

# Diachronic study (survey) of terminological units related to hydrotechnical construction in Uzbek, Russian and English languages

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**Abstract:** The beginning of any new sphere leads to the creation of a certain terminological system, and the development of this industry over the centuries leads to the development of a terminological system.

**Key words:** terminology, hydrotechnic, hydrotechnical construction, ditch, hammam, running water.

In particular, studying the emergence, formation and development of terms related to the construction of hydrotechnical constructions in different system languages, we can learn from history books that the construction of such structures requires humanity first of all to unite, work together, calculate and, most importantly, the involvement of the population, and humanity has achieved such a rise in the Neolithic (New Stone) age. Water is valued as the most essential source of life. While water is the simplest and most pristine liquid on earth, it is also the most crucial genetic element for all living organisms, creatures and humans. Therefore, when humanity reached its first peak of development, they settled in areas close to water and left the nomads.

The beginning and development of irrigation agriculture has become a new stage in the development of civilization in Central Asia and a number of other countries (Egypt, Syria, Iraq, Iran, India, China). Archaeologists N.Gulonov and S. Tolstov say that the canals 40~50 km long and 35-40 meters wide were built more than three thousand years ago in Khorezm oasis. At that time, the **dam** was adapted to raise the water level, use large **ditches** and **channels**, which led to an increase in agricultural yields, which accelerated the beginning of the settlement of the population in the oases.

Khorezm and Zarafshan oases were among the oldest agricultural regions of our country. It means in our country people began to engage in agriculture based on artificial irrigation and plowing, they dug canals and opened new lands 5-6 thousand years ago.

The Fergana swamp is a flat part of the valley. The central part of the swamp consists of plains formed by terraces of the Syr Darya. The third Above-floodplain terrace of the Syr Darya is connected to the cones of tributaries of the Sokh, Shokhimardon, Isfayram and other smaller rivers flowing from the Kurama and Chatkal ridges, such as Podshootasoy, Govasay, Chodaksay, Kasonsai, Alay and taking water from the Turkestan ridges. To achieve and increase yields in agriculture, residents used these mown cones and dug ditches, gutters<sup>1</sup>.

According to the notes from historical sources Ibn Haukal and Istakhri wrote that in the cities of Fergana there was much **running water**<sup>2</sup>. Remains were found in the cities and its manuscripts in the ruins of the water supply system. Water was supplied to residential buildings through ceramic pipes. Many kilometers of pipeline structures have passed underground. In Akhsikent, a gallery made of baked bricks, brought from Kasonsai, was built in the form of a **tunnel**, inside which there was a special water supply system, through which large ceramic pipes with a diameter of 24-26 cm were supplied. In the center of the hearth there was a spillway measuring 0.96 x 0.68 m and 0.40 m deep. Water flowed through this plug from north to south along the earthen ribs<sup>3</sup>

During this period, pools also appeared in Akhsikent with surface water structures. Ten pits where trees were planted around for the citizens were also found by archeologists<sup>4</sup>.

The next type of water structure is "hammam" (حمام) a public bathroom where people not only had a shower but also chatted, got some treatments and had a rest the history of its development dates back to our era. In the Central Asia, the period when hammams developed and became part of the culture was in the IX-XII centuries<sup>5</sup>.

According to historical sources, at the end of the X century in the regions of Eastern Turkestan, Ettisuv and the front area of the Tien Shan The Karakhan state which consisted of different Turkic tribes was formed and the famous linguist Mahmud Koshgari, who lived during this period, recorded the 1200 terms of geology and hydraulic engineering in his work "Devani lug'atit-Turk" (1072-1074)<sup>6</sup>.

The first medieval phraseological turns in the work "Finish the wall in Turkish" are given in the style of Turkic songs (poems). For example, the term "qum" (قۇم) (water waves) is used in the following way in the poem:

« Ko'lim qumi qopsa kali tamig' itar,  
Ko'rsa ani bilka kishi so'zga butar»

The meaning: "If my lake waves it destroys my thoughts and those who see it themselves will believe it".

Also this book includes some terms concerning hydrotechnical constructions. For example, "ariq" (أريكة) (ditch) had the same form in IX-X centuries and also Arabic version "nahl" (ناهل) was also used in the speech as the synonym of "ariq". Let's take another saying from this book: "Ag'ilda og'lak tug'ilsa ariqda oti ilinur". It means when someone is born his share-out is sent by God. This proverb is used to warn people not to chase after the wealth as one can not earn more than what Lord will give him<sup>7</sup>.

The next word is "kecig" (كيتك) which means bridge. There is a proverb with this word that is used to comfort people who are hesitating or feeling frightened from the issue they have. It is "Qaynar og'iz kechigsiz bo'lmas" it means "fast flowing water cannot be without a bridge".

"Solar" (سولار) is one of the canals starting from the Buzsuv. In the land tax documentation belonging to the middle centuries it was called "rudak" (روداك) According to the professor H.Hasanov the term "solar" proves the fact that the canal was dug by the warlord's order. But also there was a tribe called "solar" who might be involved in the canal work but it is not proved.

In the areas near Fergana valley constructing houses and hydrotechnical facilities was developing. People's houses had several building which consisted of interior that was called "darun" (درون) and exterior called "berun" (بيرون). Besides bedrooms and dining rooms all the houses had living room (for guests). In order to make the room light they left one or two holes with fences sometimes with doors. In the entrance of the room there was a place for getting washed called "obrez" (أبرز). The floor was made of wood that had some holes between and poured water flowed through those holes. The term "obrez" is derived from persian word "ob" water and "rez" pour. It was built in the entrance in order to wash hands and face before entering the building. The fact that all the houses at that time had "obrez" can be seen in the books of famous writers. For example: "Bare footed woman with old coat hiding her face with her scarf was standing in the "obrez" (entrance) shaking from the cold.<sup>8</sup>" In the next example S.Ayniy in his book "Memories" writes: "As the house didn't have "obrez" we had to wash our hands and face in the street."

In conclusion, it can be seen from the history that with the development of civilization in any sphere the number and the form of terms also increased. In the beginning people lived near the sea and rivers later they learned to use them in father areas digging ditches, canals, lakes and then they even learned to use hydraulic facilities at home.

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