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Fe₃O₄.

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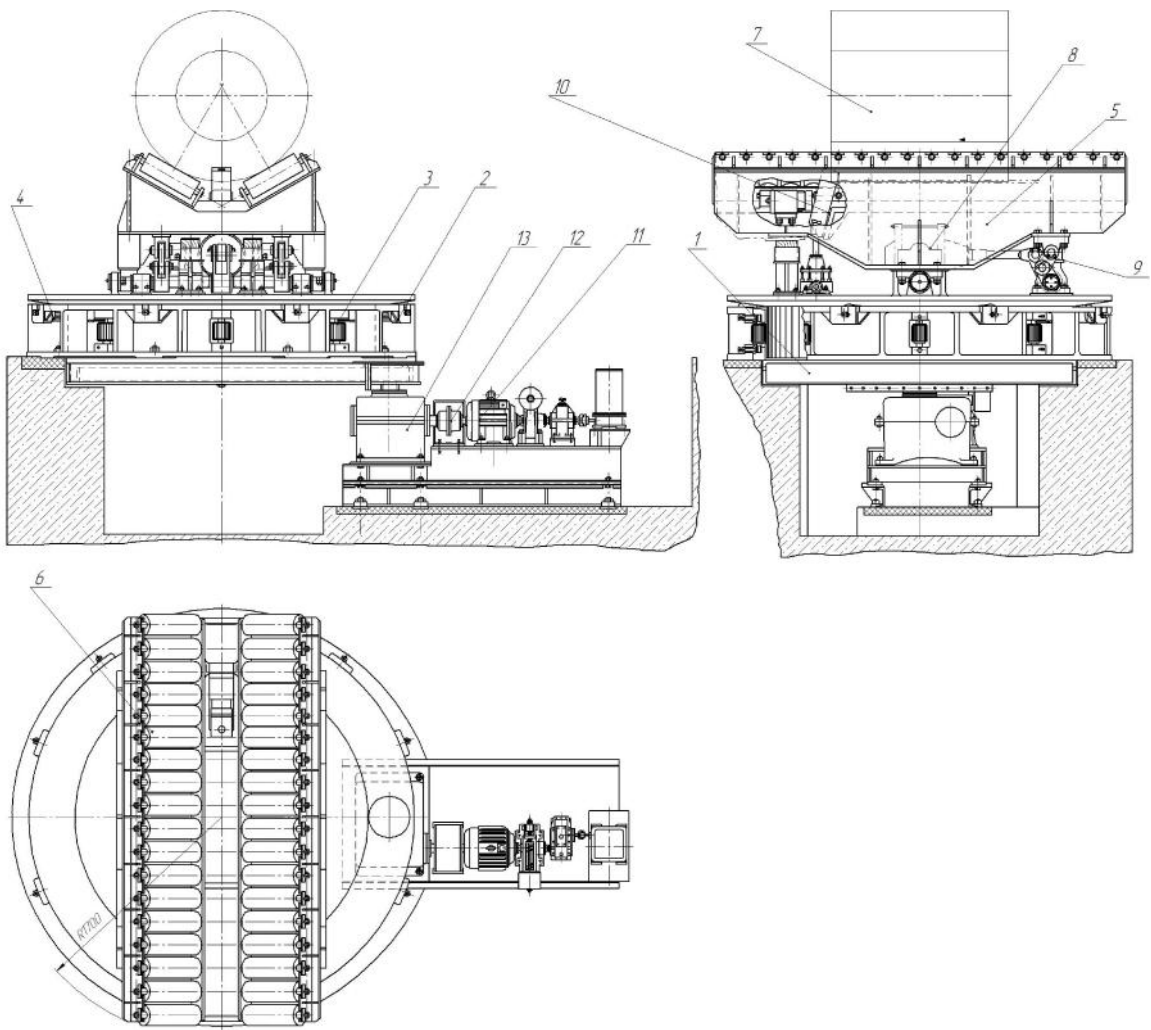
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2.2

$$U = 380 \text{ .}$$

2.3

:

$$- Q_{i1} = 103$$

$$- Q_{i2} = 45$$

$$- n_c = 2,63^{-1}$$

i

i

$$- D_o = 2670$$

2.

2.2

$$Q = Q_{i1} + Q_{i2} = 103 + 45 = 148 \tag{2.1}$$

$$U_2 = \frac{Z_4}{Z_3} = \frac{275}{40} = 6,875 \quad (2.2)$$

,

$$n = n = 2,63 \cdot 6,875 = 18,1 \quad (2.3)$$

(Q)

,

$$D_0 = 2670$$

,

$$- = \Sigma \quad (2.4)$$

-

-

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$$= \cdot \varphi, \quad (2.5)$$

