[illegible]

2. [illegible]

1. [illegible], 1998 – 244 [illegible]
2. [illegible] 1974 – 560 [illegible]
3. [illegible], 2, 1997 – [illegible] 93–95.
4. [illegible] 5.03.01–98 [illegible], 1998 – 178 [illegible]
5. [illegible], 1978, [illegible] 6 – [illegible] 142–150.
6. [illegible] 5.03.01–98). [illegible] 1999 – 157 [illegible]

[illegible] 624.015

[illegible]

[illegible]

[illegible] [1,3], [illegible] [2]. [illegible]

[illegible] [4] [illegible] [5], [illegible] 35-40 %. [illegible]

$$\sigma_x = 2G\frac{\partial U}{\partial x} + \lambda\left(\frac{\partial U}{\partial x} + \frac{\partial V}{\partial y} + \frac{\partial W}{\partial z}\right);$$

$$\tau_{yx} = G\left(\frac{\partial U}{\partial y} + \frac{\partial V}{\partial x}\right);$$

$$\tau_{xz} = G\left(\frac{\partial U}{\partial z} + \frac{\partial W}{\partial x}\right);$$

[illegible]

$$\frac{\partial \sigma_x}{\partial x} + \frac{\partial \tau_{xy}}{\partial y} + \frac{\partial \tau_{xz}}{\partial z} = 0,$$

[illegible]

$$2G\frac{\partial^2 U}{\partial x^2} + \lambda\frac{\partial}{\partial x}\left(\frac{\partial U}{\partial x} + \frac{\partial V}{\partial y} + \frac{\partial W}{\partial z}\right) + G\frac{\partial^2 U}{\partial y^2} + G\frac{\partial^2 V}{\partial y \partial x} + \frac{\partial^2 U}{\partial z^2}G + \frac{\partial^2 W}{\partial z \partial x}G = 0;$$

[illegible]

$$G\frac{\partial^2 U}{\partial x^2} + G\frac{\partial^2 U}{\partial x^2} + \lambda\frac{\partial}{\partial x}\theta + G\frac{\partial^2 U}{\partial y^2} + G\frac{\partial^2 V}{\partial y \partial x} + \frac{\partial^2 U}{\partial z^2}G + \frac{\partial^2 W}{\partial z \partial x}G = 0;$$

[illegible]

$$G\left(\frac{\partial^2 U}{\partial x^2} + \frac{\partial^2 U}{\partial y^2} + \frac{\partial^2 U}{\partial z^2}\right) = G\nabla^2 U; \quad \frac{\partial}{\partial x}\left(\frac{\partial U}{\partial x} + \frac{\partial V}{\partial y} + \frac{\partial W}{\partial z}\right) = G\frac{\partial}{\partial x}\theta;$$

[illegible] $:(\lambda + G)\frac{\partial}{\partial x}\theta + G\nabla^2 U = 0;$

[illegible]

[illegible]

$$(\lambda + G)\frac{\partial}{\partial x}\theta + G\nabla^2 U = 0;$$

$$(\lambda + G)\frac{\partial}{\partial y}\theta + G\nabla^2 V = 0; \quad (1)$$

$$(\lambda + G)\frac{\partial}{\partial z}\theta + G\nabla^2 W = 0,$$

[illegible] $\nabla^2 U, \nabla^2 V, \nabla^2 W$ - [illegible]

[illegible], 267.

[illegible]

