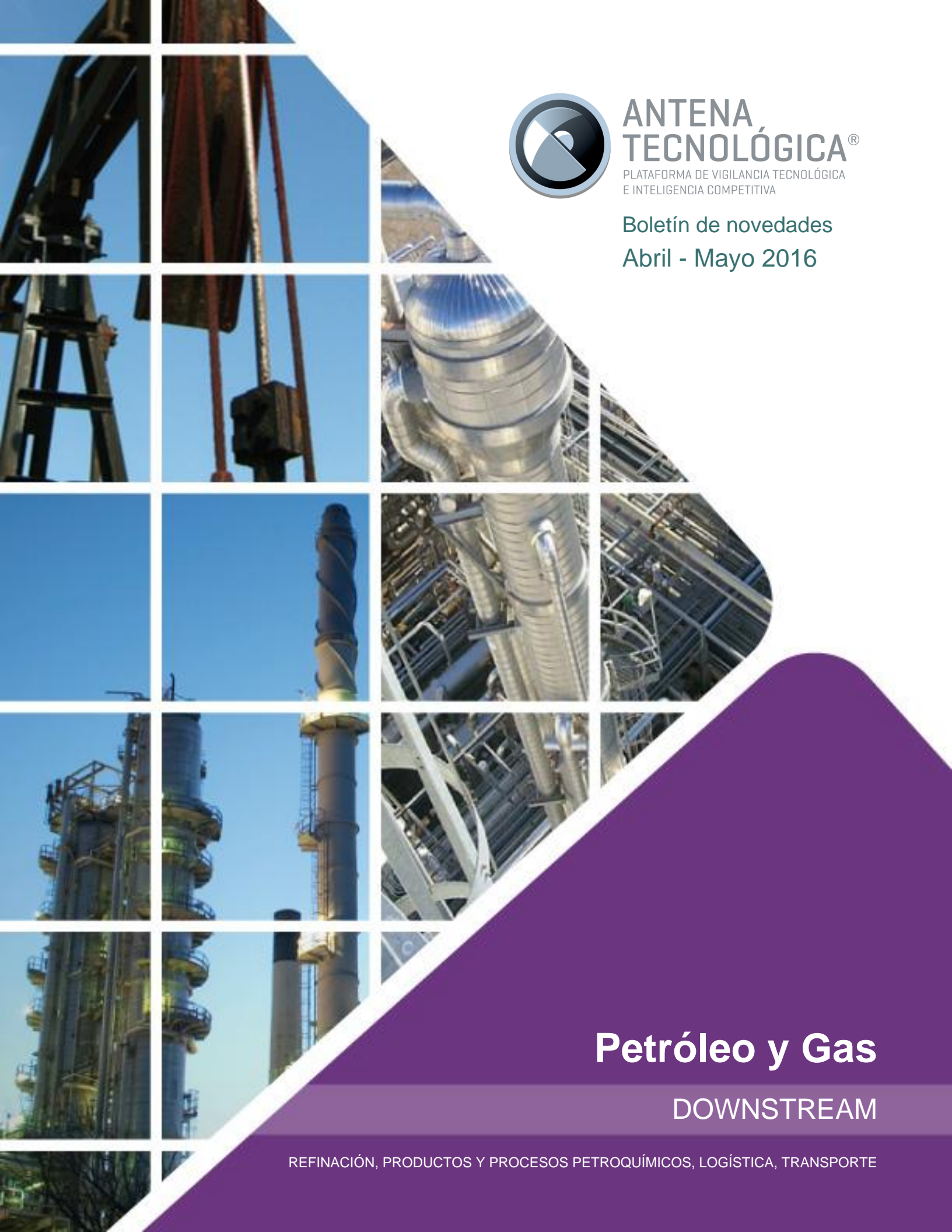




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Boletín de novedades  
Abril - Mayo 2016



**Petróleo y Gas**

**DOWNSTREAM**

REFINACIÓN, PRODUCTOS Y PROCESOS PETROQUÍMICOS, LOGÍSTICA, TRANSPORTE



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## DOWNSTREAM

### REVISTAS

#### **Producción mejorada de hidrógeno mediante ácido acético reformado con vapor sobre un catalizador de Ni apoyado en Mgo mesoporoso**

Publicada el 16/02/2016

A series of Ni-based catalysts supported on different MgO supports were investigated for hydrogen production via steam reforming (SR) of acetic acid (HAc). Three types of NiO and MgO solid solutions were prepared by co-precipitation of Ni(NO<sub>3</sub>)<sub>2</sub> and Mg(NO<sub>3</sub>)<sub>2</sub>, impregnation of Ni(NO<sub>3</sub>)<sub>2</sub> on MgO, and impregnation of Ni(NO<sub>3</sub>)<sub>2</sub> on mesoporous MgO (denoted as MgO-m), respectively.

