Correction to: Solvability and stability of the inverse Sturm-Liouville problem with analytical functions in the boundary condition (Math. Meth. Appl. Sci. 43 (2020), no. 11, 7009-7021)

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1. In Theorem 2.3, the first sentence should be read as follows: "Let $f_j(\lambda)$, $j = 1, 2$, be entire functions, let $\{\lambda_n\}_{n=1}^{\infty}$ and ω be complex numbers such that the sequence $\{v_n\}_{n=0}^{\infty}$, constructed by them, is an unconditional basis in $\mathcal{H}$ and $\left\{\frac{w_n}{\|v_n\|_{\mathcal{H}}}\right\}_{n=0}^{\infty} \in l_2$". The latter condition is important for convergence of the series at step 3 of Algorithm 2.1.

2. In Proposition 3.7, the second sentence should be read as follows: "Then there exists $\varepsilon > 0$ (depending on q) such that, for any functions $\tilde{K}, \tilde{N} \in L_2(0, \pi)$, satisfying the estimate

$$\Theta := \max\{\|K - \tilde{K}\|_{L_2(0,\pi)}, \|N - \tilde{N}\|_{L_2(0,\pi)}\} \le \varepsilon$$

and the condition

$$\int_0^{\pi} (K(t) - \tilde{K}(t))\, dt = 0, \qquad (*)$$

there exists a unique function $\tilde{q} \in L_2(0, \pi)$ such that $\omega = \tilde{\omega}$ and $\{\tilde{K}, \tilde{N}\}$ are the Cauchy data of $\tilde{q}$." The reason of condition (*) is that the Cauchy data are related with the constant ω by the relation $\int_0^{\pi} K(t)\, dt = \omega$. This relation holds, since the function $\eta_1(\lambda)$ defined by formula (9) in the original paper is analytical at $\lambda = 0$. Adding condition (*) does not influence on the application of Proposition 3.7 in the proof of Theorem 3.1, because relation (28) for $n = 0$ implies $\int_0^{\pi} \tilde{K}(t)\, dt = \omega$.

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