

CERAMAH TEKNIK TECHNICAL TALK

The pre-opening history and opening of the Black Sea

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Abstract— The Black Sea is a back-arc basin with active extension beginning in Early-middle Cretaceous times. Extensional structures within and around the basin are poorly known and are mostly overprinted (inverted) by a subsequent Tertiary compressional stage. Black Sea extension itself probably reactivated earlier extensional structures dating from at least the Permo-Triassic and probably to the Late Devonian. There is a fairly vigorous debate about the relative ages of western and eastern segments of the Black Sea basin, with the former usually considered to be somewhat older than the latter. What this could mean for the geometry of extension and mechanism(s) of back-arc rifting processes in terms of the broader plate configuration and kinematics are poorly defined. I'll summarise these issues, including the present-day tectonic regime and what can be inferred about underlying lithosphere structure, and consider these in the context of models of modern back-arc basin systems. The idea is to elucidate the processes responsible for the formation of the Black Sea and to help define a template for interpreting its under constrained observational dataset.