[ver más...](#)



## DOWNSTREAM

### PUBLICACIONES CIENTÍFICAS

#### Gestión de la cadena de suministro en downstream: Revisión crítica y futuras direcciones

Publicada el 14/05/2016

Publication date: 14 May 2016 Source: Computers & Chemical Engineering Author(s): Camilo Lima, Susana Relvas, Ana Paula F.D. Barbosa-Póvoa The oil industry has been playing a particular role in the modern economy, acting globally in different countries within competitive business environments. Due to the complexity of the oil supply chain, the associated decision making process is a difficult task, which involves numerous elements from oil supply, going through oil refining, up to oil product distribution. Thus, decision-support tools are often required to assist the decision making in the context of the oil supply chain.



[ver más...](#)

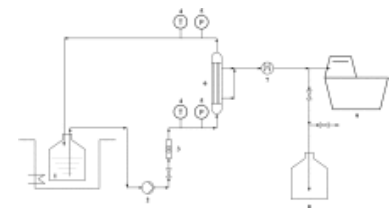


## DOWNSTREAM

### Exploración y optimización del proceso de destilación de membranas al vacío en dos etapas para el tratamiento de aguas residuales salinas producidas por la explotación de gas natural

Publicada el 02/05/2016

Publication date: 2 May 2016 Source: Desalination, Volume 385 Author(s): Xinmiao Zhang, Zhi Guo, Chenlin Zhang, Jinyi Luan Membrane distillation has recently been recognized as the emerging foremost membrane separation technology for applications in industrial wastewater treatment and desalination. By employing polypropylene hollow fiber membrane, this study firstly performed the optimization of the vacuum membrane distillation (VMD) process. Subsequently, the feasibility of the VMD for the treatment of real saline wastewater produced by natural gas exploitation was investigated under optimized operation conditions. An ultrahigh water flux of  $30.4 \text{ kg}/(\text{m}^2 \cdot \text{h})$  with a salt rejection rate of 99.8% was achieved.



[ver más...](#)

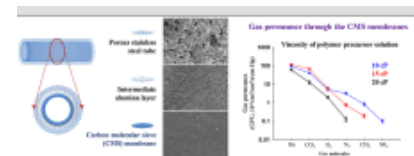


## DOWNSTREAM

### Membranas de tamiz molecular de carbono en soportes tubulares de compuestos porosos para la separación de gas de alto rendimiento

Publicada el 01/04/2016

Publication date: April 2016 Source: Microporous and Mesoporous Materials, Volume 224 Author(s): Pyung-Soo Lee, Daejin Kim, Seung-Eun Nam, Ramesh R. Bhave Carbon molecular sieve (CMS) membranes on the inside of porous composite stainless steel supports were developed for gas separation in this research effort. The intermediate alumina layer was introduced to reduce the pore size of the porous stainless steel tube and subsequently provide uniform surface roughness. Viscosity of the phenolic polymer solution was varied from 10 to 30 centipoises (cP) to maximize performance of the CMS membranes. Pyrolysis temperature was also varied from 700 °C to 900 °C to optimize the fabrication of uniform CMS membranes on porous composite stainless steel supports. High performance CMS membranes were obtained from triple coatings and subsequent pyrolysis at 700 °C.



[ver más...](#)

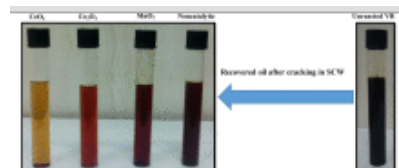


## DOWNSTREAM

### Craqueo catalítico de residuos de petróleo pesado en aguas supercríticas: estudio del efecto de de diferentes nanopartículas de metal óxido

Publicada el 22/03/2016

Publication date: 22 March 2016 Source: The Journal of Supercritical Fluids  
Author(s): Morteza Golmohammadi, Seyed Javad Ahmadi, Jafar Towfighi  
Cracking of heavy petroleum residue obtained from the vacuum distillation unit in supercritical water (SCW) was performed with and without catalysts. First, different nanoparticles, including CeO<sub>2</sub>, Co<sub>3</sub>O<sub>4</sub>, and MnO<sub>2</sub> were synthesized in a batchwise SCW reactor; then, the abilities of aforementioned nanocatalysts to convert vacuum residue (VR) into the lighter fractions as well as their stability under severe condition of supercritical water were examined. The X-ray diffractometry (XRD) and transmission electron microscopy (TEM) images indicated that the obtained nanoparticles with a satisfactory size and morphology were synthesized under supercritical condition.



