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INCREASE OF ENTERPRISE COMPETITIVE ABILITY BY IN-TIME EQUIPMENT MODERNIZATION

Scientific – technological progress in conditions of megapolis brings certain tendencies in interaction of marketing environment and rival industrial enterprises activity. To increase competitive ability industrial enterprises need to substitute out - of - date products. In this situation the state plays the main role, for example, its housing and public utilities reforming develops competitive environment in this field.

The principle of cost minimization overlords in housing and public utilities, causing many dangerous tendencies. As a rule, citizens pay for household waste scavenging, but the state has also to subsidize this process. Constant budget dependence leads to spottiness, low investment activity and vague infrastructure development.

In long term competitive ability of organizations scavenging household waste depends on time. From one hand, such an organization should be competitive for a long period of time, from the other hand, it is almost impossible to keep a constant level of competitive ability because of a great number of contradictory factors. Being influenced by external factors, such as scientific – technological progress and competition in the field, competitive ability of an organization could become worse, if necessary steps, such as in – time modernization or fund renewal, are not made.

The authors analyzed cost structure of the organization, scavenging household waste in SWAD of Moscow (Cheryomushky). It was found out that refuse receptacle park service costs was 20%. It can't help influencing its technical – economic rates, life cycle duration and competitive ability level. In this situation it is necessary to reduce costs by in – time modernization and equipment replacement, its optimal service and maintenance with consideration of external factors influence and human resources.

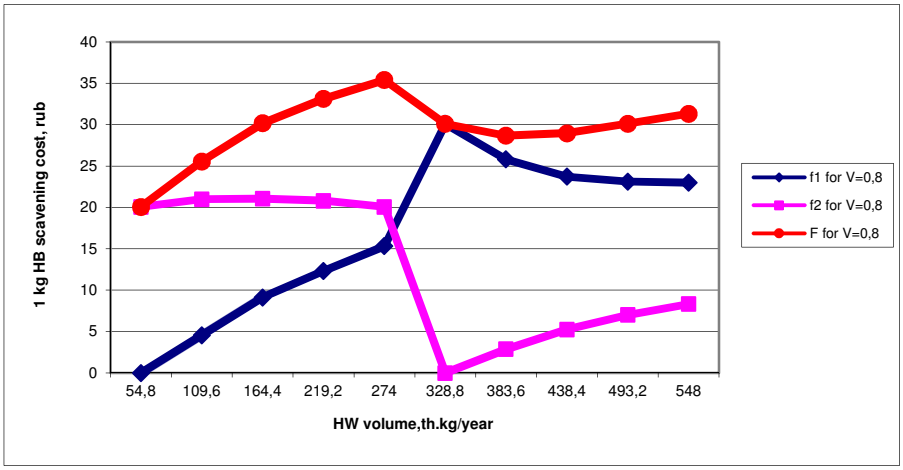
Any equipment has its individual maintenance cost. The system of cost consideration should be provided with the information about unsuitable refuse receptacles, unprofitable maintenance and proper refuse receptacles.

To solve this task we used the method of equipment replacement term on the basis of maintenance cost consideration and of the field marketing research. We analyzed and compared using of two types of refuse receptacles (0,8 and 1,1 m^3) in Cheryomushky district. Initial data and calculation are presented in table 1, graphs 1, 2.

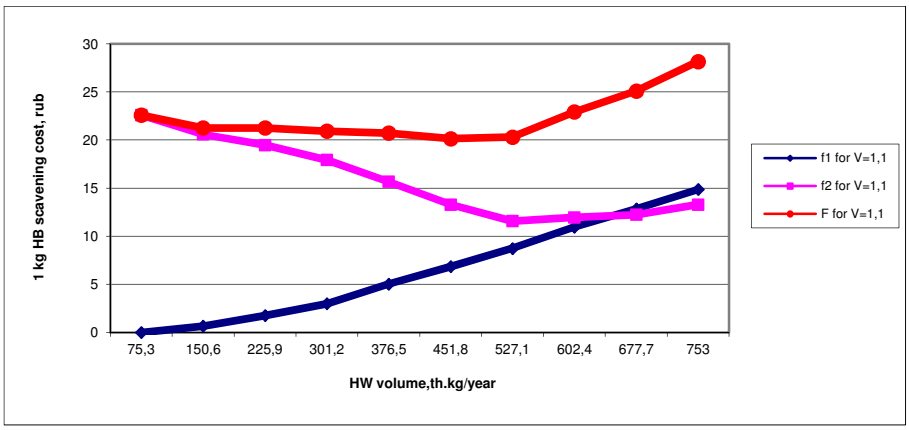
Table 1

Calculation of minimum refuse receptacle (0,8/1,1 m^3) maintenance total cost on the basis of work volume (HW)

Year	HW volume with progressive total, th. kg/year	Annual maintenance cost, rub.	Maintenance cost with progressive total, rub.	Maintenance cost on 1 HW kg to the end of the period, rub. $f_1(x)$	Refuse receptacle cost to the end of the period, rub.	Used capital to the end of the period, rub.	Used capital on 1 HW kg to the end of the period, rub. $f_2(x)$	Total cost on 1 HW kg,, rub. F(x)
1	54,8/75,3	0/0	0/0	0/0	4600/ 11300	1100/ 1700	20,07299/ 22,57636	20,07299/ 22,57636
2	109,6/ 150,6	500/100	500/100	4,562044/ 0,664011	3400/ 9900	2300/ 3100	20,9854/ 20,58433	25,54745/ 21,24834
3	164,4/ 225,9	1000/300	1500/ 400	9,124088/ 1,770695	2240/ 8600	3460/ 4400	21,04623/ 19,47764	30,17032/ 21,24834
4	219,2/ 301,2	1200/500	2700/ 900	12,31752/ 2,988048	1140/ 7600	4560/ 5400	20,80292/ 17,92829	33,12044/ 20,91633
5	274/ 376,5	1500/ 1000	4200/ 1900	15,32847/ 5,046481	200/ 7100	5500/ 5900	20,07299/ 15,67065	35,40146/ 20,71713
6	328,8/ 451,8	5700/ 1200	9900/ 3100	30,10949/ 6,861443	5700/ 7000	0/ 6000	0/ 13,28021	30,10949/ 20,14166
7	383,6/ 527,1	0/1500	9900/ 4600	25,80813/ 8,726997	4600/ 6900	1100/ 6100	2,86757/ 11,57276	28,6757/ 20,29975
8	438,4/ 602,4	500/2000	10400/ 6600	23,72263/ 10,95618	3400/ 5800	2300/ 7200	5,24635/ 11,95219	28,96898/ 22,90837
9	493,2/ 677,7	1000/ 2100	11400/ 8700	23,11436/ 12,83754	2240/ 4700	3460/ 8300	7,01541/ 12,24731	30,12976/ 25,08485
10	548/753	1200/ 2500	12600/ 11200	22,9927/ 14,87384	1140/ 3000	4560/ 10000	8,321168/ 13,28021	31,31387/ 28,15405



Gr.1. Cost and work volume (0,8 m^3refuse receptacles) correlation



Gr.2. Cost and work volume (1,1 m^3 refuse receptacles) correlation

According to the graphs 1, 2 European refuse receptacles have the longest life cycle and period of service, a 0,8 m^3 refuse receptacle needs to be replaced every 5 years. Larger European refuse receptacles can serve longer than 8 years. Their maintenance costs less than maintenance of the others. So we can conclude that European refuse receptacles use is more profitable for this organization and provides high long – term competitive ability.