$$v_{i,j-1} \to w_{m-L},$$
$$v_{i-1,j} \to w_{m-1},$$
$$v_{i,j} \to w_m,$$
$$v_{i+1,j} \to w_{m+1},$$
$$v_{i,j+1} \to w_{m+L}$$

$$-\left[h_z r_{i+\frac{1}{2}} k_1\left(r_{i+\frac{1}{2}}, z_j\right)\frac{u_{i+1,j}-u_{i,j}}{h_r} - h_z r_{i-\frac{1}{2}} k_1\left(r_{i-\frac{1}{2}}, z_j\right)\frac{u_{i,j}-u_{i-1,j}}{h_r} + h_r r_i k_2\left(r_i, z_{j+\frac{1}{2}}\right)\frac{u_{i,j+1}-u_{i,j}}{h_z}\right.$$
$$\left. - h_r r_i k_2\left(r_i, z_{j-\frac{1}{2}}\right)\frac{u_{i,j}-u_{i,j-1}}{h_z}\right] = r_i h_r h_z f_{i,j} \quad \text{при i} = 1,2,..,N_r-1\ ;\ \text{j} = 1,2,..,N_z-1 \quad \cdots (1)$$

$$-\left[h_z r_{i+\frac{1}{2}} k_1\left(r_{i+\frac{1}{2}}, z_j\right)\frac{u_{i+1,j}-u_{i,j}}{h_r} - h_z r_{i-\frac{1}{2}} k_1\left(r_{i-\frac{1}{2}}, z_j\right)\frac{u_{i,j}-u_{i-1,j}}{h_r} + h_r r_i k_2\left(r_i, z_{j+\frac{1}{2}}\right)\frac{u_{i,j+1}-u_{i,j}}{h_z}\right.$$
$$\left. - h_r r_i k_2\left(r_i, z_{j-\frac{1}{2}}\right)\frac{u_{i,j}-u_{i,j-1}}{h_z}\right] = r_i h_r h_z f_{i,j} \quad \text{при i} = 1,2,..,N_r-1\ ;\ \text{j} = 1,2,..,N_z-1 \quad \cdots (1)$$

$$a_m = \frac{h_r r_i k_2\left(r_i, z_{j-\frac{1}{2}}\right)}{h_z}$$
$$b_m = -\frac{h_z r_{i-\frac{1}{2}} k_1\left(r_{i-\frac{1}{2}}, z_j\right)}{h_r}$$
$$c_m = \frac{h_z r_{i+\frac{1}{2}} k_1\left(r_{i+\frac{1}{2}}, z_j\right)}{h_r} + \frac{h_z r_{i-\frac{1}{2}} k_1\left(r_{i-\frac{1}{2}}, z_j\right)}{h_r} + \frac{h_r r_i k_2\left(r_i, z_{j+\frac{1}{2}}\right)}{h_z} + \frac{h_r r_i k_2\left(r_i, z_{j-\frac{1}{2}}\right)}{h_z}$$
$$d_m = \frac{h_z r_{i+\frac{1}{2}} k_1\left(r_{i+\frac{1}{2}}, z_j\right)}{h_r}$$
$$e_m = -\frac{h_r r_i k_2\left(r_i, z_{j+\frac{1}{2}}\right)}{h_z}$$
$$g_m = r_i h_r h_z f_{i,j}$$

$$-\left[-h_z R\left(\chi_2 u_{N,j} - \varphi_2(z_j)\right) - h_z r_{N-\frac{1}{2}} k_1\left(r_{N-\frac{1}{2}}, z_j\right)\frac{u_{N,j}-u_{N-1,j}}{h_r} + \frac{h_r}{2} R k_2\left(R, z_{j+\frac{1}{2}}\right)\frac{u_{N,j+1}-u_{N,j}}{h_z}\right.$$
$$\left. - \frac{h_r}{2} R k_2\left(R, z_{j-\frac{1}{2}}\right)\frac{u_{N,j}-u_{N,j-1}}{h_z}\right] = \frac{h_r}{2} R h_z f_{N,j} \quad \text{при i} = N_r\ ;\ \text{j} = 1,2,..,N_z-1 \quad \cdots (2)$$

$$a_m = \frac{\frac{h_r}{2} R k_2\left(R, z_{j-\frac{1}{2}}\right)}{h_z}$$
$$b_m = -\frac{h_z r_{N-\frac{1}{2}} k_1\left(r_{N-\frac{1}{2}}, z_j\right)}{h_r}$$
$$c_m = h_z R \chi_2 + \frac{h_z r_{i-\frac{1}{2}} k_1\left(r_{i-\frac{1}{2}}, z_j\right)}{h_r} + \frac{h_r r_i k_2\left(r_i, z_{j+\frac{1}{2}}\right)}{h_z} + \frac{h_r r_i k_2\left(r_i, z_{j-\frac{1}{2}}\right)}{h_z}$$
$$d_m = 0$$

