

Features of distribution pattern of cobalt-rich ferromanganese crusts on the Micronesian and Marshall Islands seamounts

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Cobalt-rich ferromanganese crusts (cobalt crusts) on the seamounts in the Pacific Ocean are potential resources of cobalt, nickel, platinum and REEs. Particularly, those of the Republic of the Marshall Islands and the Federated States of Micronesia (FSM) waters are believed to be of the highest resources potential area in the Pacific Ocean. The total six cruises using the Japanese research vessel Hakurei-maru No.2 were carried out in the seamounts of the Marshall Islands in 1996, 1998 and 2002, and of the FSM in the 1997, 1998 and 2005 for evaluation of economic potential for cobalt crusts as part of the Japan/SOPAC co-operative study programme. During these cruises numerous data such as bathymetric, geological, geophysical and environmental data were obtained. Geophysical exploration with backscatter mapping and side looking sonar, visual imaging using towed TV camera and geological sampling were conducted on the seamounts. In this presentation, we will report the features of distribution pattern of cobalt crusts on the seamounts.

Keywords: cobalt-rich ferromanganese crusts, cobalt crusts, seamount, Republic of the Marshall Islands, FSM, SOPAC