

## Megastructures: Super Pipeline and Future Train

2 x 60'

### EPISODIC BREAKDOWN

#### 1. Super Pipeline

Teams of engineers and robots work against extreme underwater conditions to build the world's longest subsea pipeline. By two thousand and eight, Norway will be connected to the United Kingdom via a 1200 km super pipeline—the longest subsea pipeline in the world. But this connection is only a part of an enormous plan to tap into Norway's second largest gas deposit, capable of providing 20% of the UK's gas needs for decades to come. Located 3 km below the ocean's surface and 120 km offshore, the deposit is beyond the reach of humans and all of the construction has to be completed by robots working against strong underwater currents, sub-zero temperatures and extreme wind and wave conditions. When tapped, the gas will be transported to one of the largest automated gas processing plants to prepare it for shipment to U.K. Each phase will put ingenuity and engineering to the ultimate test.

#### 2. Future Train

Speeding at 430 km/h, a futuristic magnetic levitation train makes the 30 km journey from the Pudong International Airport to the Longyang Road Station in Shanghai's new financial center into an eight-minute joyride. As the world's first operating electromagnetic levitation train system, the MAGLEV travels at lightning speed and could change the way we look at train technology forever. As a transportation system it is fast, safe and energy efficient but the Shanghai line remains the only magnetic levitation train in commercial operation despite decades of research and countless proposals.

What is slowing MAGLEV down?