

LANXESS adds new colour to urban landscapes

Mumbai, July 10, 2014. Given the rate of urbanization and industrialization in India, the construction industry will see a sustained growth. This includes road and rail, bridges, pipelines, commercial and residential complexes and a lot more. The Planning Commission of India has proposed an investment of around USD 1 trillion in the Twelfth five-year plan (2012-2017), which is double of that in the Eleventh five-year plan. It is also estimated that the share of private sector investments is expected to increase to half in the Twelfth five-year plan as compared to the intended 30% for the Eleventh five-year plan. This sector will clearly be a growth driver in the decades to come.

An interesting aspect in this context is the rising importance of the element of design and aesthetics in planning urban landscapes. Here's where LANXESS iron oxide and chrome oxide pigments have an important role to play.

The high-tinting strength pigments of the Bayferrox and Colortherm lines are used to impart attractive and enduring color to construction materials such as cast-in-situ concrete, pre-cast concrete components and concrete roofing tiles and pavers. Easy to use and ecologically friendly, the products are available in the form of powder, compact pigment, granules and slurry. These products display high quality in terms of color strength and color consistency. Because of their chemical structure, these products are characterized by weather resistance, lightfast, color fast and UV-stable and are well suited for coloration of construction materials. These characteristics of Bayferrox

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and Colortherm pigments guarantee long-lasting colors in any field of application.

The color range of the entire Bayferrox and Colortherm product portfolio includes yellow, red, green, brown and black. In between these colors, a variety of additional shades are possible. The shades tend towards the opaque colors found in nature, and thus fit harmoniously with the environment. Pure colors like yellow can be made by using white cement.

Some of the interesting applications of these LANXESS pigments are:

Colored Paving Blocks/ flooring tiles

While paving blocks can be seen commonly in India especially in modern infrastructure, flooring tiles are still popular in Tier-II and Tier-III towns of India. Colored concrete paving stones and decking slabs in pedestrian zones, public squares etc bring color to an otherwise monotonous surface. They can also brighten up bicycle paths, parking lots and approach ramps.

Yellows, reds, greens, browns and blacks are possible with Bayferrox and Colortherm product portfolio; in between these colours, a wide variety of additional shades are possible. The shades tend towards opaque colours found in nature and thus fit harmoniously with the environment.

The production of multi-colored concrete paving blocks and slabs is in principle the same. To achieve the two-colour or multi-colour effect, it is important that differently colored concrete mixes are not completely mixed with one another when they are processed.

Depending on the proportions in which the two or more coloured concrete batches are mixed, the emphasis can be placed more on one

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or other of the colours. Depending on the machinery available, different production procedures are possible.

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Artificial Turf – Rich green for sports and recreation

Colortherm[®] pigments often serve as coloring pigments for artificial turf. In 2005, the International Soccer Federation (FIFA) gave its approval for international matches to be played on these turfs. Colored Artificial turf can also be used in other applications such as golf courses, field hockey and cricket pitches, tennis courts and even bowling greens. It is also suitable for indoor applications such as lawn areas, surrounding roofed recreational pools or water parks with a tropical theme.

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Now, more and more roofed stadiums are being built, in which real grass grows poorly at best due to lack of natural sunlight. Not only do artificial turfs help overcome this challenge, it is easier to care for, and lasts much longer. However, artificial turf needs the proper coloration if it is to be virtually indistinguishable in appearance from its natural counterpart. Colortherm[®] iron oxide pigments and organic phthalocyanine pigments are a proven combination for this application. These pigments are not only cost-effective, they are also very lightfast, weather resistant and does not lose colour during its lifetime.

Colored Acoustic Barriers – Unobtrusive but effective noise barriers

Colored sound barriers insulate concrete walls from the noise outside. They are used mainly on highways or motorways. They can be colored

so that they can blend in with their surroundings, to create a uniform effect with neighbouring buildings, or so that they can stand out.

The special characteristics of LANXESS Bayferrox or Colortherm pigments are of importance since the sound insulating walls are exposed to different climatic conditions.

Safer Traffic via Colored Asphalt

Gone are the days when the ground beneath our feet and wheels was restricted to grey; modern roads has now being using color as a design element. Colored asphalt and mastic asphalt guide traffic, show the way, designate zones and decorate plazas – in soft or strong tones, matched to the ambience of the surroundings. LANXESS offers a broad palette of pigments for the coloring of bituminous mixtures as the raw materials for asphalt and mastic asphalt. Inorganic pigments from LANXESS such as iron or chrome oxide or mixed phase pigments are ideally suited for the coloring of bituminous mixtures. With its broad color palette, LANXESS also offers the greatest possible design freedom, with the color being influenced solely by the bitumen used.

Dark standard bitumen are most commonly colored red using heat stable iron oxide red pigments with high tinting strength. By using light colored specialty bitumen, the color spectrum can be extended to even include white surfaces. In addition to the pigments already mentioned, iron oxide yellow, brown and black can also be used with light bitumen.

Colored Concrete Masonry Blocks

Colored concrete masonry blocks can be used for new buildings which need to blend in with centuries old buildings or to accentuate an

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architectural effect: Buildings with integrally-colored concrete masonry blocks have a higher visual appeal than their grey counterparts. The choice of pigment is of major importance for the quality of the end-product. Years of tests on colored concrete products exposed to different climatic conditions all over the world have shown that inorganic oxide pigments have particularly good fastness. Pigments from the product ranges Bayferrox and Colortherm can be used to add colour. Their strength and consistency of color prove to be an advantage in this particular application.

Durable colored roofs

Colored concrete roof tiles bring an element of color to individual designs and roofing work. The choice of pigment is of major importance for the quality of end product. Years of tests on colored concrete products exposed to different climatic conditions all over the world have shown that inorganic oxide pigments Bayferrox and Colortherm are quite color fast and display good quality in the finished product.

Iron and chromium oxides for ceramic colors

There are various commodity articles made of ceramic materials. LANXESS offers a variety of chromium and iron oxides with defined particle size and high reactivity which can be used in the production of iron chromate and copper chromate spinels. All LANXESS pigments have proven long-term quality in terms of color consistency, excellent light fastness, weather stability, chemical resistance as well as outstanding covering power.

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Elegance in Black

The new powder pigment Bayferrox TP LXS 5253 can be used universally for the coloration of construction materials. Due to its higher tinting strength and a significantly more pronounced blue undertone, it produces a distinctive color shade that sets it apart from standard black iron oxides. The low water-soluble salts content and very low chlorine content makes the product ideally suited for use in reinforced concrete, too.

Colorful fiber-cement boards: Fiber-cement boards can be used for roofs or walls – for example, in the Soccer City Stadium in Johannesburg. Bayferrox inorganic color pigments were used for the stadium façade of glass fiber-reinforced concrete.

About LANXESS

LANXESS is a leading specialty chemicals company with sales of EUR 8.3 billion in 2013 and roughly 17,300 employees in 31 countries. The company is currently represented at 52 production sites worldwide. The core business of LANXESS is the development, manufacturing and marketing of plastics, rubber, intermediates and specialty chemicals. LANXESS is a member of the leading sustainability indices Dow Jones Sustainability Index (DJSI) World and FTSE4Good as well as the Carbon Disclosure Leadership Index (CDLI).

Forward-Looking Statements:

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Information for editors:

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