Integral Equations
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ADDENDA AND ERRATA

Bart, H. and Kroon, L.G.: An indicator for Wiener-Hopf integral equations with invertible analytic symbol, Vol. 6 /1, 1983, pp. 1-20.

After the paper was submitted, M.A. Kaashoek (Vrije Universiteit, Amsterdam) brought to our attention that the proof of Theorem 2.1 can be simplified. In fact, it is unnecessary to introduce the space $Z = \ell_1(\operatorname{Im} P \oplus \operatorname{Im} P^{\times})$, which is somewhat surprising because the spaces $\operatorname{Im} P$ and $\operatorname{Im} P^{\times}$ may have different dimensions. The simplified proof yields an improvement of the original result. The details are as follows.

THEOREM 2.1 (new version). *Let* $S^{\times}$ *be the restriction of* $P^{\times}$ *to* $\operatorname{Im} P$ *considered as an operator into* $\operatorname{Im} P^{\times}$. *Then there exist invertible bounded linear operators* $E\colon \operatorname{Im} P^{\times} \oplus L_p([0,\infty),Y) \to L_p([0,\infty),Y) \oplus \operatorname{Im} P^{\times}$ *and* $F\colon L_p([0,\infty),Y) \oplus \operatorname{Im} P^{\times} \to \operatorname{Im} P \oplus L_p([0,\infty),Y)$ *such that*

$$(*)\qquad \begin{pmatrix} I-K & 0 \\ 0 & I_{P^{\times}} \end{pmatrix} = E \begin{pmatrix} S^{\times} & 0 \\ 0 & I \end{pmatrix} F.$$

Here I *and* $I_{P^{\times}}$ *are the identity operators on* $\operatorname{Im} P^{\times}$ *and* $L_p([0,\infty),Y)$, *respectively.*

PROOF. Using the auxiliary operators introduced in the proof of the original version of the theorem, we define E and F by

$$E = \begin{pmatrix} -W & I-WR^{\times} \\ I_{P^{\times}} & R^{\times} \end{pmatrix}, \qquad F = \begin{pmatrix} -R & S \\ I-K & W \end{pmatrix}.$$

A simple computation, based on the identities established for the auxiliary operators, shows that E and F are invertible with inverses

$$E^{-1} = \begin{pmatrix} -R^{\times} & S^{\times}S \\ I & W \end{pmatrix}, \qquad F^{-1} = \begin{pmatrix} W^{\times} & I+K^{\times} \\ S^{\times} & R^{\times} \end{pmatrix}.$$

One also easily verifies that $(*)$ holds, and the proof is complete. □

The following misprint should be noted. In the matrix representation of F^{-1} given in the original proof of Theorem 2.1 the (2,2)-th entry is missing; it should be V.

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I. Gohberg and L. Lerer: On non-square sections of Wiener-Hopf operators, Vol. 5, 1982, pp. 518-532.

1. The relation $\alpha_1 > \alpha_2$ on p. 519, lines 12 and 14 should be replaced by $\alpha_2 > \alpha_1$.

2. Statements (ii) and (iii) in Theorem 1 on p. 520 should read:

   (ii) $\Omega_1 \geq \Omega_2$ and $\kappa < 0$.

   (iii) $\Omega_1 \overline{>} \Omega_2$ and $\kappa > 0$.