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Let us enjoy Geo-Tetsu - the Third proposal of Geo-tours through Train Windows, JR Yodo Line in Shikoku

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1. Aims of Geo-Tetsu activities

Succeeding two year's presentation (Kato et al., 2009; Fujita et al., 2010), we will present Geo-Tetsu this year too.

The activity of Geo-Tetsu recommends Geo-tours through train windows. The word "Tetsu" contains meaning of the abbreviation of railway in Japanese, and of the generic name of railway fans. In Japan, railway is the commonest transportation system, everybody loves to ride trains. Geo-Tetsu offers the chances to get contact with the geoscientific features observable through train windows. Here in Geo-Tetsu, geologic and geographic features of the sceneries are explained plainly but scientifically by a guide-book prepared by a group of specialists. Therefore, the Geo-Tetsu can offer the opportunities to get contact with geoscience in travelling by trains. It is nowadays said that people become less and less aware of natural sciences in this country. Geo-Tetsu could, we hope, make people's eyes direct to geosciences, or eventually toward natural sciences.

We selected Geo-Tetsu courses and Geopoint through which people can see representative geoscientific phenomena through train windows. They are better accompanied by walking paths accessible at the stopovers alongside the railway routes. Availability of shorthistories about the selection of the rail routes is also taken into consideration. In short, the routes should offer the chance for geosciences to be seen, touched and felt through train travelling. As many information as obtainable are gathered from various perspectives; railway itself, geology and geography, and sight-seeing as well. A group of specialists compiled a guide-book using gathered information which is a key element of the Geo-Tetsu.

A first Geo-Tetsu proposal of JR Dosan Line in Shikoku started by our project two years ago, and we tried to investigate Gomen- Nahari Line as a second proposal last year. Here the JR Yodo Line is presented as a third project of Geo-Tetsu.

2. JR Yodo Line in Shikoku, the third project of Geo-Tetsu

(1) Abstract of the Yodo Line

The Yodo Line runs along the Shimanto-River, from Wakai tation at Shimanto Town in western area of Kochi Prefecture to Kita-Uwajima Station at Uwajima City in the southwest region in Ehime Prefecture. It is 76.3km in total distance, and is opened in March 1974. This line was planned originally as a route from Ehime Prefecture to Kochi Prefecture in the Meiji era. After many complications, its part was opened as the Uwajima Line as a kind of light railway in 1914, it took 60 years to the opening of present line. Therefore, the old and new technology coexists together in Yodo Line, and then many engineers and railway fans are attracted to the facilities of this railway.

(2) Rich sight-seeing resources of the Yodo Line

Yodo Line runs almost according to Shimanto River. We recommend to enjoy watching the development of incised meanders and the subsidence bridges from the train window, between Tosa-Taisho Station and Yoshinobu Station. Hard sandstone and fragilie mudstone of Shimanto terrane crop out at the riverside which has been eroded by the Shimanto River. Then differential erosion makes strange features of "sandstone's heads" on the Shimanto River. When we pass Yoshinobu Station, the scenery of the train window completely changes. For the dogleg appears many times, the speed of the train becomes slow. In the north side of Iyo-Miyanoshta Station, we can see the Hokezu mountain range which divedes the Pacific Ocean and the Inland Sea. Along the ridge of the Hokezu mountain range, there is the Butsuzo tectonic line. Going out of Muden Station, there is a hardest area called Madonoto Pass. The train runs down through the steep slope of about 140m relative height between two stations. At the end of Geo-Tetsu tour of Yodo Line, we can see the rias coast in Uwajima region.

Keywords: Geo-Tetsu, Yodo Line, Shimanto River, Subsidence bridge, Incised Meander, Geo-tour