$$e_m = \frac{\frac{h_r}{2} R k_2\left(R, z_{j+\frac{1}{2}}\right)}{h_z}$$

$$g_m = \frac{h_r}{2} R h_z f_{N,j} + h_z R \varphi_2(z_j)$$

$$u_{i,0} = \varphi_3(0) \text{ при i} = 0, \dots, N_r \text{ ; j } = 0 \quad \cdots (3)$$

$$a_m =$$
$$b_m =$$
$$c_m = 1$$
$$d_m =$$
$$e_m =$$
$$g_m = \varphi_3(0)$$

$$-\left[\frac{h_z}{2} r_{i+\frac{1}{2}} k_1\left(r_{i+\frac{1}{2}}, L\right) \frac{u_{i+1,N} - u_{i,N}}{h_r} - \frac{h_z}{2} r_{i-\frac{1}{2}} k_1\left(r_{i-\frac{1}{2}}, L\right) \frac{u_{i,N} - u_{i-1,N}}{h_r} - h_r r_i \left(\chi_4 u_{i,N} - \varphi_4(r_i)\right)\right.$$
$$\left. - h_r r_i k_2\left(r_i, z_{j-\frac{1}{2}}\right) \frac{u_{i,N} - u_{i,N-1}}{h_z}\right] = \frac{r_i h_r h_z f_{i,N}}{2} \quad \text{при i} = 1,2,..,N_r; \text{ j } = \text{N}_z \quad \cdots (4)$$

$$a_m = \frac{h_r r_i k_2\left(r_i, z_{j-\frac{1}{2}}\right)}{h_z}$$
$$b_m = \frac{\frac{h_z}{2} r_{i-\frac{1}{2}} k_1\left(r_{i-\frac{1}{2}}, L\right)}{h_r}$$
$$c_m = \frac{h_z r_{i+\frac{1}{2}} k_1\left(r_{i+\frac{1}{2}}, z_j\right)}{h_r} + \frac{h_z r_{i-\frac{1}{2}} k_1\left(r_{i-\frac{1}{2}}, z_j\right)}{h_r} + h_r r_i \chi_4 + \frac{h_r r_i k_2\left(r_i, z_{j-\frac{1}{2}}\right)}{h_z}$$
$$d_m = \frac{\frac{h_z}{2} r_{i+\frac{1}{2}} k_1\left(r_{i+\frac{1}{2}}, L\right)}{h_r}$$
$$e_m = 0$$
$$g_m = \frac{r_i h_r h_z f_{i,N}}{2} + h_r r_i \varphi_4(r_i)$$

$$-\left[\hbar_z r_{i+\frac{1}{2}} k_1\left(r_{i+\frac{1}{2}}, z_j\right) \frac{u_{i+1,j} - u_{i,j}}{h_r} - 0 + \hbar_r \frac{r_{i+\frac{1}{2}}}{4} k_2\left(r_i, z_{j+\frac{1}{2}}\right) \frac{u_{i,j+1} - u_{i,j}}{h_z} - \hbar_r \frac{r_{i+\frac{1}{2}}}{4} k_2\left(r_i, z_{j-\frac{1}{2}}\right) \frac{u_{i,j} - u_{i,j-1}}{h_z}\right] = \hbar_r \hbar_z \frac{r_{i+\frac{1}{2}}}{4} f_{i,j}$$
$$\text{при i} = 0 \text{ ; j } = 1,2,..,N_z - 1 \quad \cdots (5)$$

$$a_m = \frac{\hbar_r \frac{r_{i+\frac{1}{2}}}{4} k_2\left(r_i, z_{j-\frac{1}{2}}\right)}{h_z}$$
$$b_m = 0$$
$$c_m = \frac{h_z r_{i+\frac{1}{2}} k_1\left(r_{i+\frac{1}{2}}, z_j\right)}{h_r} + \frac{h_r r_i k_2\left(r_i, z_{j+\frac{1}{2}}\right)}{h_z} + \frac{h_r r_i k_2\left(r_i, z_{j-\frac{1}{2}}\right)}{h_z}$$

$$d_m = \frac{\hbar_z r_{i+\frac{1}{2}} k_1\left(r_{i+\frac{1}{2}}, z_j\right)}{h_r}$$

$$e_m = \frac{\hbar_r \frac{r_{i+\frac{1}{2}}}{4} k_2\left(r_i, z_{j+\frac{1}{2}}\right)}{h_z}$$

$$g_m = \hbar_r \hbar_z \frac{r_{i+\frac{1}{2}}}{4} f_{i,j}$$