[ver más...](#)

### Co-inyección de solventes multicomponentes con vapor en depósitos de petróleos pesados y extra-pesados

Publicada el 15/03/2016

Expanding solvent steam assisted gravity drainage (ES-SAGD) is a hybrid steam–solvent oil recovery process that can be used to extract oil from heavy oil and bitumen reservoirs. It is a variation of the SAGD process in which only steam is used. In ES-SAGD, the mobilization of highly viscous oil is enhanced through a combination of heat and mass transfer processes, which results in significantly reduced volumes of water and natural gas needed to generate the injected steam, making ES-SAGD more energy efficient and environmentally sustainable relative to SAGD.

[ver más...](#)





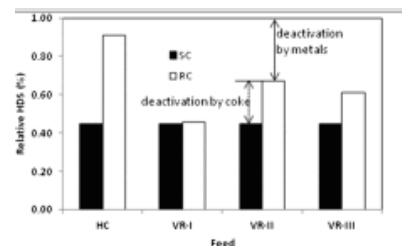
## DOWNSTREAM

### Desactivación de catalizadores de hidrotratamiento mediante metales en la resina y partes de alfateno de petróleo pesado y residuos

Publicada el 22/02/2016

Publication date: Available online 22 February 2016 Source: Fuel Author(s): K. Kohli, R. Prajapati, S.K. Maity, M. Sau, M.O. Garg The degree of deactivation was studied on the hydrotreating catalyst by using four different feed stocks. This work demonstrated that the deactivation by metals in resin and asphaltene parts of the heavy crude oil and residues was different. The degree of deactivation by metals does not always depend on the concentration of these, but also the nature of the metals. Firstly, the metals in resin part may not have as adverse effect on deactivation as the metals in asphaltene part have. It may possible that these metals in resin may deposit on the bare alumina surface, not on the active sites. Secondly, the nickel containing compounds in the feed deactivate the HDS active sites in lesser extent than that done by vanadium compounds.

[ver más...](#)



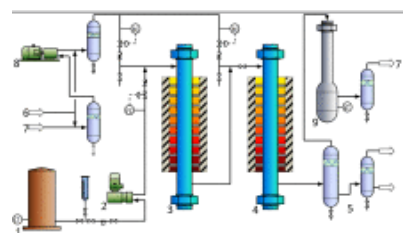


## DOWNSTREAM

### Producción directa de gasolina de alto octanaje y componentes de mezcla mediante hicrocraqueo de LCO

Publicada el 09/02/2016

Publication date: 9 February 2016 Source: Catalysis Today Author(s): Chong Peng, Xinlu Huang, Xuezhi Duan, Zhenmin Cheng, Ronghui Zeng, Rong Guo, Xiangchen Fang Hydrocracking of light cycle oil (LCO) is of great scientific and industrial importance to obtain high quality of gasoline and diesel. In this work, a novel LCO hydrocracking technology (FD2G) was proposed, and three kinds of hydroprocessing catalysts (i.e., FC-14, FC-24 and FC-26) were tested under different pilot-scale operational conditions and/or types. All the three catalysts are found to be active for direct production of high octane gasoline and ultra low sulfur diesel (ULSD) blend stocks, and the FC-24 catalyst is the most active and selective toward production of high octane gasoline.



[ver más...](#)

### Nuevas tecnologías de downstream y upstream para petróleos extra pesados

Publicada el 19/01/2016

Heavy oil and bitumen are found in many places worldwide, with the largest deposits in the world being in Canada (Alberta), Venezuela and the former Soviet Union.

Among huge conventional and unconventional oil resources so-called Bazhenov series represent one of the highest hydrocarbons potential in Russia. Its resources of light oil considerably exceed conventional oil resources, and extra heavy oil resources are estimated to be hundreds of billion tons (some estimates go beyond 2 trillion tons). Despite huge geological HC resources allocated in BS technology for their effective development is still a challenge.

