



Science@ifpen

Written on 01 September 2013



15 minutes of reading



News

Fundamental Research

Renewable energies

Wind Energy

Responsible oil and gas

Fuels

Risers and flow lines



Two of the main investigation fields being studied within the **Applied**

Mechanics Division are understanding the physical phenomena governing industrial processes and accurately determining the lifespan of technological products in their environment. In these fields, the quality of our research—both academic and in terms of industrial transfer—is recognized worldwide.

IFPEN is thus one of the top five organizations in the world in terms of **scientific publications** in the research areas of **dispersed-phase flow simulation** or the **mechanical behavior of polymer materials**. Concerning the **renewable marine energies**, IFPEN is among the top three patent filers concerning **aerodynamic efficiency and floating platforms suitable for offshore wind turbines**. This issue illustrates six significant topics that can be addressed using the Division's expertise in fluid and solid mechanics, ranging from theoretical aspects to the design of

complex technological equipment.

We hope that you will enjoy this issue.

Éric Heintzé, Head of the Applied Mechanics Division

Summary:

- **Waxy crude oils**: may the flow be with you!
 - **Seabeds** have composite fibre
 - **Particle**: Quo vadis?
 - Not so fanciful **plastics**
 - When **wind turbines** sail away!
 - **Catalyst supports** under pressure
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