-

$$= 4^\circ;$$

$$() = \pi \cdot \frac{4^\circ}{180^\circ} = 0,02\pi$$

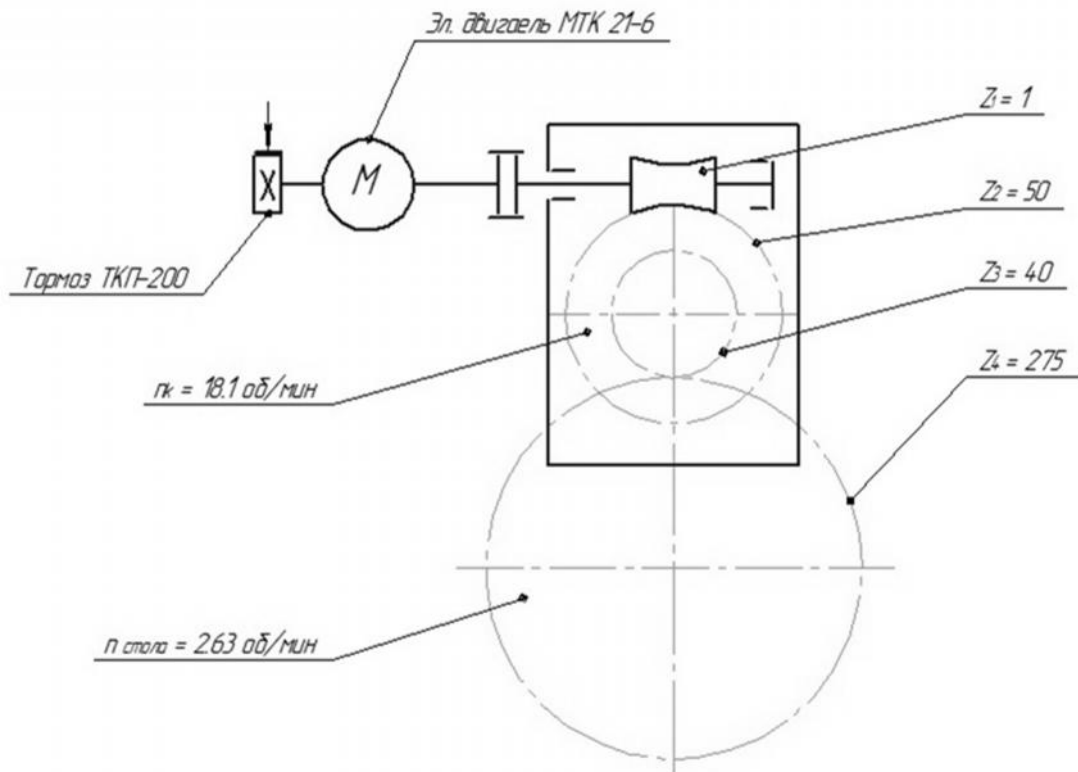
$$T = \frac{I\omega^2}{2}, \quad (2.6)$$

I-

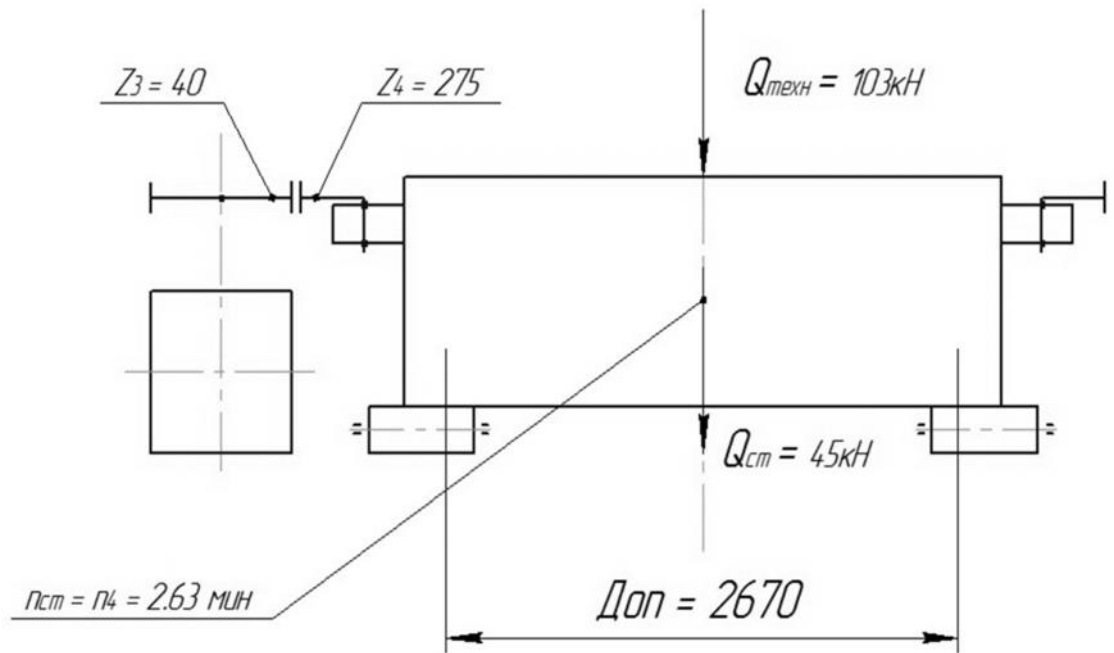
;

$$T = \frac{I\omega^2}{2} = 0, \quad (2.7)$$

$$\frac{I\omega^2}{2} = \dots \cdot \varphi$$



2.1 –



2.2 –

$$I = \frac{I\omega^2}{2 \cdot \varphi}, \quad (2.8)$$

I

$$I = \frac{m(R_1^2 + R_2^2)}{2} \quad (2.9)$$

m – , (2.3)

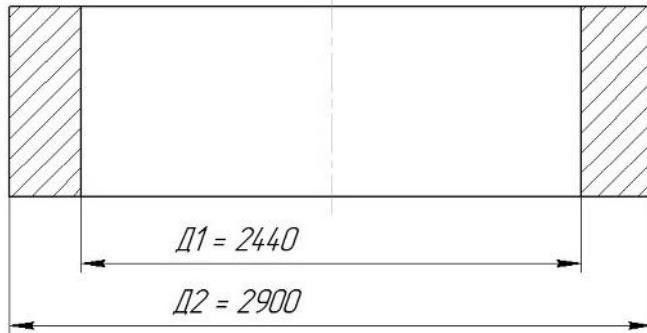
:

$$I = \frac{Q(R_1^2 + R_2^2)}{2g} = \frac{148(1,220^2 + 1,450^2)}{2 \cdot 9,81} = 27,1 \quad / \cdot ^2$$

