

$$Q_o = kd_{ex}^n \sqrt{P_{ex}}$$

$$Q_o = kd_{\epsilon}^m d_{ex}^n \sqrt{P_{ex}}$$

$$Q_o = kD^l d_{\epsilon}^m d_{ex}^n \sqrt{P_{ex}}$$

$$Q_o = f(D, d_{\epsilon}, d_{H}, d_{ex}, \alpha, \mu_c, P_{ex})$$

$$Q_o = 5,46 \cdot 10^{-3} (d_{ex} d_e)^{0,9} \sqrt{P_{ex}}$$

$$\frac{Q_H}{Q_e} = 1,13 \left(\frac{d_H}{d_e} \right)^{3,0}$$

$$Q_o = Q_e + Q_H \quad \frac{Q_o}{Q_e} = \frac{Q_e}{Q_e} + \frac{Q_H}{Q_e}$$

$$Q_e = \frac{Q_o}{1 + \frac{Q_H}{Q_e}}$$

$$d_{gp} = 8,44 \cdot 10^3 \sqrt{\frac{d_v D c_{ucx}}{d_H K_D \sqrt{P_{ex}} (\rho_m - \rho_{жс})}}$$

$$K_D = 0,8 + \frac{1,2}{1 + 100D}$$

$F(d_4)$

100%

50%

A

 d_{min} d_{zp} d_{50} d_{max} d_4

$$G_{исх} = Q_{общ} c_{исх}$$

Интегральная
кривая
распределения
частиц

$$G_v = G_{исх} \frac{A}{100} \quad c_v = \frac{G_v}{Q_v} \quad G_H = G_{исх} - G_v$$

$$c_v = 1,18 \left(\frac{d_v}{d_H} \right)^{0,3} \left(\operatorname{tg} \left(\frac{\alpha}{2} \right) \right)^{0,13} \left[\frac{U_{vx}^2}{R} \frac{d_{50}^3}{v_c^2} \frac{\rho_m - \rho_{жс}}{\rho_{жс}} \right]^{-0,24} c_{исх}^{0,78}$$

