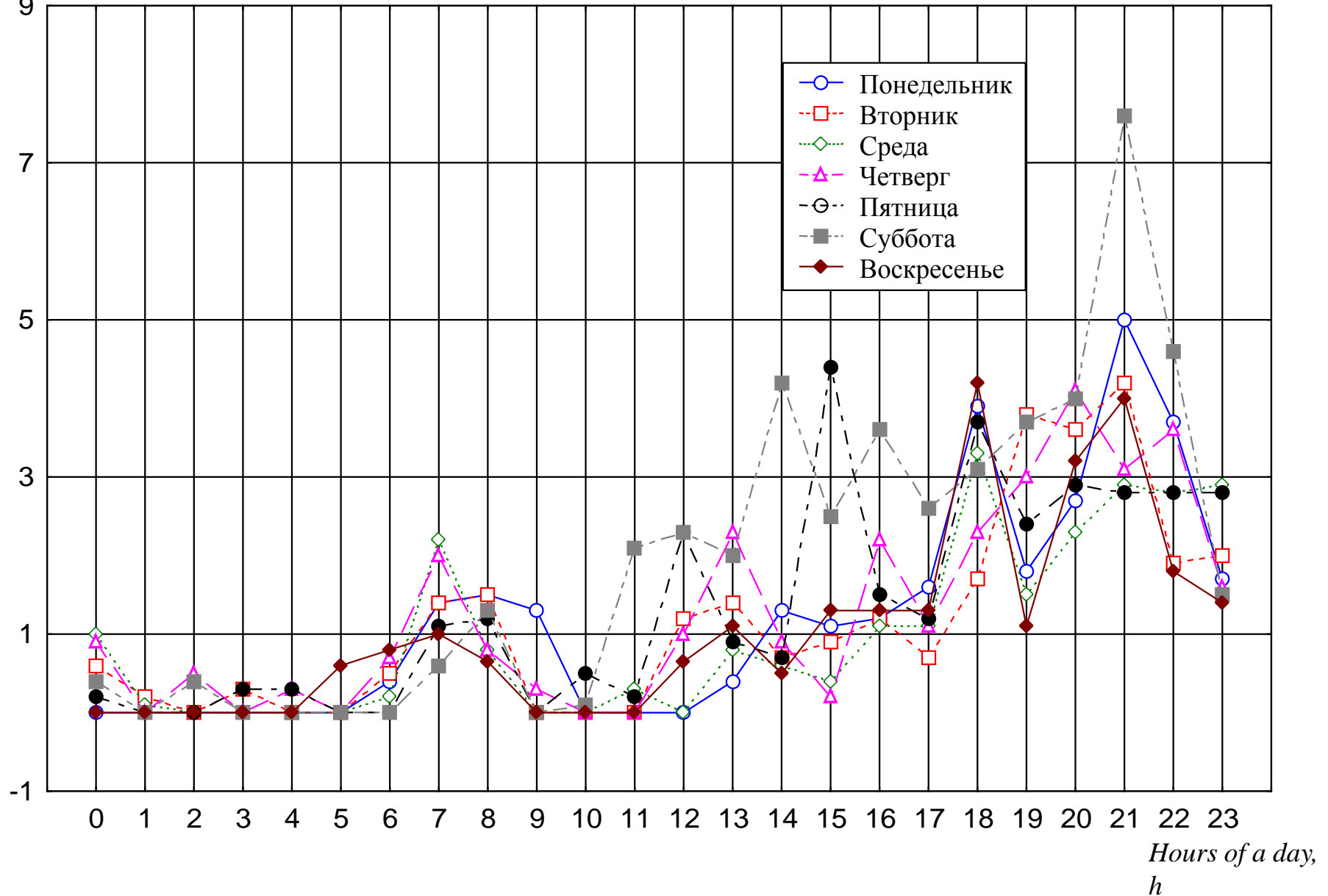


WATER CAPACITY FOR DOMESTIC HOT WATER SUPPLY SYSTEMS

**Prof. Victor Puhkal,
St. Petersburg State