

company. Also advertising on the Internet facilitates the dissemination of information about the product and increases its merchantability.

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TO THE QUESTION OF THE CONDITION OF THE DEVELOPMENT OF ENERGY SAVING OF URBAN ELEVATOR

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A new increase in the prices for energy resources, including electricity, has made the problem of reducing the consumption of electricity in all spheres and industries and everyday life acute. This, in turn, leads to a revision of the approaches and methods of work, management and control of various industrial, municipal and agricultural facilities.

The distribution of electricity between consumers correlates approximately in such a way that: 70% of the consumed electricity refers to different electric drives (regulated and unregulated), machines and mechanisms of communal, agricultural and everyday life. About 15% of the electricity comes to various electrochemical installations, 10-15% of the electric energy go to the rest of the consumers.

It is obvious that the share that accounts for the consumption of electric drives is very significant. Therefore, it is necessary to look for the ways to solve the problem of reduction of electrical energy consumption at these facilities using AC and DC electric drives.

First of all, it is necessary to check the compliance of the workload of the electric motors with respect to their nominal mode and the steady power that is available. As it is known, one of the parameters of energy efficiency is efficiency. Therefore, one of the ways to optimize is making in accordance with the possible maximum efficiency, relative to its maximum efficiency. All of the above mentioned relates more to unregulated drives. One of the significant consumers of electrical energy in the city, is the city elevator due to the large number of people serviced [4].

One of the ways to reduce the cost of electrical energy is using of a frequency-controlled converter [2]. The use of a frequency-controlled drive significantly reduces the costs of starting and braking of these drives, as well as the dynamic loads that occur during transient process. The use of a frequency-controlled drive leads to 40-60% of energy savings which, in turn, is realized by reducing the moments of inertia, all dynamic links when using a single-speed motor with a short-circuited rotor of general use. The work also demonstrates a reduction of power consumption due to a smooth acceleration and deceleration as well as a significant reduction of the load in the elements of the kinematic links of the drive

chain, namely, brake pads, gearbox, traction sheave, counterweight suspension elements and cab, which, in turn, leads to reduction of operating costs. However, the use of a frequency-controlled electric drive for a single-speed mode of operation can increase the payback period of the electrical equipment, namely, for 6-8 years, which significantly slows down the frequent use of this method of elevator control [3]. Thus, finding new ways of regulation in the framework of technical and economic norms and payback periods is a priority and urgent task for the municipal economy[1].

Table 1. Technical characteristics of winches installed on low-speed elevators with different cab speeds

Parameter	Passenger lifts (320 kg)				Elevator sick leave	Passenger and passenger-and-freight elevators	
	ЛП-150	ЛГИ 60			ЛП-150	ЛП-180	
	0,5 m / s	0,71 m / s	1,0 m / s	1,4 m / s	0,5 m / s	1,0 m / s	1,4 m / s
gear type:	РГЛ-150	РГЛ-160	РГЛ-160	РГЛ-160	РГЛ-150	РГЛ-180	РГЛ-180
gear ratio	59	50	40	35	59	45	35
number of worm-gear starts	1	1	1	1	1	1	1
diameter of traction head pulley, mm	770	770	770	770	600	930	930
motor type:	4A/112 MB8 НЛУЗ	AC2-72-6/18 ШЛУЗ	УТМ250 AC6/24	ЗАН2806/24ИЛУЗ	AC2-72-6/18ШЛУЗ	ЗАН2808 6/24НЛУЗ	ЗАН280М А6/ 24 НЛУЗ
power, kWt	2,2	3,5-1,17	5/1,25	7/1,75	3,5/1,17	7/1,75	10/2,5
rotational speed of rotor, min ⁻¹	680	950/276	950/222	945/205	950/276	945/205	945/205
electric motor mass, kg	119	189	295	370	189	370	460
winch weight, kg	630	750	815	860	700	1650	1700

The suggested solution is using of a single-speed asynchronous motor with a squirrel-cage rotor, with a possible realization of a precise stop of the elevator car in the dynamic braking mode.

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LANDSCAPE DESIGN TRENDS 2019

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Fashion is fleeting and changeable, and gardens are not created for one year. And it takes quite a lot of time to create them, even if large-sized plantings are used – the plants need to adapt to the new conditions and survive the stress after transplantation. Therefore, landscape design does not respond to fashion trends so quickly, but, nevertheless, it cannot remain aside from the requests of time.

1. Geometry and asymmetry. In landscape design, the popularity of the geometric theme, which began with drawings on textiles and confidently took the leading positions in interiors and architecture, is growing. Geometry and asymmetry of planning solutions, paving, garden furniture, clipped hedges, reinforced by contrast with plantings in a natural style, cereals, can be seen in gardens more often.
2. Minimalism in detail. In recent years, minimalism inspired by the Scandinavians has dominated modern gardens. In the coming years, its popularity is unlikely to fall much. But the interiors are already returning to the 80th, a mixture of times and styles, giving freedom of creativity and allowing to express the personality of the owner. Probably in the near future a mix of styles and styles from the interiors will flow into the garden.
3. Color contrasts. Light furniture of cheerful colors, which is easy to move, bold combinations of colors will add to the space of the garden game element.
4. Personalization of the garden, its emotions and character. More and more in the gardens there will be small architectural forms, garden benches, custom-made lamps, by individual measures, by hand. Furniture, arbors - as art, but comfortable and functional. The cumbersome “palace” lanterns are a thing of the past; they are replaced by the “right” light, creating coziness and emphasizing the beauty of landscapes.
5. The pursuit of naturalness. Appeal to local producers, the use of local materials, plants from local nurseries is becoming popular. Simple forms, pronounced textures, emphasizing the authenticity of materials, rough, seemingly untreated surfaces are actual. In place of overloaded complex mix borders come landing in a natural style.
6. Garden for the frame. Today it is difficult to imagine the world without self and social networks. And, therefore, the need for creating a garden, which may become an object for the photographer or a worthy background for portrait photography, is growing.
7. Using the most unpretentious plants. There remains the tendency to use stably decorative, unpretentious plants that can grow for a long time in one place without transplants and meticulous care,