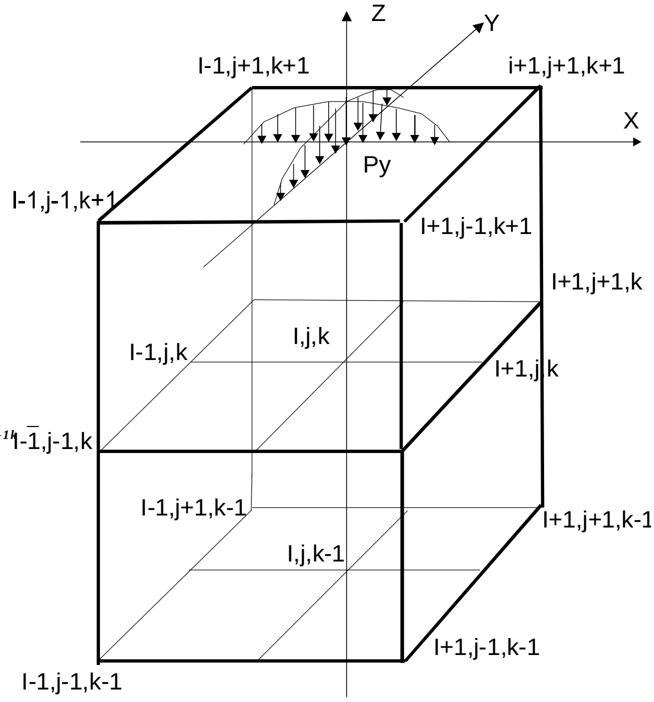
[illegible]

[illegible]:

$$(\lambda+G)\Big[\Big(\frac{1}{\Delta x^2}(U_{i+1jk}+U_{i-1jk}-2U_{ijk})+\frac{1}{\Delta x\Delta y}(V_{i+1jk}+V_{i-1j-1k}-V_{i+1j-1k}-V_{i-1j+1k})+\frac{1}{\Delta x\Delta y}(W_{i+1jk+1}+W_{i-1jk-1}-W_{i+1jk-1}-W_{i-1jk+1})\Big]+G\Big[\frac{1}{\Delta x^2}(U_{i+1jk}+U_{i-1jk}-2U_{ijk})+\frac{1}{\Delta y^2}(U_{ij+1k}+U_{ij-1k}-2U_{ijk})+\frac{1}{\Delta z^2}(U_{ijk+1}+U_{ijk-1}-2U_{ijk})\Big]=0;$$

[illegible]

$$U_{ijr}=\frac{1}{G_1}\{(\lambda+G)[(\frac{1}{\Delta x^2}(U_{i+1jk}+U_{i-1jk})+\frac{1}{\Delta x\Delta y}(V_{i+1jk}+V_{i-1j-1k}-V_{i+1j-1k}-V_{i-1j+1k})+\frac{1}{\Delta x\Delta y}(W_{i+1jk+1}+W_{i-1jk-1}-W_{i+1jk-1}-W_{i-1jk+1})]+G[\frac{1}{\Delta x^2}(U_{i+1jk}+U_{i-1jk})+\frac{1}{\Delta y^2}(U_{ij+1k}+U_{ij-1k})+\frac{1}{\Delta z^2}(U_{ijk+1}+U_{ijk-1})]\}=0;$$ [illegible]



$$V_{ijk}=\frac{1}{G_1}\{(\lambda+G)[(\frac{1}{\Delta x\Delta y}(U_{i+1j+1k}+U_{i-1j-1k}-U_{i+1j-1k}-U_{i-1j+1k})+\frac{1}{\Delta y^2}(V_{ij+1k}+V_{ij-1k})+\frac{1}{\Delta y\Delta z}(W_{ij+1k+1}+W_{ij-1k-1}-W_{ij+1k-1}-W_{ij-1k+1})]+G[\frac{1}{\Delta x^2}(V_{i+1jk}+V_{i-1jk})+\frac{1}{\Delta y^2}(V_{ij+1k}+V_{ij-1k}-2V_{ijk})+\frac{1}{\Delta z^2}(V_{ijk+1}+V_{ijk-1})]\}=0;\quad (2)$$

$$W_{ijk}=\frac{1}{G_1}\{(\lambda+G)[(\frac{1}{\Delta x\Delta z}(U_{i+1jk+1}+U_{i-1jk-1}-U_{i+1jk-1}-U_{i-1jk+1})+\frac{1}{\Delta y\Delta z}(V_{ij+1k+1}+V_{ij-1k-1}-V_{ij+1k-1}-V_{ij-1k+1})]+\frac{1}{\Delta z^2}(W_{ijk+1}+W_{ijk-1})+G[\frac{1}{\Delta x^2}(W_{i+1jk}+W_{i-1jk})+\frac{1}{\Delta y^2}(W_{ij+1k}+W_{ij-1k})+\frac{1}{\Delta z^2}(W_{ijk+1}+W_{ijk-1})]\}=0$$

[illegible] $G_1=0{,}5(\frac{\lambda+G}{\Delta x^2}+\frac{G}{\Delta x^2}+\frac{G}{\Delta y^2}+\frac{G}{\Delta z^2})$.