:

$$\omega = \frac{\pi \cdot n}{30}, \quad \text{с}^{-1} \quad (2.10)$$

$n = 2,63 \text{ с}^{-1}$



2.3 –

$$\omega = \frac{\pi \cdot 2,63}{30} = 0,087 \text{ с}^{-1}$$

$$= \frac{I\omega^2}{2\varphi} = \frac{27,1 \cdot (0,087)^2}{2 \cdot 0,02\pi} = 13,1$$

$$U_2 = 6,875$$

$$\eta_2 = 0,98$$

$$= \frac{13,1}{U_2 \eta_2} = \frac{13,1}{6,875 \cdot 0,98} = 2,39 \quad (2.11)$$

$$U_1=50$$

$$\eta_1 = 0,92$$

$$= \frac{2,39}{U_1 \eta_1} = \frac{2,39}{50 \cdot 0,92} = 0,051 \quad (2.12)$$

:

$$U = U_1 \cdot U_2 = 50 \cdot 6,875 = 343,75 \quad (2.13)$$

:

$$n = n \cdot U = 2,63 \cdot 343,75 = 904,06^{-1} \quad (2.14)$$

$$= \frac{0,051 \cdot 904,06}{975} = 4,7 \quad (2.15)$$

:

$$132S6;$$

$$=5,5$$

$$n = 1000/880^{-1}$$

$$U=380$$

$$I=8$$

$$\lambda = / = 2,5$$

$$J = 0.07 \quad ^2$$

:

$$= 9550 \quad /n = 9550 \cdot 5,5/1000 = 53 \quad . \quad (2.16)$$

,
:

$$(\) = (\) = \frac{GD^2 \cdot n}{375 \cdot t}, \quad . \quad (2.17)$$

$$\begin{aligned} t_p - & \quad (\quad), \quad (t_p=1 \ ; t=1 \); \\ n - & \quad , n=905 \quad ^{-1}; \\ GD^2 - & \quad : \end{aligned}$$

$$GD^2 = GD^2 + GD^2 \quad , \quad (2.18)$$

$$\begin{aligned} GD^2 - & \quad ; \\ GD^2 - & \quad . \end{aligned}$$

$$GD^2 = I_{\Sigma} \cdot 4 \cdot g, \quad (2.19)$$

$$\begin{aligned} I_{\Sigma} - & \quad (\quad), \quad I_{\Sigma} \\ = 0,083 \quad ^2; & \end{aligned}$$

$$GD^2 = 0,083 \cdot 4 \cdot 9,81 = 3,25 \quad ^2.$$

:

$$GD^2 = \frac{365 \cdot Q \cdot V^2}{n^2}, \quad (2.20)$$

Q – , Q – , –
Q=47000

;
V – , V=0,366 / ;
n – , n = 905⁻¹.

$$GD^2 = \frac{365 \cdot 47000 \cdot 0,366^2}{905^2} = 2,8^2.$$

$$GD^2 = 3,25 + 2,8 \approx 6^2.$$

:

$$(\) = \frac{6 \cdot 905}{375 \cdot 1} = 14,5.$$

:

$$(\) = \frac{6 \cdot 905}{375 \cdot 1} = 14,5.$$

:

$$\Sigma = + = 53 + 14,5 = 67,5.$$

:

