



2.  $a \frac{\partial^2 w}{\partial x^2} + \frac{\partial}{\partial y} \left( b e^{\mu y} \frac{\partial w}{\partial y} \right) = f(w), \quad ab > 0.$

Functional separable solution for  $\mu \neq 0$ :

$$w = w(\xi), \quad \xi = [b\mu^2(x + C_1)^2 + 4ae^{-\mu y}]^{1/2},$$

where  $C_1$  is an arbitrary constant and the function  $w(\xi)$  is defined implicitly by

$$\int \left[ C_2 + \frac{2}{ab\mu^2} F(w) \right]^{-1/2} dw = C_3 \pm \xi, \quad F(w) = \int f(w) dw,$$

$C_2$  and  $C_3$  are arbitrary constants.

### References

**Zaitsev, V. F. and Polyanin, A. D.,** *Handbook of Partial Differential Equations: Exact Solutions* [in Russian], Mezhdunarodnaya Programma Obrazovaniya, Moscow, 1996.

**Polyanin, A. D. and Zaitsev, V. F.,** *Handbook of Nonlinear Partial Differential Equations*, Chapman & Hall/CRC, Boca Raton, 2004.