

## **KINEMATIC ANALYSIS OF COEVAL NEOPROTEROZOIC SHEAR ZONES AND ALKALINE DYKE SWARMS IN SSE BAHIA STATE, BRAZIL**

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The Itabuna-Itaju do Colônia shear zone (IICSZ) is located in the SSE portion of the Bahia State. The IICSZ is a 30 km wide, N45°-trending shear zone that cross-cut some 150 km of the Archean-Paleoproterozoic terrains of the São Francisco Craton. The SW sector of the IICSZ is truncated by the N140°-trending Potiraguá shear zone (PSZ). The IICSZ is a typical intracratonic structure, whereas the PSZ marks the boundary between the São Francisco Craton and the Neoproterozoic Araçuaí mobile belt. Structural data collected over more than 1.000 mafic and felsic alkaline dykes in SSE Bahia indicate that these dykes were emplaced coevally with the evolution of both regional shear zones. These dykes are related to the Neoproterozoic Alkaline Province of southern Bahia and intruded the crust between 680-550Ma, marking the time-frame within which the shear zones developed. The study of kinematic indicators associated with the dykes revealed that the IICSZ and the PSZ developed along a polyphasic tectonic and magmatic history, summarized as follows: (i) N-S compression resulting in reverse ductile shearing in the PSZ, sinistral brittle transpressive shearing in the IICSZ and a small amount of felsic and mafic dyke intrusions; (ii) this was proceeded by a E-W compression that produced sinistral and dextral transtensive shearing in the PSZ and the IICSZ, respectively, which was accompanied by the peak of felsic and mafic dyke emplacement.