$$\Sigma = \quad + \quad = 53 - 14,5 = 38,5 \quad .$$

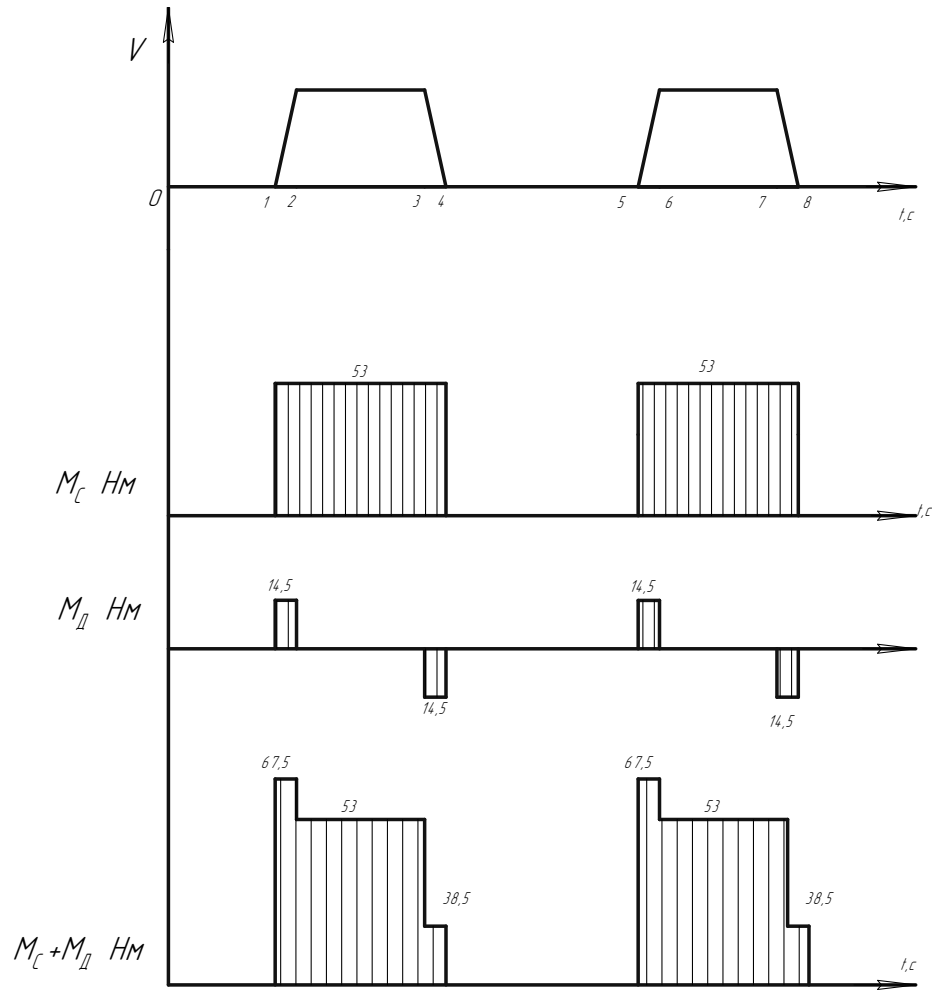
$$= \sqrt{\frac{M_{12}^2 \cdot t_{12} + M_{23}^2 \cdot t_{23} + M_{34}^2 \cdot t_{34} + M_{56}^2 \cdot t_{56} + M_{67}^2 \cdot t_{67} + M_{78}^2 \cdot t_{78}}{t_{23} + t_{67} + k \cdot (t_{12} + t_{34} + t_{56} + t_{78} + t)}}, \quad (2.21)$$

$$= 0,65 \quad (4.6)$$

$$= \sqrt{\frac{67,5^2 \cdot 1 + 53^2 \cdot 5 + 38,5^2 \cdot 1 + 67,5^2 \cdot 1 + 53^2 \cdot 5 + 38,5^2 \cdot 1}{5 + 5 + 0,65 \cdot (1 + 1 + 1 + 1 + 40)}} = 32,2 \quad . \quad (2.4)$$

$$K = \frac{67}{53} \leq [\quad], \quad (2.22)$$

$$K = \frac{67}{53} = 1,26 < [\quad] = 2,5 .$$



$t_{12} -$; $t_{23} -$; $t_{34} -$; $t_{45} -$
 $-$; $t_{56} -$; $t_{67} -$; $t_{78} -$

2.4 -

$$\leq \sqrt{\quad}, \tag{2.23}$$

$$32,2 < 53\sqrt{0,6} = 41$$

2.4

() QF1 (.2.5).

FU1 FU2.

YA1

- YA5

(SB8 SB9,
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SAM-1

YA1 - YA5

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QF2

I.

YA1 - YA5

QF2

II.

YA1 - YA5

SA

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SA2 - SA6.

(SB2 - SB6)

YA1 - YA5

SB2 - SB6

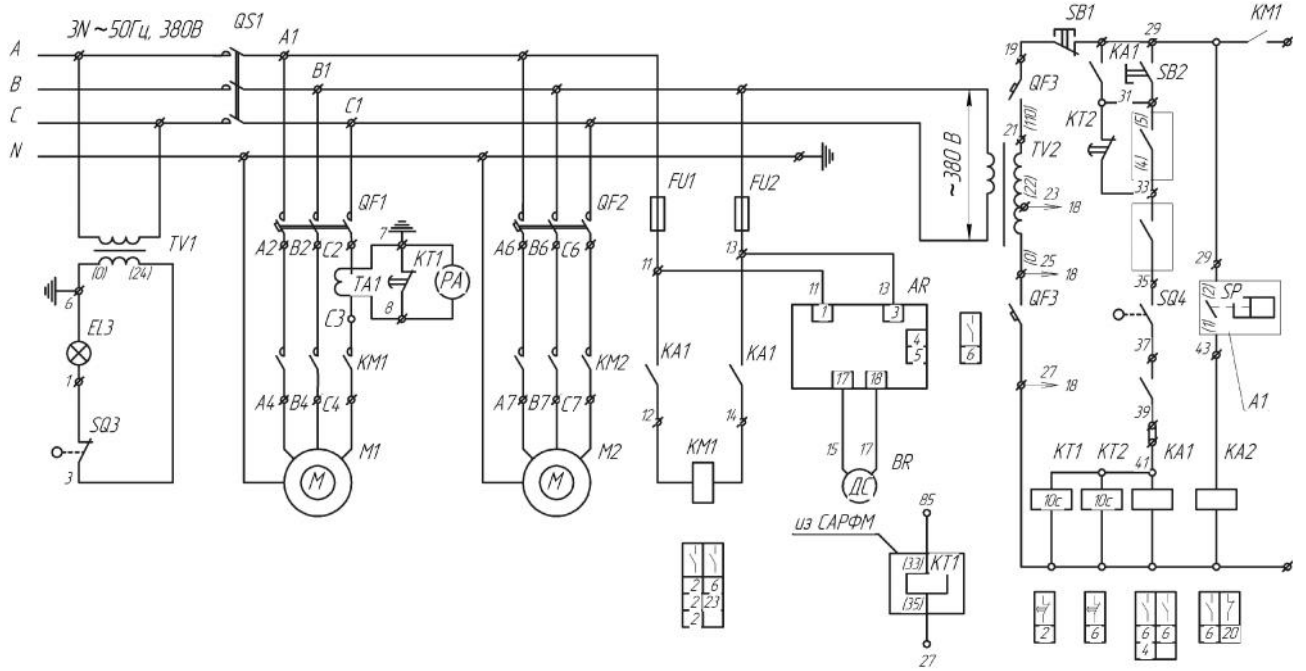
3 - 7,

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YA1 – YA2)

