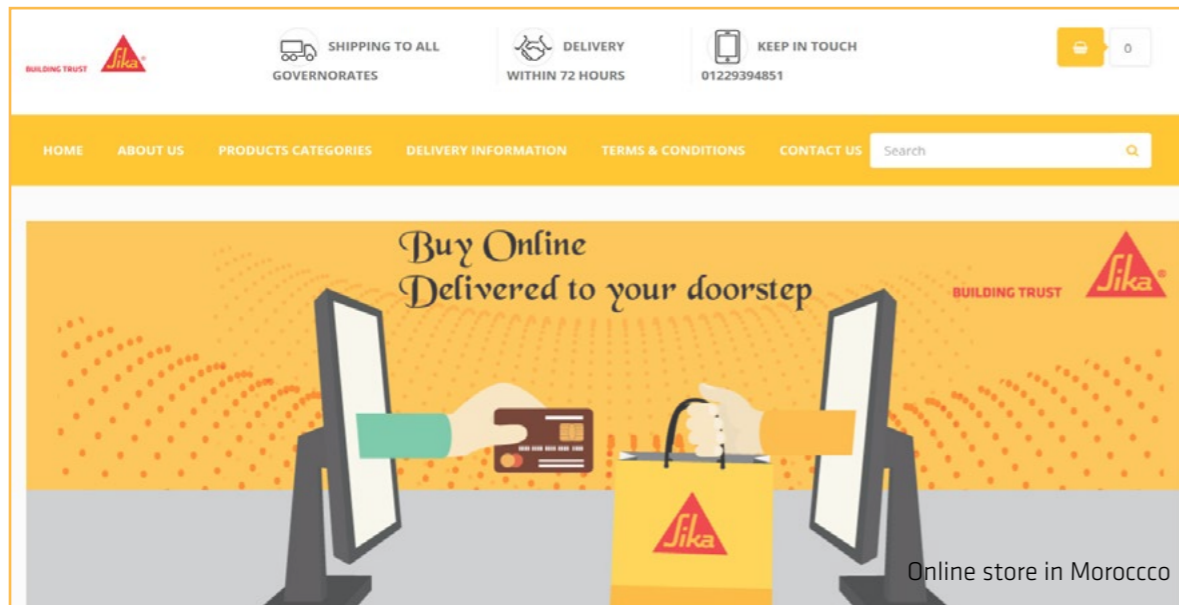
This has been a great platform for Sika Tanzania to engage with professional engineers from all over the country and to present Sika products and Solutions with demonstrations.

SIKA PRODUCTS ON LINE

Since a few months, our Moroccan and Egyptian customers can buy Sika products online and be delivered directly: Sika Egypt has created its own online store and in Morocco Sika products are available on Jumia, the e-commerce leader in the country.

A wide range of products is offered with photos of the packaging, and a description of their uses. To help customers in their choice, additional information is available with illustrations of the application field, the needed tools and the instructions for use in photos or video.

24 hours a day, 7 days a week, in a few clicks, the consumer can choose from the range, fill his basket and immediately know the delivery date.



BATIMATEC ALGER

Sika Algeria has participated last April in the International Exhibition of Building, Building Materials and Public Works BATIMATEC in Algiers.

With 1,224 exhibitors the show has been a great success. Sika welcomed its customers on 2 stands one inside and a second outside for product demonstrations.

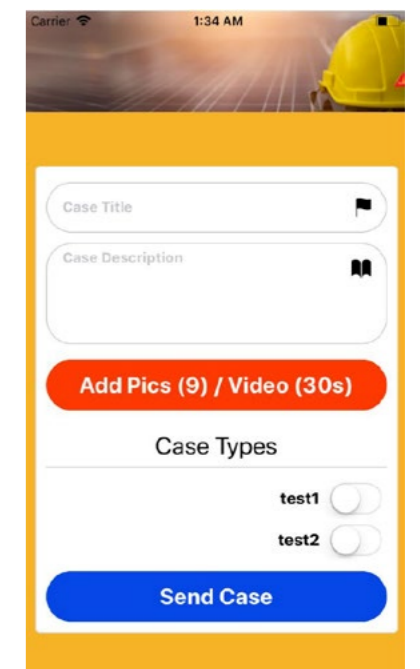
On this occasion, Sika has received the INNOV'BAT Innovation Award for the structural reinforcement systems Sika Carbodur and Sika Wrap.



ASK SIKA

Sika Egypt has launched a mobile application (for Android and IOS) ASK SIKA to answer to customers. After simple registration, customer can give details on his problem with explanations, photos and video.

Within 2 working days maximum he will receive an answer with a complete solution and links to products data sheets.



SIKA OPENS NEW PRODUCTION FACILITIES IN SENEGAL AND CAMEROON



Sika Senegal, a subsidiary created in 2017, which has been producing concrete admixtures for several months, has just set up a mortar production unit at its Dakar plant and has invited its customers for an official opening on November 26th.



The commissioning of the new plant in **Sika Cameroon** in Douala, enables the local construction industry to supply concrete admixtures and, from the beginning of 2019, ready-to-use mortars. The opening ceremony was held on December 1st.

Both events were marked by the presence of customers, local authorities, ambassadors of Switzerland and regional managers of the Sika Group, Ivo Schädler, Regional Manager EMEA and Jean de Martres, Africa area manager.

Over the last four years, Sika has significantly increased its presence on the African continent and positioned itself in these markets to take advantage of the construction boom triggered by rapid population growth and urbanization.

With 2 new production units in Dakar and Douala Sika is the leading local producer in these growing markets and will become the supplier of all major projects on the African continent.



PROJEKT INSPIRE

Education is a key component of the Government of Tanzania's development agenda. The country has made significant gains in access and equity in primary education.

Despite these successes, many challenges persist related to transition to secondary education, quality of education, actual learning outcomes, and the relevance of skills that graduates bring to the economy. Many children enrolled in school drop out before completing primary education.

Raymond C. Maro, the founder of ProjeKt Inspire is a young and driven Tanzanian man who is very passionate about education and creating career awareness. The ProjeKt Inspire program helps students choose the best courses in universities, while also allowing them to get involved in extracurricular activities that arm them with the knowledge and skills needed in the global market.

Sika Tanzania recently organized the first factory tour with children from different schools. Children love it and the aim is to schedule one every six weeks. Furthermore, Sika staff are giving lectures at the secondary school and university level and technical presentations once a month.

The major goal is to unlock young people's potential by actively involving them in making informed career decisions and career consultancy.



INNOVATION AND SUSTAINABLE SOLUTIONS FOR CONSTRUCTION AND INDUSTRY

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