[illegible] (2). [illegible] «[illegible] -77» [illegible] (2) [illegible]:

1. [illegible] XOZ:

[illegible]

$$\sigma_y=0;\ \tau_{xy}=\tau_{yz}=0;$$

[illegible]:

а) $t_{xy}=G\gamma_{xy}=G(\frac{\partial V}{\partial x}+\frac{\partial U}{\partial y})=0$.

[illegible]

$$G(\frac{U_{ijk}-U_{ij-1k}}{\Delta y}+\frac{V_{i+1jk}-V_{i-1jk}}{2\Delta x})=0;\qquad (6)$$

$$U_{ijk}=-\frac{\Delta y}{2\Delta x}(V_{i+1jk}-V_{i-1jk})+U_{ij-1k}$$

[illegible]

в) $\tau_{zy}=G\gamma_{zy}=G(\frac{\partial W}{\partial y}+\frac{\partial V}{\partial z})=0;$ [illegible]

$$G(\frac{V_{ijk+1}-V_{ijk-1}}{2\Delta z}+\frac{W_{ijk}-W_{ij-1k}}{\Delta y})=0;\qquad (7)$$

[illegible]

$$W_{ijk}=-\frac{\Delta y}{2\Delta z}(V_{ijk+1}-V_{ijk-1})+W_{ij-1k};$$

в) $\sigma_y=2G\xi_y+\lambda\theta;=0$

$\xi_y=\frac{\partial V}{\partial y};\ \theta=\xi_x+\xi_y+\xi_z;$ [illegible]

$$\sigma_y=2G\frac{\partial V}{\partial y}+\lambda(\frac{\partial U}{\partial x}+\frac{\partial V}{\partial y}+\frac{\partial W}{\partial z});$$

$$\sigma_y=2G[\frac{V_{ijk}-V_{ij-1k}}{\Delta y}+\frac{\mu}{1-2\mu}(\frac{U_{i+1jk}-U_{i-1jk}}{2\Delta x}+\frac{V_{ijk}-V_{ij-1k}}{\Delta y}+\frac{W_{ijk+1}-W_{ijk-1}}{2\Delta z})]=0;$$ [illegible]

$$V_{ijk}=\frac{\mu\Delta y}{(1-\mu)}(\frac{U_{i+1jk}-U_{i-1jk}}{2\Delta x}+\frac{W_{ijk+1}-W_{ijk-1}}{2\Delta z}+\frac{V_{ij-1k}}{\Delta y})+\frac{(1-2\mu)V_{ij-1k}}{(1-\mu)};\qquad (8)$$

2. [illegible]

$$\sigma_y=-P_y.\qquad (9)$$

[illegible]:

$$P_y=-kP_{max}(\frac{x^2}{2a^2}+\frac{y^2}{2b^2}-1);.(A),\qquad (10)$$

[illegible]

$$V_{ijk}=-\frac{\mu\Delta y}{(1-\mu)}(\frac{U_{i+1jk}-U_{i-1jk}}{2\Delta x}+\frac{W_{ijk+1}-W_{ijk-1}}{2\Delta z}+\frac{V_{ij-1k}}{\Delta y})+\frac{1-2\mu}{1-\mu}V_{ij-1k}-P_y\frac{(1-2\mu)(1+\mu)}{E(1-\mu)\Delta y};$$

3. [illegible]

$$U_{ijk} = 0;\ V_{ijk} = 0;\ W_{ijk} = 0 \qquad (11)$$

[illegible] 30-35%, [illegible]

[illegible]

1. [illegible] // [illegible]. - 1971. - [illegible] 4.
2. [illegible] // [illegible], 1972. - [illegible] 18.- [illegible]. 8 -11.
3. [illegible] 1973. - 246 [illegible]
4. [illegible] 2.02-83. [illegible] 05.12.83. [illegible] -15-74. [illegible] 01.01.85/ [illegible] 1985.- 40 [illegible]
5. [illegible] //[illegible]-1978.- [illegible] 10.- [illegible]. 31-33.

