

ABSTRACT

RESOURCE COLLECTION SYSTEM

A resource collection device 20e of a resource collection system has a resource collection pipe, a protection pipe 22, and a coiled tubing device 60. The protection pipe 22 is disposed around the resource collection pipe and protects the resource collection pipe. The coiled tubing device 60 is fed from a winding reel 62 disposed on the sea surface or inside the protection pipe 22 by way of a feeding device 64 and penetrates a side wall 22a of the protection pipe 22 to extend from the interior to the exterior. The resource collection system cracks the sea floor layer 18 by way of: supplying undiluted solutions of foaming material, fuel gas, and air containing oxygen into the sea floor layer 18 through the coiled tubing device 60; mixing the undiluted solutions of foaming material together so as to expand in an atmosphere that includes fuel gas 66a and air 66b; and causing the fuel gas 66a accumulated in the hollows of the foaming material 66c to explosively combust. The resource collection system can more efficiently collect resources from the sea floor layer.

FIG. 2