Architectural and Construction University, Russia**

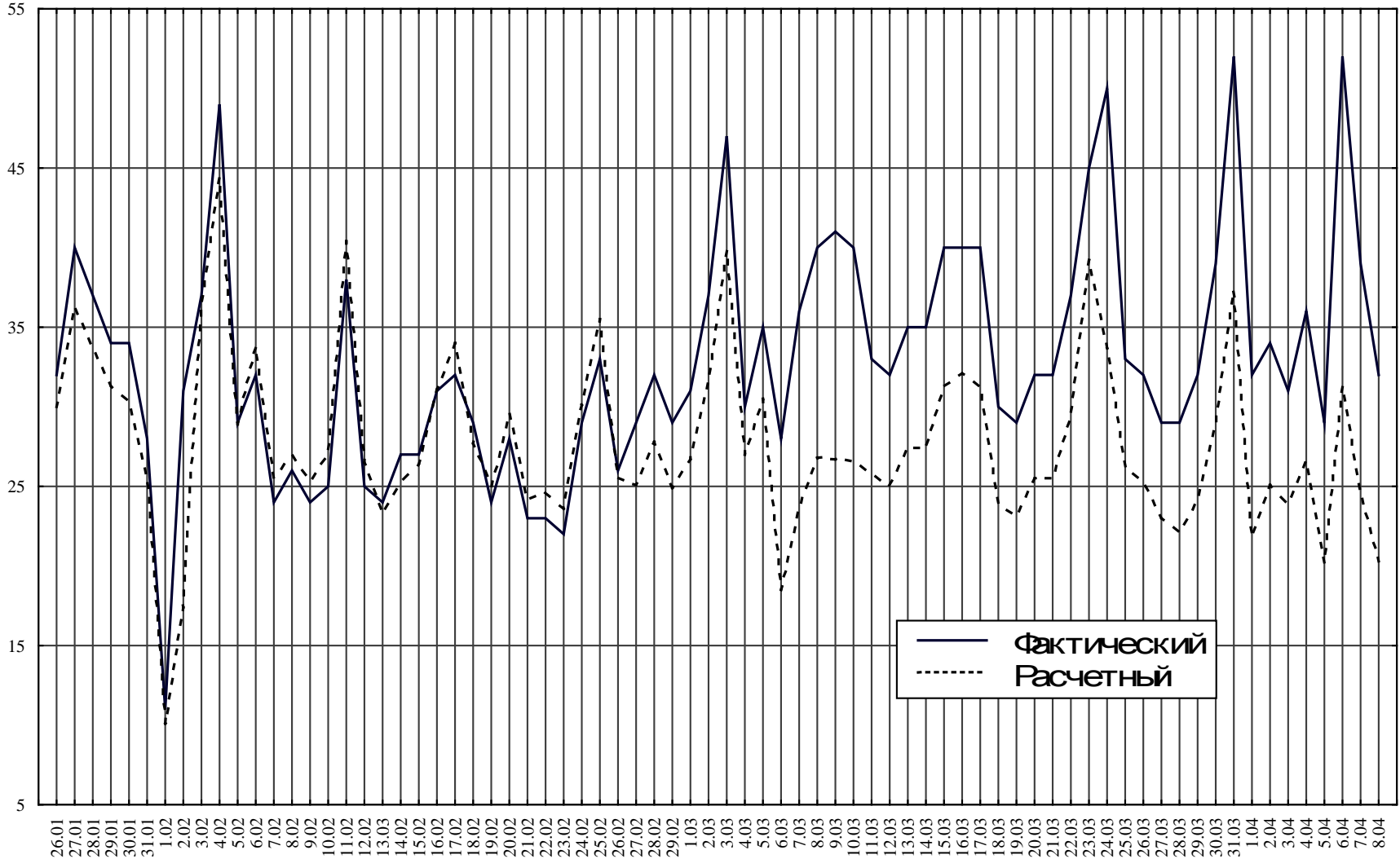
Hot water consumption per hour during the day

