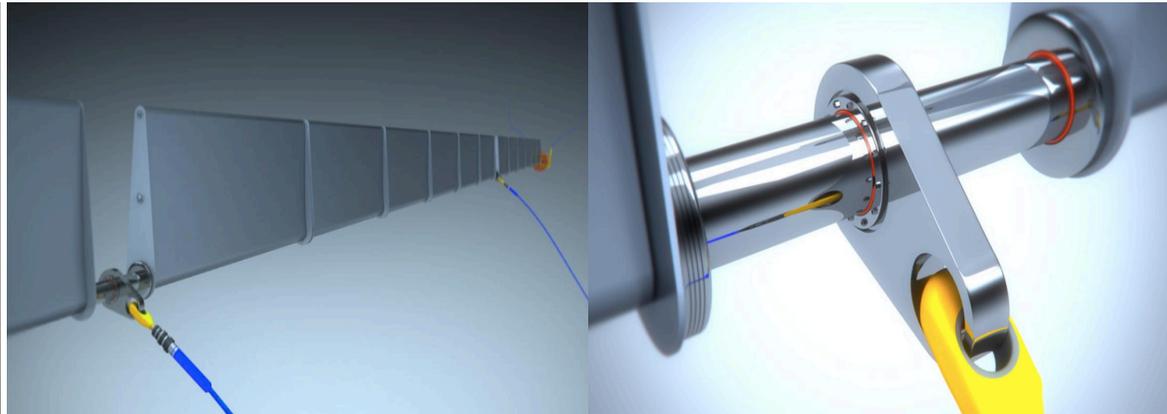
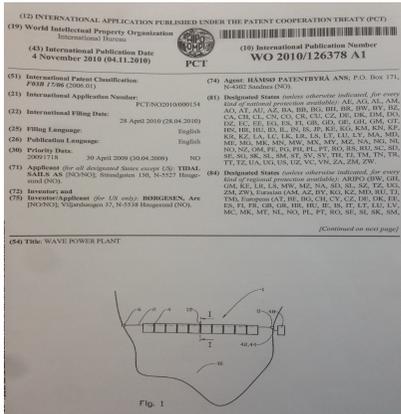


# WaveSails – “revolving gas pipe”



Tidal Sails, established in Norway 2004, is also developing a unique patented solution for producing low-cost electricity from small, medium and large waves by combining the oscillating movement of seaweed with well proven gas pipe technology.

## Technological Advantage

Unrivaled **exposed wave range**, which is particularly important in small and medium size waves. By extracting a high energy percentage in small waves, and only a fraction of the energy in large waves, structural integrity is safeguarded.

## Low Cost and Weight Advantage

Due to low weight to output ratio, and ability to harvest energy from an extensive wave front.

## Service & Maintenance

Direct Drive Generators, a Pipe Shaft and sea water resistant and recyclable aluminum Sails, indicates a simple “horse and carriage” type technology with minimal maintenance.

## Environmental Impact

Slowly oscillating aluminum sails barely penetrating the surface follow the motion of the waves, protect the beach play area inside, and reduce erosion due to the lessened excavating wave energy. WaveSails is harmless to most fish and sea mammals, and will not interfere with shipping lanes. “Hot Spots” of large waves are less common, and farther in between than small and medium waves.

## The Patented WaveSails Power Plant

Strung in between two fixed points either across a bay, in between oil platforms, islands or skerries at 2 meters depth, each individual sail autonomously contributes to turning the 50m–1000m long Pipe Shaft at design rpm. Small waves produce the same electricity as the energy packed larger waves. Excess power bleeds off once the Pipe Shaft “design rpm” is reached in order not to compromise structural integrity.

## Winner of several awards:

- 2008 Tidal Sails joins the European Championship League of innovation SMEs by winning its first Eurostars R&D contract .
- 2010 Tidal Sails become one of CNBC`s 10 Green Heroes and win the Frost & Sullivans - Technology Award.
- 2012 Tidal Sails win the European Venture Contest - Energy amongst 851 nominated startups.
- 2013 Tidal Sails secures its third EU project. (€1,5m)
- 2013 Tidal Sails secures a 3MW Permit to install a full scale Tidal Sails plant near Hammerfest.
- 2014 Tidal Sails win IAIR Awards - Sustainability.
- 2015 Tidal Sails secures a tidal 4MW Permit