$\Delta H = -\sqrt{p^2 - (p_x - a_c)^2 - (p_y - a_y)^2} + p - \frac{(p_x - a_x)^2}{2n} - \frac{(p_y - a_y)^2}{2n}$

The transformation for the correction term $\Delta H = H - H_2$ for $1/\rho = 0$:

$$= p - p_z - \frac{(p_x - a_x)^2}{2p} - \frac{(p_y - a_y)^2}{2p},$$

$$a_x = -\frac{B_z}{2}y,$$
(48)

$$a_y = \frac{B_z}{2}x,$$
 is written as

$$x = x_0 + \Delta x,$$

$$y = y_0 + \Delta y,$$

$$y = y_0 + \Delta y,$$

$$p_x = p_{x0} + \frac{B_z}{2} \Delta y,$$

$$p_y = p_{y0} - \frac{B_z}{2} \Delta x,$$

$$p_y = p_{y0} - \frac{B_z}{2} \Delta x,$$
 where
$$\Delta x = \left(p_{x0} + \frac{B_z}{2} y_0\right) \sin w\ell - \left(p_{y0} - \frac{B_z}{2} x_0\right) (\cos w\ell - 1),$$

$$\Delta x = \left(p_{x0} + \frac{B_z}{2}y_0\right)\sin w\ell - \left(p_{y0} - \frac{B_z}{2}x_0\right)(\cos w\ell - 1),$$

$$\Delta x = \left(p_{x0} + \frac{B_z}{2}y_0\right)\sin w\ell - \left(p_{y0} - \frac{B_z}{2}x_0\right)(\cos w\ell - 1),$$

$$\Delta y = \left(p_{x0} + \frac{B_z}{2}y_0\right)(\cos w\ell - 1) + \left(p_{y0} - \frac{B_z}{2}x_0\right)\sin w\ell.$$

$$\Delta x = \left(p_{x0} + \frac{B_z}{2}y_0\right)\sin w\ell - \left(p_{y0} - \frac{B_z}{2}x_0\right)(\cos w\ell - 1),$$

$$\Delta y = \left(p_{x0} + \frac{B_z}{2}y_0\right)(\cos w\ell - 1) + \left(p_{y0} - \frac{B_z}{2}x_0\right)\sin w\ell,$$

$$\Delta x = \left(p_{x0} + \frac{z}{2} y_0 \right) \sin w\ell - \left(p_{y0} - \frac{z}{2} x_0 \right) (\cos w\ell - 1),$$

$$\Delta y = \left(p_{x0} + \frac{B_z}{2} y_0 \right) (\cos w\ell - 1) + \left(p_{y0} - \frac{B_z}{2} x_0 \right) \sin w\ell ,$$

$$\Delta y = \left(p_{x0} + \frac{B_z}{2}y_0\right)(\cos w\ell - 1) + \left(p_{y0} - \frac{B_z}{2}x_0\right)\sin w\ell,$$

$$B_z(p - p_z)$$

$$\Delta y = \left(p_{x0} + \frac{z_z}{2}y_0\right)(\cos w\ell - 1) + \left(p_{y0} - \frac{z_z}{2}x_0\right)\sin w\ell,$$

$$w = \frac{B_z(p - p_z)}{n}.$$
(56)

$$w - \frac{1}{pp_z}$$
.

$$w = \frac{1}{pp_z}$$
. The longitudinal coordinate is transformed as:

 $z = z_0 + \left(\frac{3}{2} - \frac{p}{p_z} - \frac{p_z^2}{2p^2} + \Delta v\right)\ell$.

(47)

(50)

(51)

(52)

(53)

(54)

(55)

(58)