prevalent clastic sedimentary units but more shallow parts of the sedimentary basin were filled by mudstones and carbonate rocks. Fine-grained rocks of aleuropelitic character and variable mineralogical composition in which silica (mostly less crystalline forms like CT-opal, tridymite etc., but also clastic quartz), carbonate (calcite locally enriched in magnesium) and clay minerals (illite, kaolinite and glauconite) prevail can be classified in the range from clayey-calcareous silicites to siliceous-clayey micritic limestones.

Traditionally, these rocks have been used as a common building stone but also as sculptural stone. Along these traditional uses, recent investigations show that some varieties of silicites are also employed as raw material for hydraulic lime binders burning. This paper discusses properties of these traditional stones and possibilities for determining their source locality. Their durability is discussed based on the thorough analysis of physical and mechanical properties and on the experience with their long-term behaviour in outdoor exposures.

Geological Timescale of Tectonostages for Continental Margins

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The lithosphere plate tectonics theory describes the process of oceanic crust opening and closure in geological history of the Earth using the Wilson cycle. Upon the end of the cycle, the oceanic crust being formed at its early stages is almost completely destructed in the process of subduction. As for the continental margin, it is modified during the cycle with formation of volcanic and non-volcanic island arcs, back- and fore-arc sedimentary basins, and orogens. During the next stage of the cycle, the previously formed continental margin is again affected by deep transformation, leaving in the structure of the newborn margin only some relics of the previous ocean crust known as ophiolites. However, as the study proves, complete destruction of the previous continental margin is not reached. Always or quite often a significant part of the newborn continental crust is preserved and laterally accreted to an existing continental plate and is being modified during further transformations passing through consecutive stages that could be called a vertical line of the tectonostages for particular continental margin. Evidence for that conclusion is an age rejuvenation of the continental crystalline crust while moving from the central parts (shield) towards their outskirts (continental margin). It is proposed a geological timescale of tectonostages derived from the Wilson cycle and establishing their time boundaries for the last 2500 million years. Along with the developed model for continental margins evolution, it allows application of the concept of horizontal sequence of tectonostages transition into vertical and vice versa to study structure of continental margins. It is supposed that for the Wilson cycle of 1200 million years every continental margin is subjected to the tectonic process as follows. During the first stage of a divergent epoch (0-200 Ma), a new oceanic basin is forming due to a continental rift. Present-day example of such a rift one can consider the Red Sea Rift and latitude-oriented rift system between North and South America stretched into the Pacific and Atlantic Oceans. Predecessor of the future Red Sea Ocean were the Tethys and the Prototethys paleo-oceans, which originated during the stages of 590, 75-385, 75 Ma and 992,5-793,0 Ma ago. The Tethys is corresponding to present-day Alpine-Himalayan orogenic zone and related sedimentary basins, and the Prototethys – to the Donbass Foldbelt and its eastern prolongation into Karpinskiy Ridge. Rejuvenation of continental margins age towards the periphery of the continents set the problem of studying evolution of those margins applying concept of vertical and horizontal sequences of tectonostages. For this purpose, the model of evolution (tectonic stratification) of continental margins is developed. It includes six stages of tectonic evolution: origination of a new ocean and its opening (divergent epoch of the Wilson cycle), stage of the oceanic basin shortening and thermal subsidence (convergent stage), stage of partial inversion, and the next stage of the complete inversion along with the

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compression thrusting (collision stage). Corresponding to the stages are the types of crust being formed (ocean, quasi-ocean, quasi-continental, continental). The stages are divided into geosynclinal and orogenic sub-stages (the Bertran cycle). It is demonstrated that tectonostages and orogenies are matching (Alpine, Hercynian, Caledonian, Baikal and others) for the last 1500 million years. Actually, the features and direction of changes in vertical and horizontal sequences of continental margin tectonostages is a basic tectonic regularity to be studied because it determines existing types of sedimentary petroleum-prone basins, sedimentary complexes and separate prospects considered as hydrocarbon traps.

Evaluation of Sea-Level Rise Impact on Cemented and Uncemented Beach. Case Study from Thassos Island, Greece

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A semi-buried underwater beachrock exposure, in the west coast of Thassos Island (N Greece), has been investigated due to coastal erosion phenomena. The partial removal of the beachrock's outcrop by locals incurred rapid regression of the beach, while the protected by the formation coast, remained stable during the same time interval. The use of the Bruun Rule as a contributor in the quantification of the marine transgression in the study area showed a participation of the sea-level rise to the beach erosion equal to 7% of the total erosion at minimum. Several other factors, which are related to the unique dynamic conditions at the eroded coastline, might have contributed to augmented erosion values.

Evidence of Pre-Apulian (Paxos) isopic Zone in the Filiatra-Pylos area (SW Peloponnese, Greece)

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The studied area, for decades was regarded as belonging to the Gavrovo-Tripolis isopic zone. However, in last years the area has been the subject of extensive geological mapping reinvestigation, which has brought to light the fact that the features of this geographical part could geotectonically be correlated to the Pre-Apulian (Paxos) isopic zone of the external Hellenides.

The observed lithostratigraphic successions of Filiatra-Pylos area, in comparison with those of Ionian and Gavrovo-Tripolis zones, are clearly and highly distinguishable. In the studied area, the whole Cretaceous to Tertiary sedimentary successions are composed of whitish shallow-water limestones, locally bituminous or rich in organic matter, with multiple emersions bearing scarcely bauxitic episodes, with absence of typical darkish platformal lithofacies like Gavrovo-Tripolis carbonate sequences or any deep-water limestone sequences with chert like Ionian carbonates. In addition to that, the entire examined sedimentary sequence is also developed over a Triassic evaporitic substratum, which is entirely absent within the Plattenkalk Series in Peloponnese. The exceptional thick siliciclastic flysch successions are normally developed over the marly limestones and the clastic deposits and cover by Miocene. Moreover, the flysch sequence in Gavrovo-Tripolis zone and the metaflysch sequence with the Plattenkalk Series are presented by highly restricted outcrops in overall Peloponnese.

The whole area is also characterised by the presence of large anticlines, however the easternmost flysch sequence outcrops are deformed as thrust and fold structures, by the SW

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