Water consumption,
 m^3/h



HOT WATER CONSUMPTION PER DAY DURING THE OBSERVATION PERIOD

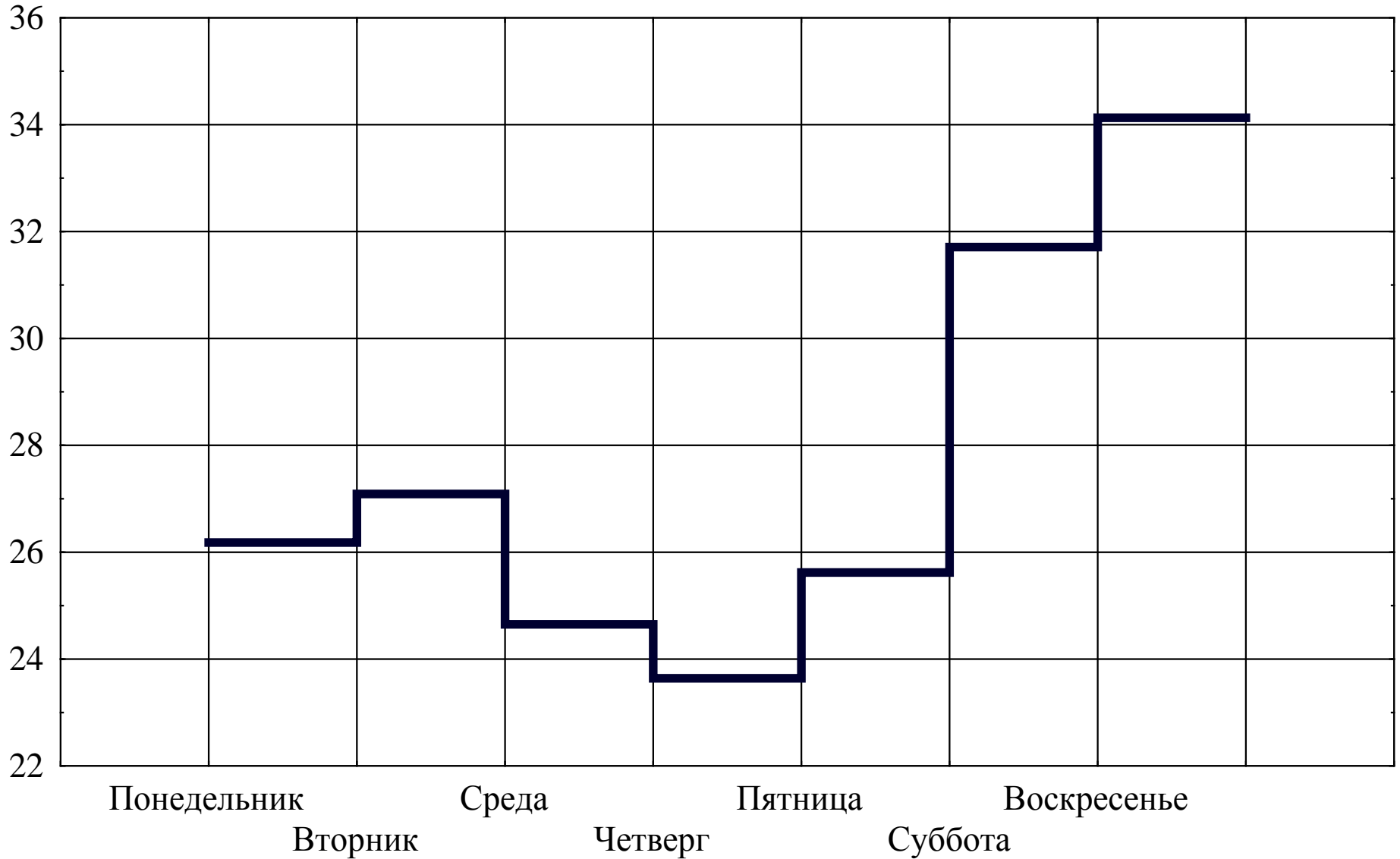
Consumption per day,
 m^3/day



Date

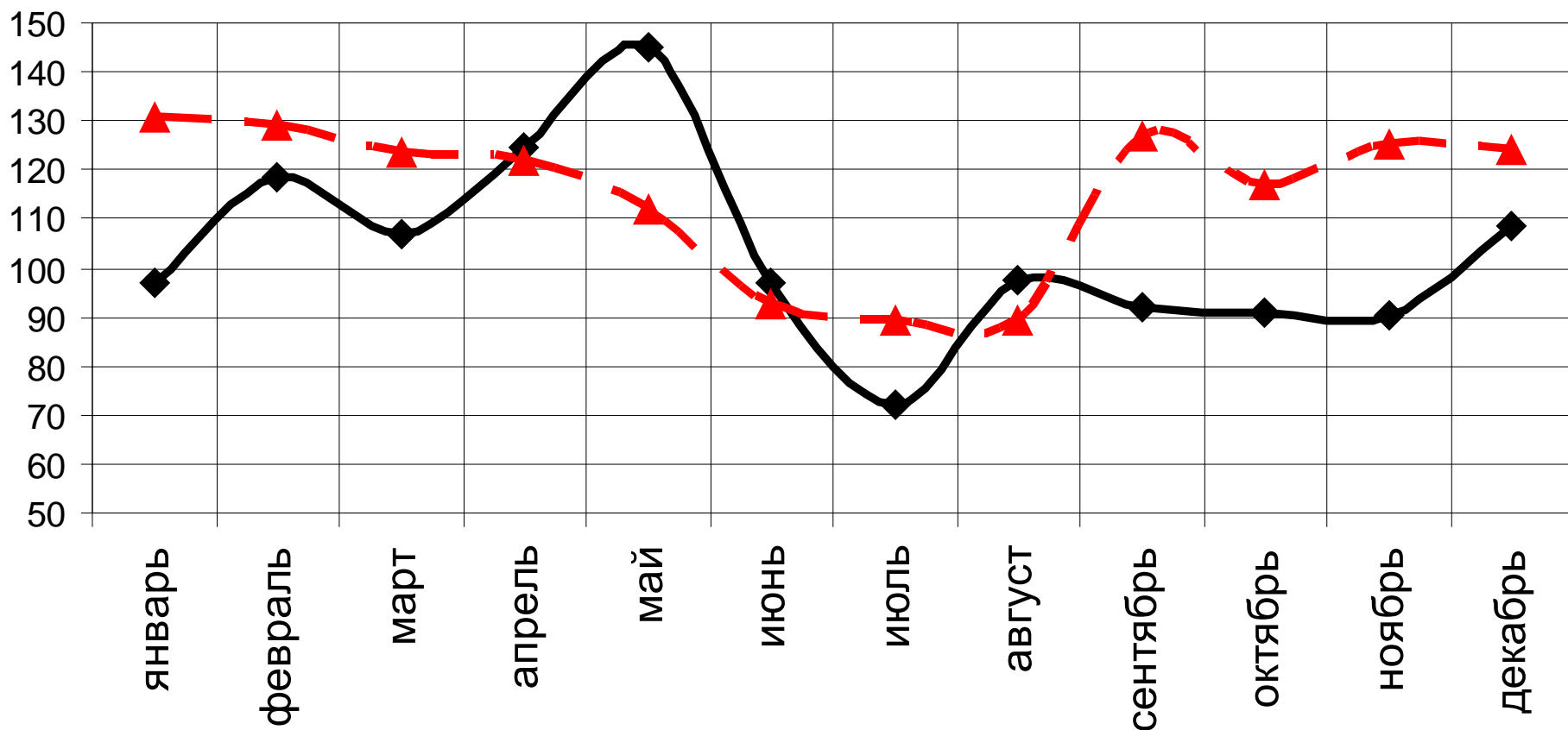
HOT WATER CONSUMPTION PER DAY ON DEFINITE DAYS OF THE WEEK

Consumption per day, m³/day



CHANGE OF HOT WATER CAPACITY DURING THE YEAR

$a, L/(day \cdot person)$

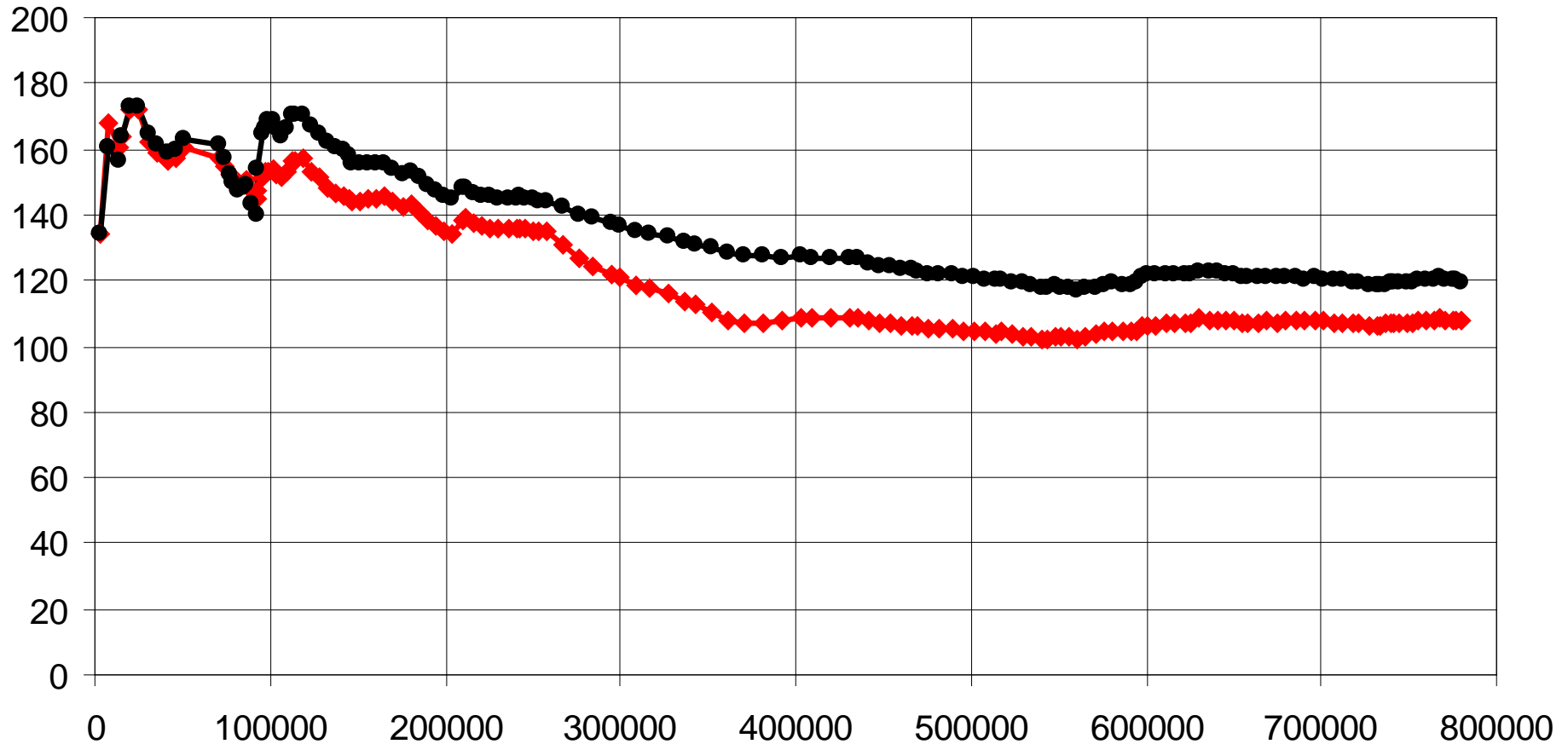


—◆— по результатам измерений; -▲- по данным [3]

Месяц

DEPENDENCE OF SPECIFIC WATER CONSUMPTION PER CAPITA OF THE NUMBER OF MENS-HOURS OF WATER CAPACITY

$a, l / (\text{day} \cdot \text{person})$



◆ средняя арифметическая, взвешенная по величине человеко-суток
● средняя арифметическая величина

$N \cdot T, \text{чел} \cdot \text{сут}$

DESIGN REGIME OF WATER CAPACITY

$$\overline{Q_{\Sigma}} = T^K$$

$\overline{Q_{\Sigma}}$ - water capacity measured in relative units during some time T

T - time measured in shares of the whole period of water capacity

$$K = K_{X\%} = \frac{Q_{\div.X\%}}{Q_{\tilde{\delta.\div}}}$$

$K_{X\%}$ - general hour irregularity factor with X% guarantee;

$Q_{\div.X\%}$ - water consumption per hour with X% guarantee

$Q_{\tilde{\delta.\div}}$ - average water consumption per hour for hot water supply

$$Q_{\Sigma} = Q_{\tilde{\delta.\div}} \cdot K \cdot T^{K-1}$$

Water capacity chart

