

# off the fence.

## Inside Mighty Machines

6 x 60'

EPISODIC BREAKDOWN

### 1. Jumbo Jet

Engineer Chad Zdenek gets hands on with a Mississippi disassembly team as they take on the task of stripping down the six million parts that make up the iconic 747 aircraft. Meeting some of its original designers and pilots along the way, Chad will get to the nuts and bolts of what this particular plane the 'Queen of the Skies'.

### 2. Power Plant

Coal powered the birth of modern America and smokestacks dotted the landscape. As we turn to natural gas and renewables, engineer Chad Zdenek gets deep inside the workings of one of the nation's behemoth coal power stations in North Carolina before it's taken apart and consigned to history forever.

### 3. Hovercraft

Engineer Chad Zdenek joins a salvage team to tear apart the world's biggest hovercraft and reveal the engineering innovations that made it a legend of its time. In San Diego, he takes controls of the US Navy hovercraft fighting wars and saving lives around the world.

### 4. Oil Rig

The Brent Delta oil rig extracted oil and gas from beneath one of the roughest seas on the planet for over 40 years. Now the North Sea oil fields have run dry and the 24,000 ton rig is being taken apart on the east coast of Britain. Chad joins the teams attempting to recycle an oil rig for the first time, so he can find out the 5 incredible innovations that allowed it to drill deeper than ever before, 115 miles from land. The jet-fighter engines, powering turbines, that kept the rig running. The flare tower that burned off explosive gas in a 120ft flame. The bomb proof accommodation block that protected 160 men from lethal gas explosions. The massive upgrade that turned the oil rig into a gas platform, extending the rigs life by 2 decades. And the incredible drilling system that could cut through miles of seabed, in any direction. Chad follows the rigs deconstruction as these massive components are brought crashing to the ground, as they give up their amazing engineering secrets.

## **5. C5 Galaxy**

Built in 1968, the C5 Galaxy was the biggest cargo plane EVER. With the ability to carry more cargo further than any other plane and to land anywhere, the C-5 has been a crucial part of the US Military's arsenal for almost 50 years. In this episode, Chad gets to see a C-5 being stripped down, over-hauled and rebuilt in order to serve for another 20 years. Giving him the chance to uncover the five key engineering innovations that make it King of the Skies.

## **6. Aircraft Carrier**

For forty years, Nimitz class aircraft carriers have delivered US military might wherever it is needed, anywhere on the globe. But now, this legendary design is being phased out and new carriers are planned. But until they're ready, the giant Nimitz ships have to be kept at the forefront of military technology.

In this episode, engineer and host Chad Zdenek spends a week on board the USS Carl Vinson to work with the highly trained specialist engineers, mechanics and sailors who keep this incredible floating city in perfect working order during a critical mission in the Pacific – training twenty F18 pilots who have never taken off from an Aircraft Carrier before. This gives Chad the chance to discover the five engineering innovations at the heart of America's most incredible Aircraft Carrier.