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$$= \frac{\sqrt{\quad}}{0,875} \cdot I$$

(2.25)

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, =0,6;

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0,875 -

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2.24 :

$$I = \frac{\sqrt{0,6}}{0,875 \cdot 0,87} \cdot 8 = 8,15 \text{ A}$$

4.9

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$$I = 12 > I_p = 8,15 \text{ A.}$$

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380 =60%,

$$I_p = 8,15 \text{ A}$$

224,

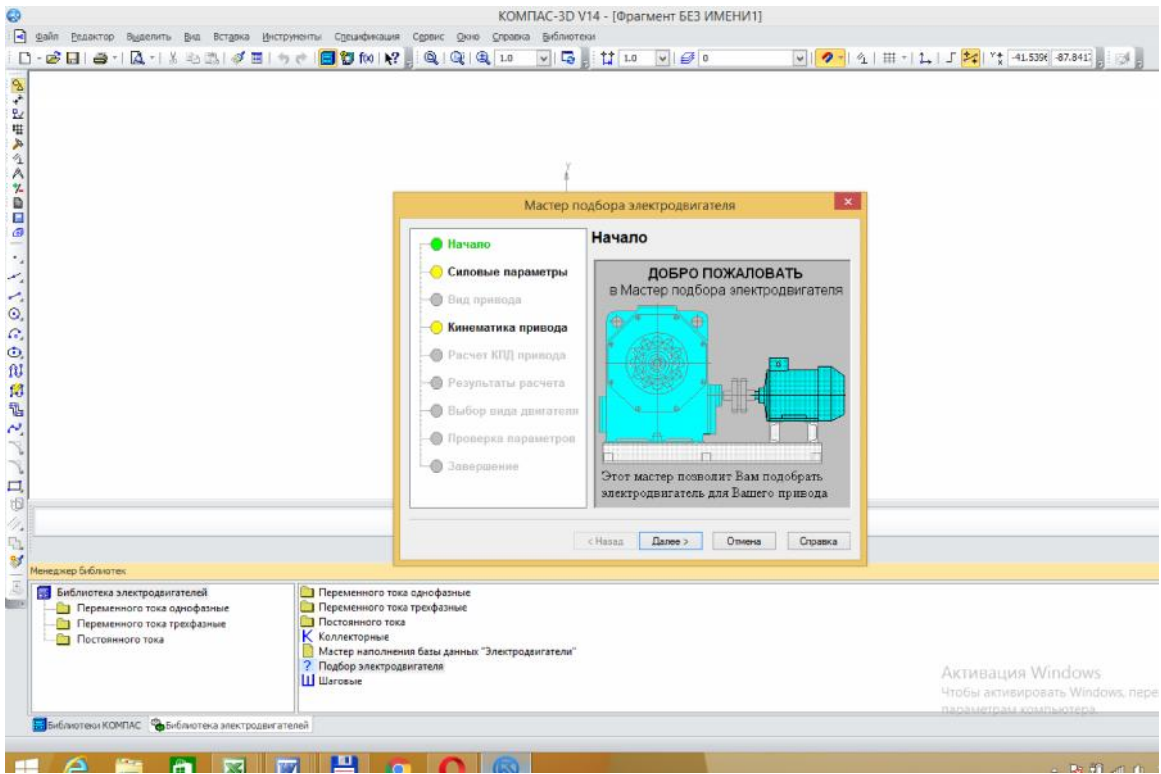
$$I = 10 \text{ A.}$$

3

3.1

« 3D».

