

## Abstract

*In the paper we consider a system  $\Phi \cup \Psi$  in a Banach space  $B = B_1 \oplus B_2$ , where  $B_1$ , and  $B_2$  are infinite dimensional subspaces,  $\Phi \equiv \{\varphi_n\}_{n \in \mathbb{N}}$ ,  $\Psi \equiv \{\psi_n\}_{n \in \mathbb{N}}$ . We find the conditions under which the system  $P_{\tau B_2} \Psi$ , where  $P_{\tau B_2}$  is a projection operator from  $B$  to sub-space  $B_2$ , forms a basis of the space  $B_2$ .*