

**1992 NOVA AWARD WINNER****Ekofisk Tank Protective Barrier**

The Ekofisk Tank Protective Barrier is a unique solution to an unusual problem. Phillips Petroleum Company discovered that the Ekofisk field's drilling platforms and the Ekofisk collection tank had settled about 20 feet and that the facilities were in danger of being swamped by the North Sea. The legs of the platforms were raised by the installation of steel spools, but the tank could not be protected without a barrier being built around it. The barrier was begun with the construction of two base trays in a drydock in Rotterdam, Holland. The trays, which weighed 27,000 tons each, were then shipped by submersible ship from Holland to Alfjord, Norway, marking the largest sea shipment ever. In deep offshore waters at Alfjord, the 73 meter high walls of each half of the barrier were slipformed and prestressed from the top. Additional precast walls were added to bring the entire height to 103 meters. The barrier halves were then towed to the tank site and floated into place around the tank. The halves were then connected and the barrier ballasted to set it on the sea floor.

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