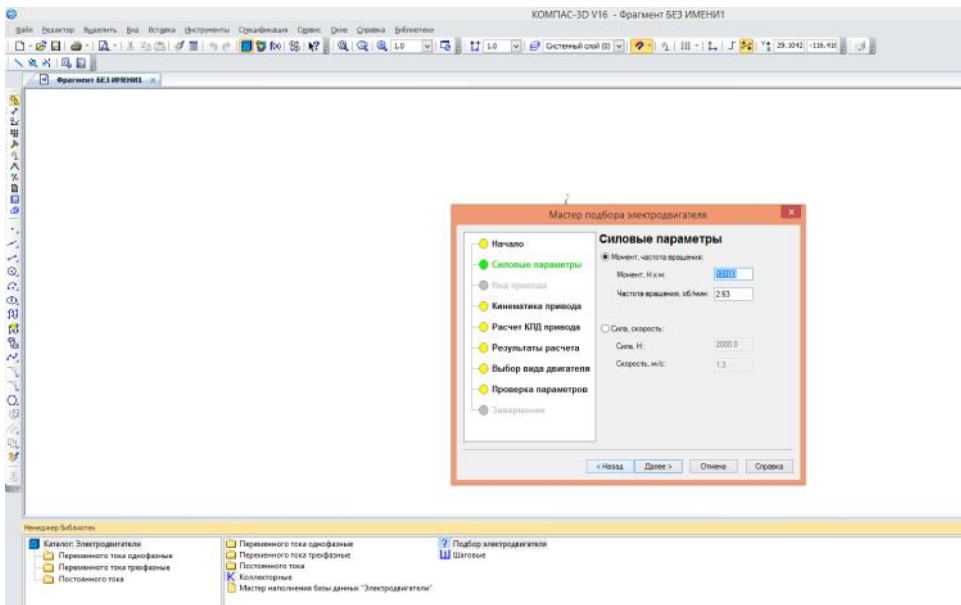
, « 3D» .3.1



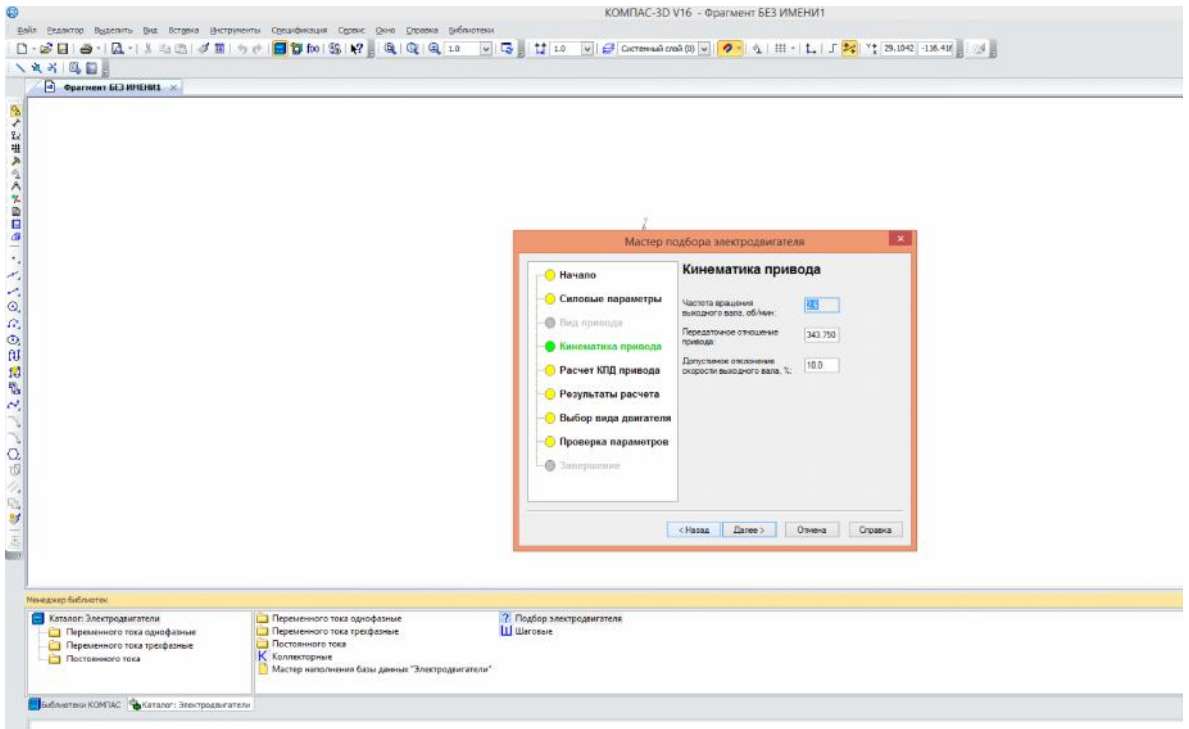
3.1 –

« 3D»

, , 3.2 3.3 .



