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POLLUTION ABSORBING BRICKS ASA SUSTAINABLE SOLUTION

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ABSTRACT:

Air pollution is the biggest problem world facing nowadays. It causes about seven million premature deaths every year. Inhabiting air pollution takes away at least 1-2 years of typical human life. In Italy, only 90,000 people die every year due to air pollution.In the construction industry, great advancement is being made to be part of the eco-revolution. Many alternate materials are being developed with conventional materials.While manufacturing conventional bricks creates a lot of air pollution. It is a big contributor to air pollution.The alternate material which will not produce pollution while it is manufactured and also it decreases air pollution is pollution absorbing bricks. They are also called breathe bricks. It is developed by Carman Trudell, an assistant professor at Cal Poly San Luis Obispo's school of architecture and founder of both landscape and architecture.

INTRODUCTION:

Welcome to the presentation on Revolutionizing Environmental Sustainability through Pollution Absorbing Bricks. This innovative solution has the potential to significantly reduce pollution in urban areas. Join us as we explore the groundbreaking technology and its impact on environmental sustainability. Urban pollution is a growing concern worldwide. Pollution Absorbing Bricks oer a sustainable solution by reducing air pollution and improving urban landscapes. This presentation will explore the benefits and potential of this innovative technology.

The detrimental effects of environmental pollution are well documented, impacting air and water quality. Traditional construction materials contribute to this problem. Pollution Absorbing Bricks, however, offer a promising solution by actively reducing pollution levels in urban areas.Rapid urbanization has led to increased air pollution and environmental degradation in cities. Conventional building materials contribute to this issue. Pollution Absorbing Bricks aim to address these challenges by actively reducing pollutants in the air.Pollution absorbing bricks work on the principle of air filtration. They filter the air from the outside and provide the filtered air to the inside of the structure. These bricks are embedded with a special coating of titanium dioxide, which acts as a catalyst to break down pollutants when exposed to sunlight. The bricks absorb and neutralize harmful pollutants, contributing to cleaner air and healthier environments. Pollution Absorbing Bricks are ideal for urban environments where pollution levels are typically higher. By incorporating these bricks into buildings and infrastructure, cities can proactively combat pollution and improve the overall air quality for residents and workers. The bricks are in the form of porous concrete block. They are specifically designed and shaped in a

faceted manner, so as to direct the airflow inside the system. Shafts are provided for structural reinforcement. A coupler made of recycled plastic is provided between two bricks and a hopper is provided at the base for the collection of particles.According to the test, which was carried out to detect the filtration capacity of the brick, it was inferred that the bricks, filters 30% of particles spanning up to2.5 microns or smaller in diameter, which is equal to smoke or haze, and it filters 100% of coarse particles with diameter more than and equal to 10 microns.The innovative technology behind Pollution Absorbing Bricks involves the use of specialized materials that actively absorb and neutralize pollutants from the surrounding air. This revolutionary approach has the potential to transform the construction industry and improve environmental sustainability. Environmental pollution is a combined result of natural and man-made (anthropogenic) contributions. This Theme deals with the technologies and equipment available for control of anthropogenic pollution. There are different options for reducing the impact of pollutants but the most cost-effective is to trap pollutants at source. The major sources of man-made pollution are related to engineering activities, such as excavation and processing of raw materials, power generation, transportation, etc. The interdisciplinary engineering efforts for environmental pollution management at source are often defined as environmental engineering. Technology in this area has been developing rapidly. Gaseous emission control systems can generally be divided into those designed. Those designed to remove pollutants, which are emitted as gases. Particulate removal techniques include cyclonic collectors and wet scrubbers, bag house fabric filters, electrostatic precipitators, etc. Gaseous pollutants are separated from the inert air stream through processes, such as condensation, absorption, adsorption, etc. Applied Combustion Science is yielding significant results both in the management of combustion emissions, and as a method for liquidation of pollutants, so the third Topic is devoted to this subject. The first three Topics cover also a necessary amount of chemical engineering fundamentals, needed for better understanding of the principles on which the different control technologies are built. The Topic on industrial processes reviews the latest pollution monitoring, control and management technologies employed by the major industries – the petroleum industry, power generation, the chemical industries, metallurgy, etc. which are perceived as landmarks of civilization, but are also major contributors to anthropogenic pollution. This topic is an illustration of the specific application of the technologies for control of gaseous emissions discussed in the previous topics, but covers also options for control of the pollution of water and soil, and the pollution control The widespread adoption of Pollution Absorbing Bricks has the potential to significantly reduce air pollution in urban areas, leading to improved public health and environmental quality. This innovative solution represents a major step forward in the pursuit of environmental sustainability.

- This report provides a quantitative analysis of the pollution absorbing bricks market forecast along with market segments, current trends, estimations, and dynamics of the pollution absorbing bricks market analysis from 2022 to 2032 to identify the prevailing pollution absorbing bricks market opportunities.
- The market research is offered along with information related to key drivers, restraints, and opportunities.
- Porter's five forces analysis highlights the potency of buyers and suppliers to enable stakeholders make profit-oriented business decisions and strengthen their supplier-buyer network.
- In-depth analysis of the pollution absorbing bricks market segmentation assists to determine the prevailing market opportunities.

- Major countries in each region are mapped according to their revenue contribution to the global market.
- Market player positioning facilitates benchmarking and provides a clear understanding of the present position of the market players.
- The report includes the analysis of the regional as well as global pollution absorbing bricks market trends, key players, market segments, application areas, and market growth strategies.

CONCLUSION:

The bricks filter up to 30% of dust particles of about 2.5 microns diameter or smaller.This is equal to the effects of smoke or haze. It blocks 100% of rough particles that have a diameter of more than or equal to 10 microns.Pollution AbsorbingBricks offer a sustainable and innovative solution to urban pollution challenges. Their ability to reduce harmful pollutants and improve air quality makes them a valuable addition to urban landscapes. Embracing this technology can lead to healthier and more sustainable cities for future generations.

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