apartment heat substation under any changes in temperature or HWS flow, as well as pressure in both the primary and secondary circuits in all operating modes. The combined regulator is designed to keep the heat exchanger cold when there is no water drawdown. This significantly reduces the heat loss from the AHS, as the heat exchanger is the largest source of heat loss.

The mixing unit ensures that the temperature of the heating medium is precisely maintained at the required level for underfloor heating between 30 °C and 50 °C.

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A. Chorna (PSACEA, Dnipro)
Scientific supervisor: T. Danylova, Cand. Sc. (Tech), Assoc. Prof.
Language consultant: K. Shabanova, English lecturer

FASHIONABLE WORLDWIDE CONSTRUCTION: TRENDS AND INSIGHTS

The construction industry is constantly evolving, adopting new technologies and trends to meet the demands of the modern world. Here are some insights into the fashionable worldwide construction trends:

3D Printing: 3D printing technology is revolutionizing the construction industry. It allows for the creation of complex structures with greater precision and efficiency. This technology has the potential to reduce construction time and costs while enabling more sustainable practices [1].

Connected Construction Sites: The use of connected technologies, such as Internet of Things (IoT) devices and sensors, is becoming increasingly prevalent in construction sites. These technologies enable real-time monitoring of construction processes, improve safety, and enhance project management [1].

Virtual Design and Construction (VDC): Virtual design and construction technologies, including Building Information Modeling (BIM), are gaining popularity in the construction industry. These tools allow for the creation of virtual environments to visualize and plan construction projects before they are built in the physical world. VDC helps improve collaboration, reduce errors, and optimize construction processes [2].

Sustainability: Sustainability is a key focus in the construction industry. Companies are adopting greener practices, such as using eco-friendly materials, implementing energy-efficient designs, and incorporating renewable energy sources. The goal is to reduce the environmental impact of construction projects and create more sustainable buildings [3].

Smart Cities: The rise of smart cities is influencing construction trends. Smart cities leverage technology and data to improve the quality of life for residents, enhance sustainability, and optimize resource management. Construction projects in smart cities often involve the integration of smart infrastructure, including smart buildings, transportation systems, and energy grids [4].

Automation and Robotics: Automation and robotics are transforming construction processes. Construction robots are being used for tasks such as bricklaying, concrete pouring, and demolition, increasing efficiency and reducing the need for manual labor. This trend is expected to continue as technology advances.

Global Market Insights: The construction industry is a global market, with different regions experiencing varying levels of growth and trends. For example, North-East Asia, including countries like China, Japan, and South Korea, has been a significant contributor to the construction market in recent years.

In conclusion, we should note that these insights are based on the search results and snippets from various sources. The construction industry is dynamic, and new trends and innovations continue to emerge as technology advances and sustainability becomes a priority.

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M. Kobets (PSACEA, Dnipro)
Scientific supervisor: Yu. Balashova, Cand. Sc. (Tech), Assoc. Prof.
Language consultant: L. Druzhinina, Assoc. Prof.

MODERN INTERACTIVE PEDESTRIAN CROSSINGS

It is a well known fact that every year many accidents, that result in injuries and deaths, occur at pedestrian crossings around the world. That is why the British insurance company Direct Line, in collaboration with the design bureau Umbrellium, has created a "smart crossing", called Starling Crossing (STigmatic Adaptive Responsive LearningING), which will make such road sections safer for pedestrians, cyclists and motorists.

This innovative development differs significantly from traditional crossings because it is not static, it is painted on the asphalt surface and it is constantly changed in accordance with the road situation. As you know, the design of the first zebra crossings with the rules of behaviour appeared in the 1950s. Since then, such markings have remained virtually unchanged, but today, in the 21-st century, roads are significantly different from the roads of the 20-th century.

How does Starling Crossing work? This system uses machine learning to make roads safer and the first prototype of such crossing has now been created on the territory of a television studio in London. The idea to create such a prototype became a necessity for testing different road situations, such as how a digital zebra would react to a cyclist approaching the intersection, to a truck being in a blind spot or to a child running out into the road. The Starling Crossing technology is not just white paint applied to the road surface, but a complex system of video cameras, computer algorithms and multi-coloured lights that signal pedestrians about their behavior in a given situation. These LEDs are protected from damage by special high-strength steel and plastic covers. Video cameras capture images of road users, after which artificial intelligence performs calculations and determines the current risks and then chooses what shape and colour of markings should be shown to the pedestrian at the moment. Three familiar colours are used