3.2 –

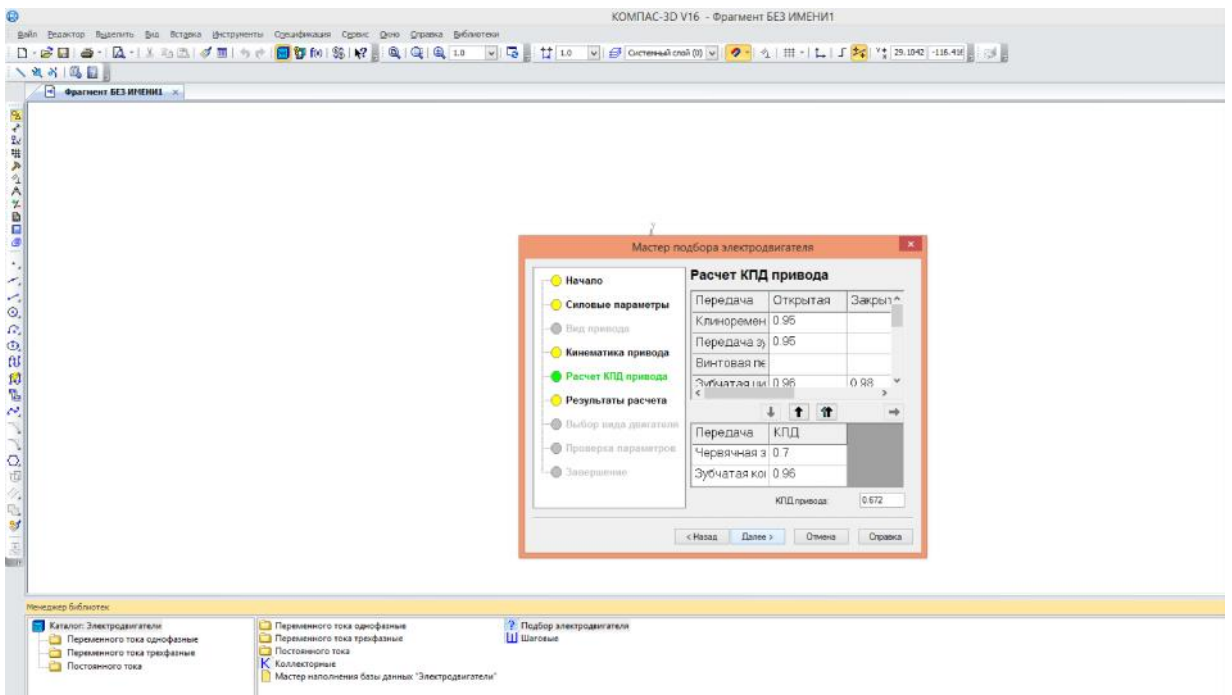


3.2 –

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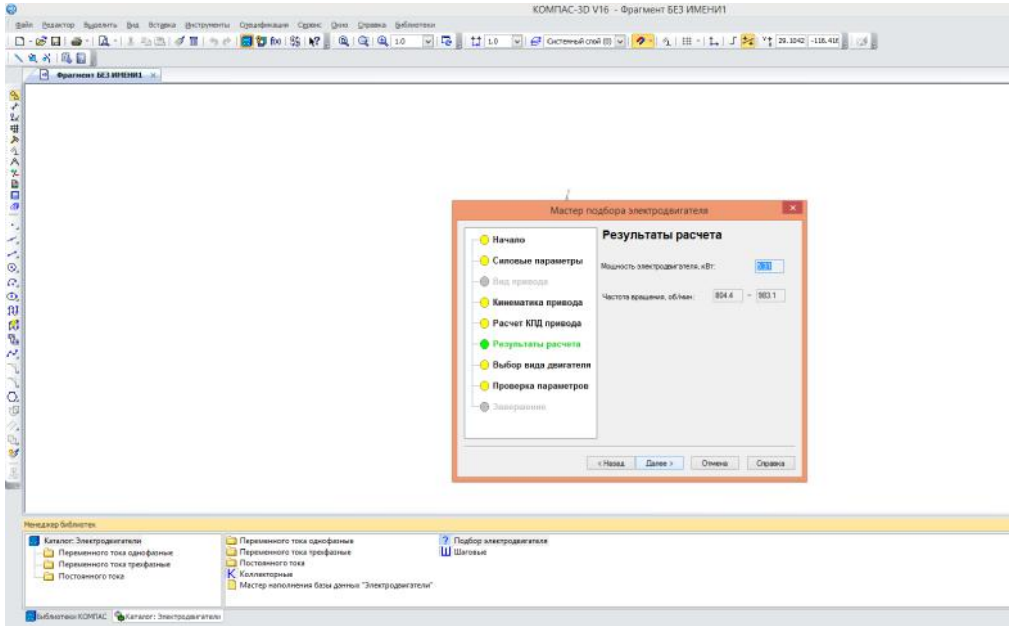
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(3.3).



