

?????????, ??????, ?????????? ??????, ?????????????? ?????? (???????, ?????? ? ????????, 3. VII 1939). ?????????? ?? ?????????????? ?????????? ? ?????? 1963, ? ?????????? ?? ?? ? ?????????? 1982. ?? 1964. ?? 1974. ?????? ?? ?????? ?????????? ? „?????????????????“ (??????), ?? ?????????? ?????????? ?????????? ? ?????????? ??????????. ?????? ?? ? ?????????? ?????????????? ??????? ?????? ? ?????????????? ?????????? ?????? ?????? ?????????? ?? ?????????????? ??????? (????????? ?????????? ??? ? ??????, ?????? ?? 19, 21 ? 23 ?????? ? ??? ???? ? ??????). O? 1974. ?? 2004. ?????? j? ? ?????????? ?? ?????????????? ?????????????? ? ?????????????? ?????????????? (?????) ? ??????, ??? ?????? ?????????? ? ?????????????? ??????? ?? ?????????????? ?????????????? ?????????????? ?????????? ??????????????, ??? ?? ?????????? ?????????? ?? 1986, ? ?????????? ?????????? ?????? ?????????? ? ?????????? 2004. ?????????? ?? ?????????????? ? ?????????? ?????????? ?? ?????????? ?????????????? ?????????????? ?????????? ?????????????? ???, ?????? ? ??????. ??? ?? ?????????? ?????????? ?? ??? ?????????????? (?????? ??????????????, ?????????? ??????????????, ?????????????? ??? ??, ?????????? ?????????????? ??????????, ?? ? ?????????? ? ??.), ??????? UNESCO-? ? ?????????? ?????????? ??, ?????????? ?? ?????????????? ?????????????? ? ?????????, ?? ?????????? ? ?????????????? ??????? ?????????????? ?????????????? ?? ?????? ? ???. ?????? ?????????????????? ??? ?? *Structural Consolidations, Repair and Strengthening of Monuments* (New York 1994), ? ?????????????????? ?????????????????, ?????????? ? ?????????? ?????????? ?????????, ??? ? ?????? ?? ?????????? ?????????????????? ?????????????? ? ?????????? ??????????????. ??? ?? ?????????????? ? ?????? ?????????????? ?????? ?????? ?????????????????? ?????????????? ?????????????? ?????????????????? ? ?????????????? ?????????????? ?????????????? ?????????? ? ?????????????? ?????????? ? ???. ?????????? ?? ?????????? ?????????? ?? ?????? ?? ?????? ?? ?????????? ?????????? 1989, ? ?????????????? ?????????? ?????????????? ?????????????? „????? ??????“, ?? ?????????? ? ?????? ?????, ?????? ?? 2005.

????: ???????, *Repair and Strengthening of Reinforced Concrete, Stone and Brick-Masonry Buildings*, Vienna 1983; ? M. G. Oliva, R. W. Clough, „Seismic Testing of Large Panels Walls; Correlations of Pseudostatic and Shaking table tests“, *Earthquake Engineering and Structural Dynamics*, 1990, 19, N6; ??????, *Seismic Strengthening and Conservation of Byzantine Churches in Macedonia*, Los Angeles 2004.

?????: ?????? ?????.

?. ??????????????

\*????? ?? ?????????? ? 1. ????? III ??? ???? ?????? ?????????????????? (2018)