TABLE 2

Exp. No.	I_{10}, kA	I_{20}, kA	I_{1max}, mA	I_{2max}, kA	H_{max}, kOe	W_0, kJ	W_l, kJ	W, kJ
13	394	17,5	9,51 (9,15)	424	164	46,5	68,2	285
12	400	28,5	7,40 (8,33)	526	90	48,0	106	319
14	318	22,3	9,25 (9,95)	650	100	51,0	160	499
15	318	26,4	8,85 (9,62)	735	134	51,0	207	539
16	303	31,0	8,42 (8,37)	860	60	69,0	280	778

Since the current I_1 in the circuit of the explosion-magnetic generator was measured only for the "feeding" stage, the values of I_{1max} in Table 2 were determined using the formula

$$I_{1max} = I_{10} \cdot I_{2max} / I_{20}.$$

The same table gives in parentheses values of I_{1max}, determined from the results of measurements of H_{max} and I_{2max}. The total energy W was determined from the mean values of I_{max} from Table 2.

The calculations show that the energy transmitted to the load increases considerably with a rise in the coefficient of the coupling k of the windings of the transformer. An increase in the value of k as a result f a decrease in the gaps between the windings could not be realized due to a lowering of the electrical strength of the insulation. Therefore, to increase k, it was decided to increase the diameter of the solenoid and, correspondingly, the length of the explosion-magnetic generator, to maintain the required degree of compression of the magnetic flux. This made it possible to increase the energy in the load and to obtain $W_l/W_0 \simeq 4$, which considerably exceeds the results of [6].

In the process of compression of the explosion-magnetic generator, there were observed considerable (up to 60%) losses of the magnetic flux, not characteristic for generators of this type [4]. It is to be expected that the final development of the construction of a an explosion-magnetic generator will make it possible to decrease the losses and to increase the energy in the load. Under these circumstances, the weight of the explosive can obviously be decreased, since, in the present explosion-magnetic flux generator, it exceeded the weight required for compression of the magnetic flux.

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ERRATA

In issue No. 3, 1976 on p. 339 the integral $\int_0^\infty n_3 dt$ appearing on the 21st line from the bottom of the page is incorrect. It should be $\int_0^\infty n_3 n_6 dt$.