[ver más...](#)



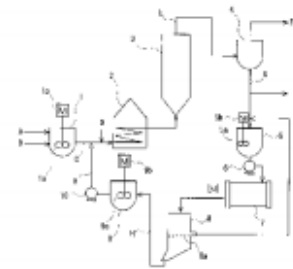
## DOWNSTREAM

### PATENTES

#### **Método de hicrocraqueo, método para producir petróleo hidrocraqueado, dispositivo de hidrocraqueo y dispositivo para producir petróleo hidrocraqueado**

Publicada el 13/04/2016

The present invention is a method for hydrocracking a petroleum-based heavy oil containing a heavy metal component, the method characterized by being provided with a supplying step for supplying hydrogen gas and a starting material slurry including the petroleum-based heavy oil and an iron-based catalyst to a hydrocracking reactor, a hydrocracking step for hydrocracking the petroleum-based heavy oil in the hydrocracking reactor, a recovery step for recovering a residual oil component including the iron-based catalyst from the product after the hydrocracking step, a disintegration step for disintegrating the iron-based catalyst in the recovered residual oil component and obtaining a disintegrated iron-based catalyst, and a resupplying step for resupplying a processed residual oil component including the disintegrated iron-based catalyst to the hydrocracking reactor.



[ver más...](#)



## DOWNSTREAM

### Procesos para el desalado de petróleo crudo bajo condiciones de flujo dinámico

Publicada el 08/04/2016

Presented is a process for desalting crude oil. The process includes mixing a partially dehydrated crude oil, comprising less than 10 vol. % water and at least one water-extractable contaminant, with an aqueous wash fluid. A water-in-oil emulsion is formed. The water-in-oil emulsion is introduced into a first coalescence zone defined by a first vessel. The first vessel is configured to apply an electric field to the emulsion. The water-in-oil emulsion is broken within the first coalescence zone in the presence of the electric field under dynamic flow conditions to form a partially desalted crude oil and a non-emulsified aqueous salt solution.

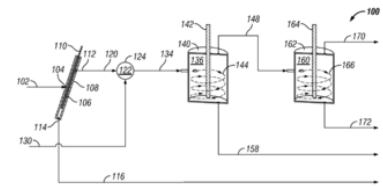


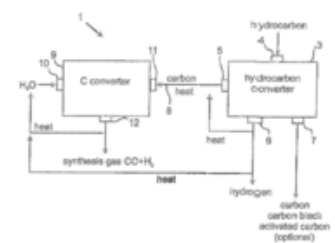
FIG. 1

[ver más...](#)

### Proceso y sistema para la generación de gas de síntesis

Publicada el 01/04/2016

A method and an apparatus for generating synthesis gas using hydrocarbons and water are described. In further embodiments of the method and the apparatus, synthesis gases having any desired CO/hydrogen ratio and/or synthetic functionalised and/or non-functionalised hydrocarbons are generated. With this method, a hydrocarbon containing fluid may be transformed into a synthesis gas having variable hydrogen content without generating significant amounts of CO<sub>2</sub>. Further, hydrogen and different forms of carbon may be obtained as by-products.



[ver más...](#)

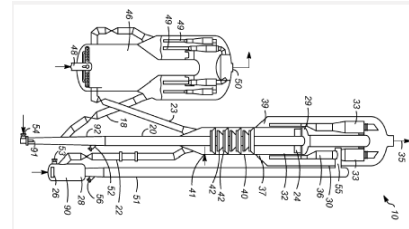


## DOWNSTREAM

### Métodos y sistemas para incrementar la producción de destilados medios de hidrocarburos a partir de hidrocarburos pesados durante el craqueo catalítico de fluidos

Publicada el 25/03/2016

A method is provided for increasing production of middle distillate hydrocarbons from conversion of a heavy hydrocarbon feed in a fluid catalytic cracking system having a primary riser and a secondary riser, wherein the method comprises providing regenerated catalyst to the primary riser and operating the primary riser under severe conditions and providing spent catalyst to the secondary riser and operating the secondary riser under moderate conditions.



[ver más...](#)

### Desulfuración de mezclas de nafta

Publicada el 19/02/2016

A process for desulfurizing a delayed coker naphtha in a catalytic naphtha desulfurization process in which the feed comprising the delayed coker naphtha is passed over a silicon trap comprising a high surface area inert alumina of low metals content prior to being hydrodesulfurized in an olefin-retentive, catalytic naphtha hydrodesulfurization process. Unpromoted (no intentional metals content), inert alumina is preferred for the silicon trap since it will not affect the olefin-retentive qualities of the hydrodesulfurization catalyst and for maximal silicon capture, a high surface area alumina is employed.