$$Q_{общ} c_{исх} = Q_v c_v + Q_H c_H$$

$$G_{исх} = G_v + G_H$$

$S_B\%$

48

40

32

24

16

8

0

5

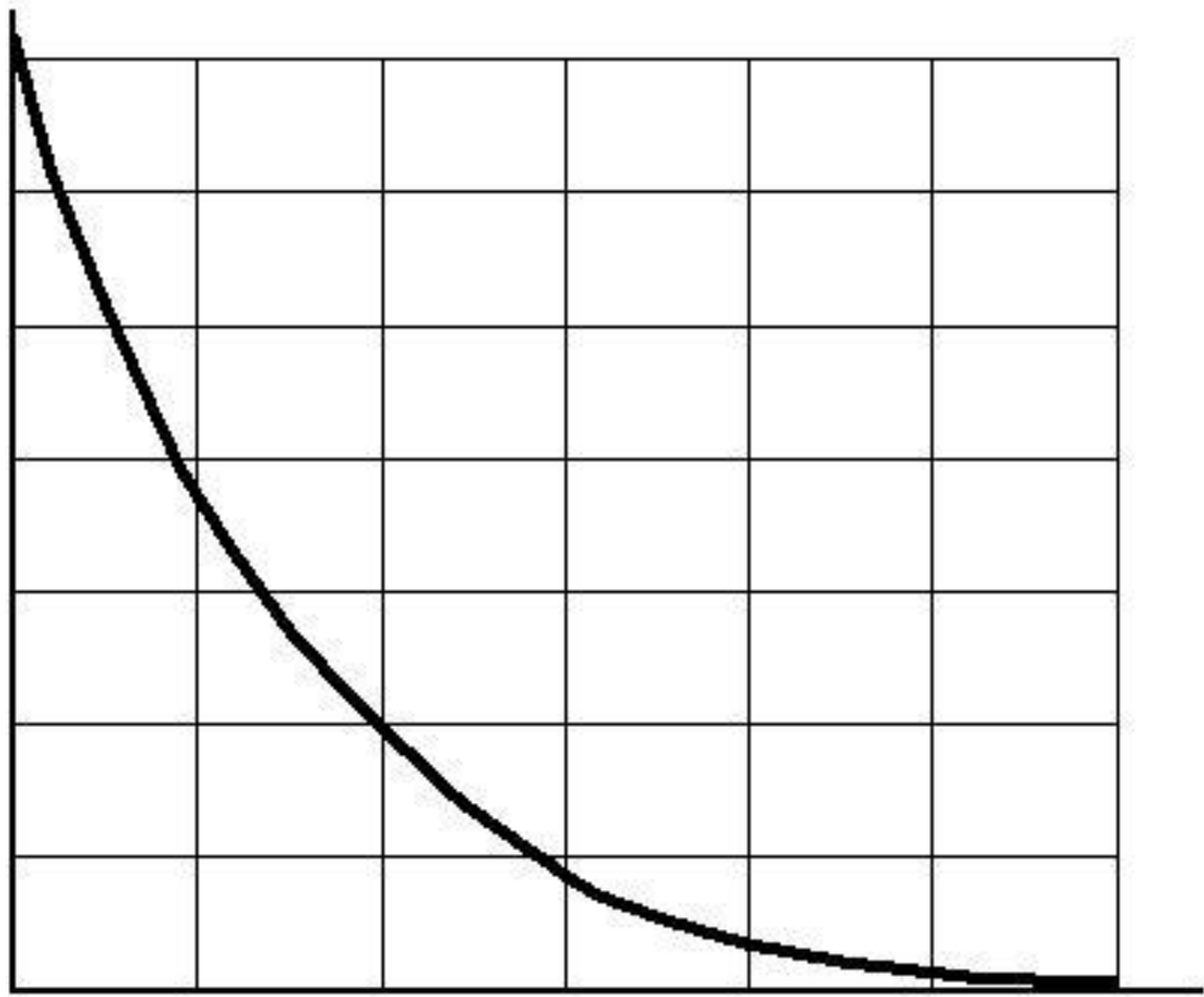
10

15

20

25

$\bar{\alpha}$



$$\bar{\alpha} = \pi^2 d^4 \omega^2 R^2 (\rho_m - \rho_{жс}) \rho_{жс} \frac{v_{жс}}{2b'}$$

$$\omega = \frac{2U_{ex}}{D - d_{ex}}$$

$$b' = \left[1,35 + 17,8d_{ex} \frac{tg \frac{\alpha}{2}}{d_H} \right] (0,58 + 0,26U_{ex}) \cdot 10^{-18}$$

$$G_{ex} = G_{исх} S_{ex} \quad c_{ex} = \frac{G_{ex}}{Q_{ex}}$$

x1; x2; x3 ...

x16

$\Sigma x_i = 100\%$

$$G_{ucx1} = G_{ucx} x_1$$

$$G_{ucx2} = G_{ucx} x_2$$

.....

$$G_{ucx16} = G_{ucx} x_{16}$$

$$G_{e1} = G_{ucx} x_1 S_{e1}$$

$$G_{e2} = G_{ucx} x_2 S_{e2}$$

.....

$$G_{e16} = G_{ucx} x_{16} S_{e16}$$

$$\sum_1^{16} G_e = G_e \quad c_e = \frac{G_e}{Q_e}$$

$$x_{\epsilon 1} = \frac{G_{\epsilon 1}}{G_{\epsilon}}$$

$$x_{\epsilon 2} = \frac{G_{\epsilon 2}}{G_{\epsilon}}$$

.....

$$x_{\epsilon 16} = \frac{G_{\epsilon 16}}{G_{\epsilon}}$$

$$G_{ucx1} - G_{e1} = G_{H1}$$

$$G_{ucx2} - G_{e2} = G_{H2}$$

.....

$$G_{ucx16} - G_{e16} = G_{H16}$$

$$\sum_1^{16} G_H = G_H$$

$$x_{H1} = \frac{G_{H1}}{G_H}$$

$$x_{H2} = \frac{G_{H2}}{G_H}$$

.....

$$x_{H16} = \frac{G_{H16}}{G_H}$$

