Successful Dismantling of Mega-Float by Mechanized Underwater Cutting

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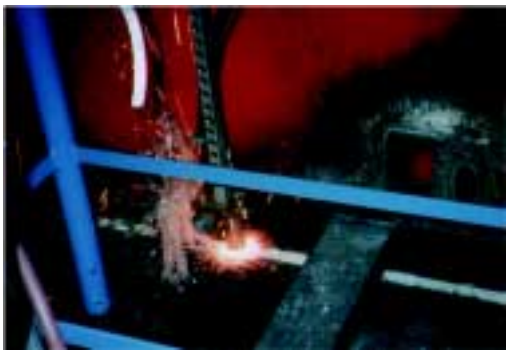
At the final stage of the Mega-float project, the main body was dismantled into twelve small units. Each separated units restarted their new lives such as floating parking area, offshore recreation park and emergency storage against earthquake.

Mechanized underwater flame cutting system had adopted for dismantling operation of the Mega-float, because of its high quality and high efficiency. An edge cut by underwater flame cutting technique can be achieved for new welding joint without any additional surface treatment. This mechanized system cut over 1000m without any troubles. One machine cut about 60 meters a day. This length is about four times superior compared by manual oxy-arc cutting.



Seawater flushes into the float during cutting operation.

All-in-Focus Camera System

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In this paper, a high-speed digital processed microscopic observational system for tele-micro-operation is proposed with a dynamic focusing system and a high-speed digital-processing system using the "depth from focus" criteria.

In micro-operation, it is not easy to obtain good visibility of objects with a microscope focused in small depth, especially when using it for microsurgery and DNA studies, among other procedures. In this sense, the "all-in-focus image," which keeps an in-focus texture all over the object, is useful to observe microenvironments with the microscope. Furthermore, this system realized to obtain the depth map, which is also important information to operate, and show the 3D microenvironments at any view angle in real-time to operate the micro-objects.