[ver más...](#)



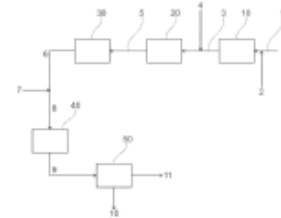
## DOWNSTREAM

### Proceso para la producción de hidrógeno

Publicada el 15/01/2016

Process for producing hydrogen in which tail gas from a separate plant for production of gasoline or diesel is added downstream the steam methane reforming stage and upstream the water gas shift stage of a hydrogen production plant.

[ver más...](#)





## DOWNSTREAM

### NOTICIAS

#### Petróleo y gas natural en Texas

Publicada el 03/05/2016

Advances in proven technology are delivering new opportunities in oil and natural gas production around Texas. While much of Texas is familiar ground to oil and natural gas development, many Texans are experiencing oil and natural gas operations in their communities for the first time. This book aims to answer questions and provide useful resources about oil and natural gas in Texas. Topics in this book include Regulation, Fracking, Water, Air, Waste Management, Pipeline Safety, Refining and Economic Impact.



[ver más...](#)

#### Petróleo y gas natural lideran innovación en tecnología hidráulica

Publicada el 03/05/2016

Texans know that water is among our state's most precious resources and it takes creative thinking and cooperation between the public and private sectors to address our water needs.

[ver más...](#)



## DOWNSTREAM

### Sector gas natural abre grandes posibilidades para la integración regional según informe de ARPEL

Publicada el 19/04/2016

El crecimiento de la demanda energética, estimado en un 3% anual, la necesidad de descarbonizar la economía, reforzado por el Acuerdo de la COP21, el crecimiento de las energías renovables no convencionales, las posibilidades tecnológicas y de mercado que ofrece la nueva dinámica del gas natural a nivel global y la existencia de recursos naturales, serán los principales drivers para el desarrollo del gas natural en la región, según se expresa en el nuevo informe sobre “Tendencias del Sector Gas Natural en América Latina y el Caribe”, elaborado por el Comité de Gas y Energía de la Asociación Regional de Empresas del Sector Petróleo, Gas y Biocombustibles en Latinoamérica y el Caribe (ARPEL).



[ver más...](#)

### Gobierno y sector privado crean fondo de 50 millones de dólares para fortalecer industria petroquímica

Publicada el 15/04/2016

El Gobierno nacional acordó con empresas privadas crear un fondo conjunto de 50 millones de dólares para impulsar la industria petroquímica nacional, en las áreas de gas, refinación, alimentos, plásticos y químicos. La creación del fondo se acordó en una reunión del Motor Petroquímico dirigida por el ministro de Petróleo y Minería, Eulogio Del Pino, con la participación de representantes de empresas del sector privado, reseñó una nota de prensa de Petróleos de Venezuela (Pdvsa).

[ver más...](#)





## DOWNSTREAM

### Se desploman los precios de gas natural

Publicada el 04/04/2016

Han transcurrido 20 meses desde que los precios del petróleo comenzaron a desplomarse muy vertiginosamente. En junio de 2014, el precio promedio WTI se emplazó en 105,8 dólares por Barril y llegó a caer a 31,7 dólares en enero de 2016, un descenso de 70%. A continuación un análisis del impacto del precio del petróleo y de otras variables en los precios del gas natural a nivel regional y mundial.

[ver más...](#)

### Datos del downstream del sector petrolero 2016

Publicada el 31/03/2016

The UK Petroleum Industry Association (UKPIA) is the trade association that represents the main oil refining and marketing companies operating in the UK.

[ver más...](#)





## DOWNSTREAM

### **Paquete de seguridad de energía de la UE es un comienzo para reconocer la importancia del gas natural**

Publicada el 21/03/2016

IOGP has described the European Commission's gas proposals as a positive step in taking natural gas into account to deliver on the Energy Union's ambitions.

[ver más...](#)

### **Propuesta de la PHMSA podría ampliar requerimientos de seguridad para gasoductos**

Publicada el 17/03/2016

The US Pipeline & Hazardous Materials Safety Administration proposed broader natural gas transmission pipeline safety regulations that would add new assessment and repair criteria, and include lines in medium population density areas, called moderate consequence areas, where an incident would pose a risk to human life.

