

SEM036-P10

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Multicomponent natural remanent magnetization from red chert in the Tsukumi area, eastern Kyushu

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Middle Triassic (Anisian) red cherts in the Chichibu Terrane were collected at 27 beds for paleomagnetic study. Progressive thermal demagnetization treatment revealed five distinct remanent magnetization components from the cherts. The first remanent magnetization component is demagnetized at around 200degrees. The component is similar to that of the present Earth's geomagnetic field. The second component appears at around 250degrees and is demagnetized at around 420degrees. The directions of the component, before tilt correction, cluster well and have negative steep inclinations and southwesterly declinations. The third and fourth component is revealed between about 480 and 630degrees. The directions of these components, before tilt correction, cluster well and have positive intermediate inclinations and northwesterly declinations. The fifth component is retrieved at the latest stages of the demagnetization from 650 to 690degrees. The majority of the directions of this component show steep inclinations before tilt correction and show northerly shallow directions after tilt correction. A few of the directions, after tilt correction, have southerly shallow directions. This component is considered to be of primary because both polarities are present and the antipodality between the two polarities is observed.

The observed directions are compared with previously reported red chert directions from the Mino-Tamba Terrane (Inuyama area) that yielded four distinct remanent magnetization components. The directions of the first to fourth component in this study (referred to as components A to D), before tilt correction, are well correlated with the in-situ directions of the first to third components from cherts in the Mino-Tamba Terrane (Shibuya and Sasajima, 1986; Oda and Suzuki, 2000; Ando et al., 2001), although the two regions are 500 km apart from each other.

The fifth component, with low inclination values after tilt correction, is well correlated with the tilt-corrected inclinations of the D component observed in the previous study. The cherts in the present study have formed at around the equator during Middle Triassic times.

Keywords: paleomagnetism, red chert, Triassic