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Modern Architecture of Uzbekistan

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As far as we know, in traditional architecture of Uzbekistan the special place occupies a principle of the organization of the closed court yard.

At the dawn of its history the humanity used natural construction materials, namely timber, natural stone, clay, straw, among which clay was the most widespread and easy one to use. Universally available and cheap, it was actively used in construction not only in Central Asia, but also around many countries all over the world. Statistical data shows that about 30% of the world's population or around 1.5 million people live in clay houses. Around 20% of the above mentioned population lives in cities and city suburbs. Central Asian rural areas have over 50% of housing and facilities built of natural clay. This is primarily caused by its availability, economic efficiency and excellent insulation qualities. First primitive rounded shape air bricks were first applied in Central Asia ten thousand years ago and are perpetually used since then.

An excellent example for entire city built of clay is ancient Khorezmian city Toprak-kala, inhabited up to the 6th century AD. It was surrounded by a clay wall, had one major street with a number of secondary streets perpendicular to the major one. The remainders of clay sculptures, mural paintings, highly developed irrigation systems have been excavated.

Some historical sites dated from early Middle Ages still are in more or less good condition. In the period preceding the spread of Islam around Central Asia, Termiz had numerous Buddha temples, stupas and castles, some of which survived till present time. Corner towers, some walls and arch covered corridors of Kyrk-kyz palace in Termiz (10-11th century AD) maintained their original height, though its last clay dome collapsed in 1980. Chadrah-khovli erected in 18th century near Khiva still demonstrates its exceptional sublimity. Uzbekistan also has numerous houses built up from wooden frames, clay and air bricks spread around its territory and majority of them is over 100 years old.

The most popular unburnt construction material was "pakhsa". It looked like a wall comprised of earthen belts of various height. Widely spread 75×90×100 sm (Ak-tepe castle) and 100×90×300 cm (Tali-barzu castle) "pakhsa" blocks were manufactured directly on site. Air bricks, clay mortars, puddle and "guvalya" (rounded air bricks) were used as well.

Researchers conducted in Tashkent Institute of Architecture and Construction showed insulation and structural qualities of clay mixture mortars. Addition of various alkaline and calcium comprising elements resulted into the double or triple increase of resistance against compressive pressures, compared to regular clay mortars.

Clay has nothing harmful for human organism. Our granddads knew that. Thus, a medieval writer Narshakhi tells that Ismail, the governor of Bukhara, was advised to move from the City palace, built of burnt bricks to a clay countryside residence in the village of Zarmon.

The principal and probably the only drawback of clay construction materials is their poor earthquake resistance. Consequently, in middle ages, the clay, air brick and half-timber framed houses had no foundations, but were erected on artificial puddle earth platforms. They served as damping anti-earthquake stabilizers to reduce the seismic waves.

Taking into account the ecological clarity, being expensive, low energy capacitance and availability for building not only habitat constructions, but also, prestigious objects from local materials, this direction may get future development.

As we see for rather small term architecture and urban-planning of Uzbekistan of an independence epoch have reached high development and considerable experience is saved up. Concrete methodological lines and art features of this development were outlined. In this connection, it is time to refuse the long time out-of-date principles of moving and the regional lay-out, known under textbooks 1960-80x years. Radical updating on methods of working out general plans of cities with unfairly enormous industrial-warehouse zones is required. It is necessary to introduce objects of small and average business, idea of studying central city streets, and introducing of new types of building. New objects should be projected, taking into account the newest technologies and centuries-old traditions, reflecting innovative ideas of the period of independence.

Innovative ideas of architecture and urban-planning independence period should be deeply studied and introduced in curricula of the higher educational institutions of the Republic.

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Means of Learning CaadSoftwares	Percentage
A	0%
B	43%
C	21%
A&B	10.5%
A&C	5.2%
B&C	13.7%
A&B&C	5.2%
NONE	1%

Table 1: Means of learning CAAD by students.