[ver más...](#)

### **Informe: Industria del petróleo y gas natural crean mayores oportunidades para mujeres y minorías**

Publicada el 08/03/2016

Women and minorities will fill an exceptional number of the nearly 1.9 million job opportunities projected in the oil and natural gas and petrochemical industries by 2035, according to a new IHS report, Minority and Female Employment in the Oil & Natural Gas and Petrochemical Industries 2015-2035, sponsored by API.

[ver más...](#)



## DOWNSTREAM

### El valor de las exportaciones cae 35% arrastrado por el gas natural

Publicada el 07/03/2016

El descenso se produjo en las cuatro actividades económicas que periódicamente son analizadas por la oficina estatal, aunque la que tuvo una mayor incidencia en el resultado final fue la de extracción de hidrocarburos.

[ver más...](#)



### Industria mejora las prácticas de instalaciones de almacenamiento de gas natural

Publicada el 02/02/2016

Today the Pipeline and Hazardous Materials Safety Administration's (PHMSA) released a natural gas storage safety advisory modeled after industry's best practices.

[ver más...](#)

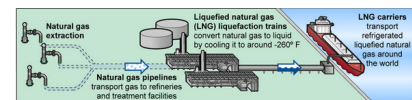


## DOWNSTREAM

### Implicancias del uso de buques transportadores de gas natural para las exportaciones

Publicada el 20/01/2016

According to Department of Energy (DOE) and industry expectations, in the next few years the United States is expected to change from a net importer of natural gas to a net exporter, with those exports destined for different regions of the world, especially Asia.



[ver más...](#)

### La producción de gas natural se incrementará en 13% hasta junio

Publicada el 08/01/2016

Hasta junio de este año, la producción de gas natural aumentará de los actuales 61 millones de metros cúbicos por día (MMmcd) a 69 MMmcd. El incremento de la productividad, de un 13% adicional, permitirá un mayor ingreso de divisas para el país.

[ver más...](#)





## DOWNSTREAM

### Plástico reforzado con fibra muestra superioridad térmica ante el acero

Publicada el 04/01/2016

Thermal insulation properties of fiber-reinforced (FRP) plastic crude oil pipelines are superior to seamless steel pipelines. Operating a crude oil pipeline at too low a temperature can lead to wax precipitation, a major economic and safety problem.

[ver más...](#)



## DOWNSTREAM

### MERCADO

#### Alberta incrementa uso del gas para petroquímicos

Publicada el 02/02/2016

Alberta will award “royalty credits” to petrochemical manufacturers in a competitive application system designed to add value to natural gas produced in the province.

[ver más...](#)



## DOWNSTREAM

### EVENTOS

#### 20° Cumbre anual de Downstream CIS

Publicada el 10/05/2016

28th November - 30th November 2016. Vienna, Austria. We are excited to announce that we are returning to Vienna, the original host of the event 20 years ago! CIS Downstream Summit features first-hand experiences, latest refining technologies, strategies, operations and management techniques that enable refiners and producers meet their operational and financial goals.

[ver más...](#)



#### Congreso Petroquímico 2016

Publicada el 22/03/2016

14 y 15 de junio de 2016. Buenos Aires, Argentina. El encuentro tiene como objetivo principal mostrar los avances del sector y los desafíos que enfrentamos para capturar las oportunidades de negocio a futuro.

[ver más...](#)





## DOWNSTREAM

### 12th Simposio Internacional “Pipeline Transport – 2016”

Publicada el 15/03/2016

April 28, 2016. Moscow, Russian Federation. The Symposium will focus on major trends in the development of the oil and gas market and their influence on oil and gas transportation infrastructure, including world market demand for Russian hydrocarbons.

[ver más...](#)



### Asia Refining Technology Conference

Publicada el 16/02/2016

19 - 21 Apr, 2016. Kuala Lumpur, Malaysia. Now in its 19th year, the ARTC Annual Meeting is a two day, dual stream technical conference hosted annually by Global Technology Forum (GTF). ARTC is the leading downstream event for refiners and petrochemical producers operating in the Asia Pacific region. Join us and senior decision makers for 2-days of technical analysis and real life case-studies as well as extensive networking opportunities at the meeting place for the Asian refining and petrochemical industries

[ver más...](#)





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Entidades que colaboraron:



INSTITUTO ARGENTINO  
DEL PETRÓLEO Y DEL GAS



Cámara de la Industria  
Química y Petroquímica

Trabajo realizado por:



Secretaría de Planeamiento y Políticas  
**Ministerio de Ciencia,  
Tecnología e Innovación Productiva  
Presidencia de la Nación**