

SYMMETRIC AND NONSYMMETRIC OPERATORS WITH GENERAL WENTZELL BOUNDARY CONDITIONS

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We will deal with some results obtained in the papers [1]-[3] concerning existence, regularity and continuous dependence on the boundary conditions of the (C_0) semi-groups generated by the closures of some symmetric and nonsymmetric uniformly elliptic operators with general Wentzell boundary conditions. Here we will focus on the operators acting on the Hilbert space X_2 defined as the completion of $C(\overline{\Omega})$ in the norm $||| \cdot |||_2$ given by $|||u|||_2 := \left(\int_{\Omega} |u|^2 dx + \int_{\partial\Omega} |u|^2 \frac{dS}{\beta} \right)^{\frac{1}{2}}$, where Ω is a bounded domain of \mathbf{R}^N with boundary $\partial\Omega$ in $C^{2+\epsilon}$ and $\beta \in C^1(\partial\Omega)$, $\beta > 0$, comes from the boundary conditions.

REFERENCES

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2. A. Favini, G. R. Goldstein, J.A. Goldstein, E. Obrecht and S. Romanelli, *Elliptic operators with general Wentzell boundary conditions, analytic semigroups and the angle concavity theorem*, (submitted).
3. A. Favini, G. R. Goldstein, J.A. Goldstein, and S. Romanelli, *Wentzell boundary conditions in the nonsymmetric case*, Math. Model. Natural Phenomena (to appear).

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