[illegible] 624.151

[illegible]

[illegible]

[illegible] [1] [illegible] [2]. [illegible] [3]:

1. [illegible]

$$\sigma_x = \frac{1-\mu_o^2}{\mu_1} E_{x(y)}\varepsilon_x + \frac{\mu_o(1+\mu_o)}{\mu_1} E_{y(y)}\varepsilon_y\ ,$$

$$\sigma_y = \frac{\mu_o(1+\mu_o^2)}{\mu_1} E_{x(y)}\varepsilon_x + \frac{1-\mu_o^2}{\mu_1} E_{y(y)}\varepsilon_y\ , \qquad (1)$$

$$\tau_{xy} = \frac{1}{4(1+\mu_o)}\left[E_{x(y)} + E_{y(y)}\right]\gamma_{xy},$$

[illegible] $\mu_1 = 1-\mu_0^2(2\mu_0+3)$.

2. [illegible]

$$\varepsilon_x = \frac{\partial u}{\partial x};$$

$$\varepsilon_y = \frac{\partial v}{\partial y} \qquad (2)$$

$$\gamma_{xy} = \frac{\partial u}{\partial y} + \frac{\partial v}{\partial x}.$$

3. [illegible]

$$\frac{\partial \sigma_x}{\partial x} + \frac{\partial \tau_{xy}}{\partial y} + X = 0\ ;$$

$$\frac{\partial \tau_{xy}}{\partial x} + \frac{\partial \sigma_y}{\partial y} + Y = 0\ . \qquad (3)$$

[illegible] (1) [illegible] (2), [illegible]:

$$\frac{1-\mu_0^2}{\mu_1} E_{x(y)} \frac{\partial^2 u}{\partial x^2} + \frac{E_{x(y)} + E_{y(y)}}{4(1+\mu_0)} \frac{\partial^2 u}{\partial y^2} + \left[\frac{\mu_0(1+\mu_0)}{\mu_1} E_{y(y)} + \frac{\mu_0(1+\mu_0)}{\mu_1} E_{x(y)}\right]\frac{\partial^2 v}{\partial x \partial y} + \frac{\mu_0(1-\mu_0)}{\mu_1}\frac{\partial E_{x(y)}}{\partial y}\frac{\partial v}{\partial x} + \frac{(1-\mu_0^2)}{\mu_1}\frac{\partial E_{y(y)}}{\partial y}\frac{\partial u}{\partial y} = 0$$

$$\frac{E_{x(y)} + E_{y(y)}}{4(1+\mu_0)}\frac{\partial^2 v}{\partial x^2} + \frac{1-\mu_0^2}{\mu_1} E_{y(y)} \frac{\partial^2 v}{\partial y^2} + \left[\frac{E_{x(y)} + E_{y(y)}}{4(1+\mu_0)} + \frac{\mu_0(1+\mu_0)E_{x(y)}}{\mu_1}\right]\frac{\partial^2 u}{\partial x \partial y} + \frac{\mu(1+\mu_0)}{\mu}\frac{\partial E_{x(y)}}{\partial y}\frac{\partial u}{\partial x} + \frac{(1-\mu^2_0)}{\mu_1}\frac{\partial E_{y(y)}}{\partial y}\frac{\partial v}{\partial y} = 0; \qquad (4)$$

[illegible] (4) [illegible] $\Delta x \cdot \Delta y$. [illegible] (4) [illegible]

[illegible]

[illegible]

[illegible]

[illegible], 267.