Diamond wire cutting system - sub bottom cutter (SBC)

Fact Sheet

Project Information

SBC

Grant agreement ID: G1RD-CT-2000-03007

Project website

Start date 1 March 2001
End date 30 June 2003

Funded under FP5-GROWTH
Overall budget € 2 696 192
EU contribution € 1 199 197

Coordinated by TECNOSPAMEC SRL Italy

Objective

The scope of the SBC is to design, develop and test a new prototype machine able to excavate the sea bed soil limiting the volume of the sea-bed materials released in the environment and cut subsea structures down to 5 m below the soil. Critical research areas are a "new concept" Diamond Cutting String, a subsea remotely operated work/deployment platform, a combined drilling/dredging system. The SBC allows the structures re-cycling, eliminates any dangerous effects on the Marine Environment as primary value to the Community and meets with the Offshore Regulations for decommissioning. Any human body working in contact with the system or marine resources in close vicinity are safeguarded to the highest level of Health and Safety standards. This key aspect benefits the Marine Food Industry and improves the quality of life through the hazard elimination.

1. Prototype machine able to excavate the sea bed soil limiting the volume of the sea-bed materials to approx. 3.5 m3 (0.2 m3 per metre of soil penetration) and to cut 36 inces tubulars up to 5 m below the sea bed, equipped with control devices and protection mechanisms to allow operation in a hostile environment without direct
2. "New concept" Diamond Cutting String, fully compliant with the requirements of a sub bottom cutting task, able to substantially enhance all positive characteristics of conventional diamond wires, mainly in resistance to axial loads, tolerance to the collapse of the cut materials, overall reliability and production life-span;

3. "New concept" subsea work/deployment platform remotely operated with its intelligent Control/Drive Station on surface, stationed on board the vessel/barge supporting the subsea operation (the platform accommodates machine parts and functions and stabilises the complex onto the structure to be cut);

4. "New concept" dredging system based on the combined use of drilling heads and new generation jet pumps designed to avoid any pollution effects in connection with the water turbulence generating a suspension of the upper sea-bed polluted sediments (hydrocarbons, heavy metals, micro-biological pollutants).

Programme(s)

Topic(s)

Funding Scheme

CSC - Cost-sharing contracts

Coordinator

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