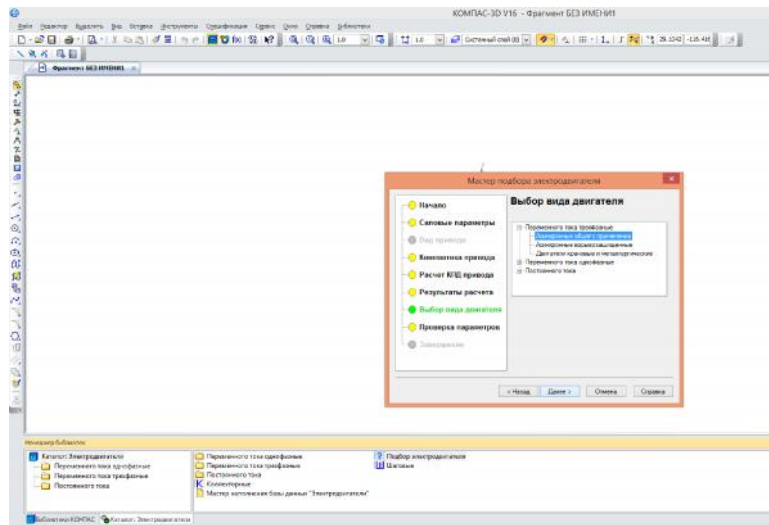
3.3 –

3.4

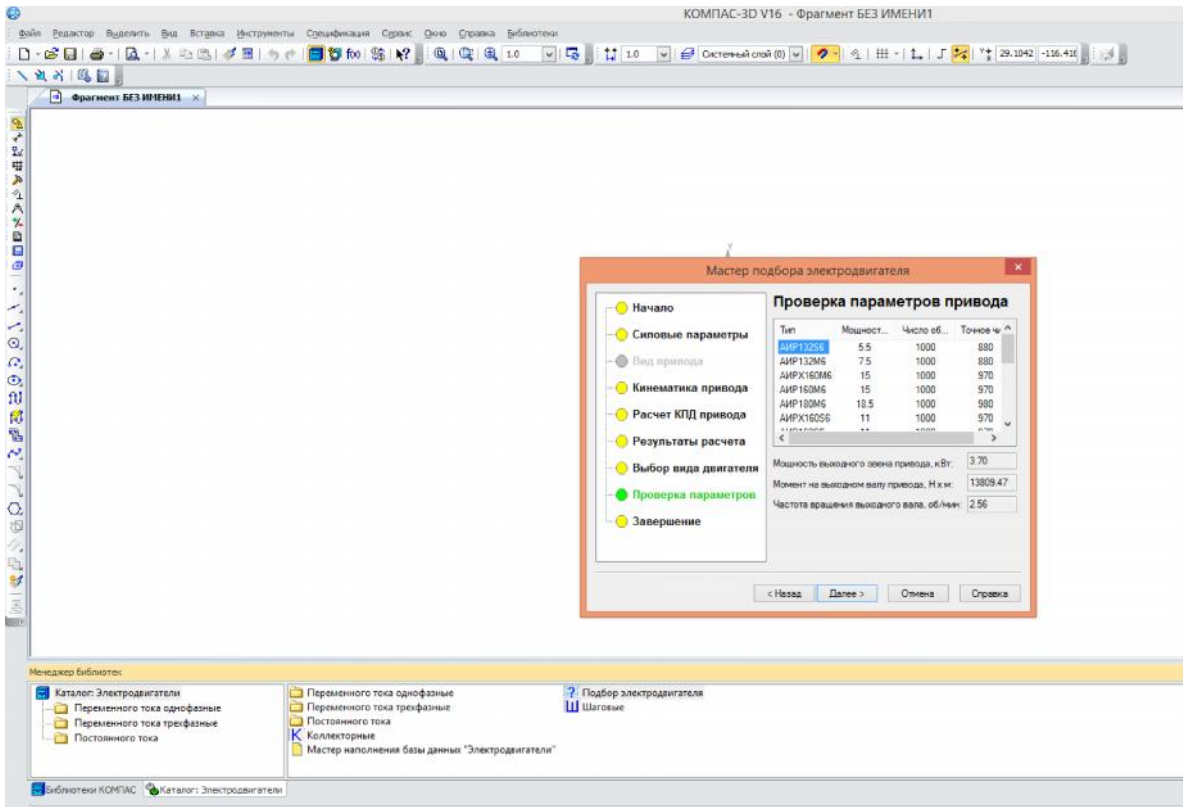


3.4 –

, 3.5 3.6

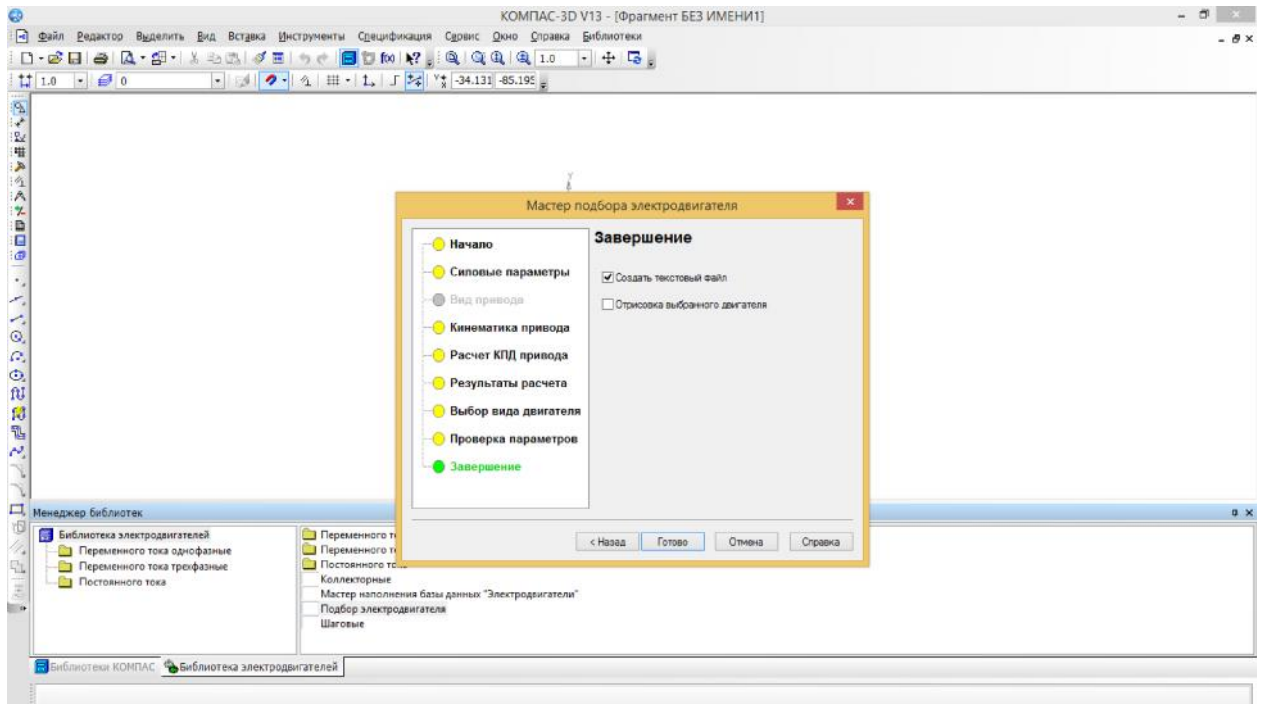


3.5 –



3.6 –

, (3.7)



3.7 –

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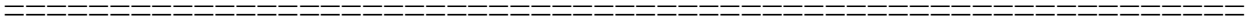
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343.8

: 10.0 %

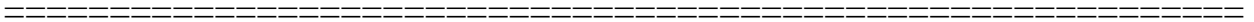
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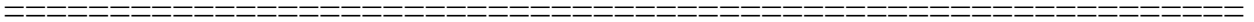
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: 5.3

: 804.4 - 983.1 /



: 132S6; 5.5 ; 880.0 /



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