

# Catalyst & Technology

April/May 2002

News

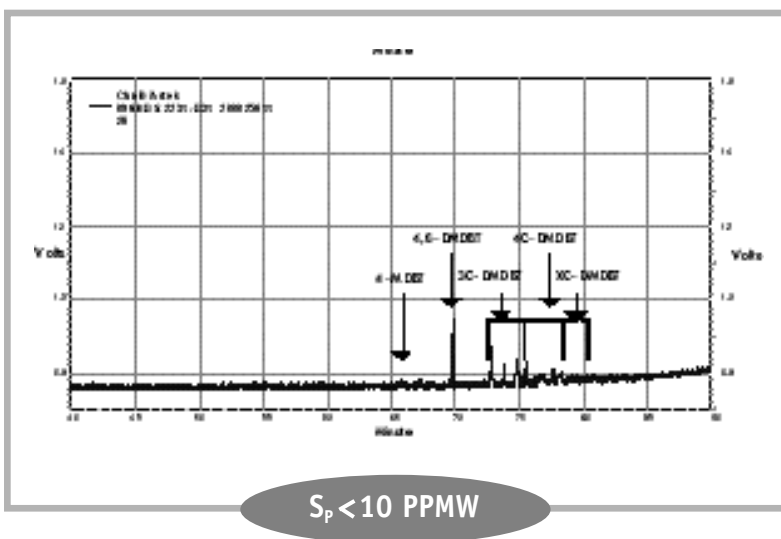
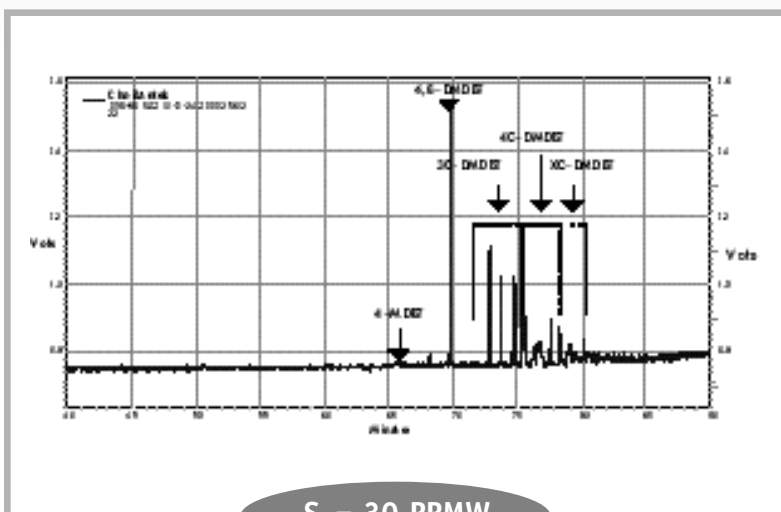
## Criterion CENTINEL DC-2118

*"The Heart of Your ULSD Strategy"*

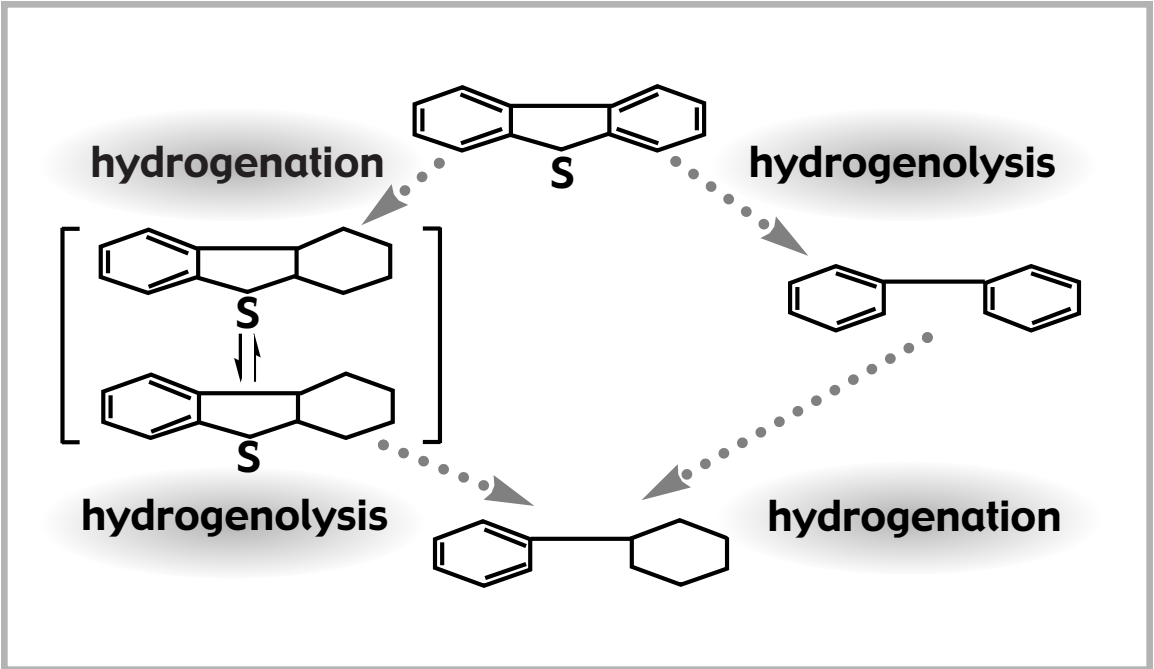
### DC-2118

*Effectively Removes  
the Difficult Sulphur  
Species That Challenge  
Conventional Catalysts...*

*By reducing the effects  
of sterically hindered  
sulphur species.*



**CRITERION**  
CATALYSTS & TECHNOLOGIES



Resulting in cost-effective solutions for producing ULSD...

*Whether the ULSD  
Strategy entails drop-in  
catalyst, a unit revamp,  
or a grass roots unit.*

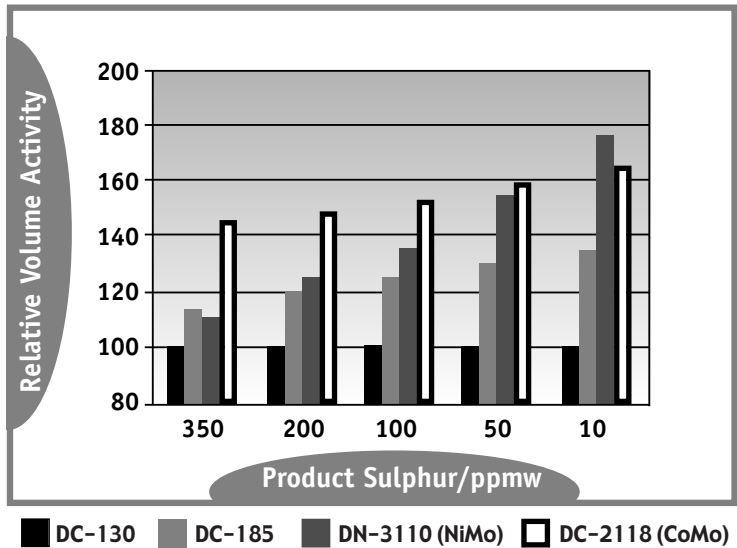
*Criterion's  
Clean Fuels Team... can help!*

**CENTINEL** is Criterion's latest catalyst manufacturing innovation that yields optimal, stable metals dispersion and simultaneously creates active sulphurized site formation...

- Producing the highest HDS/HDN/HDA performance and stability
- Providing a simple, reliable catalyst start-up procedure

Use DC-2118 and Take Advantage of the Benefits Today While Preparing for Future Diesel Fuel Regulations

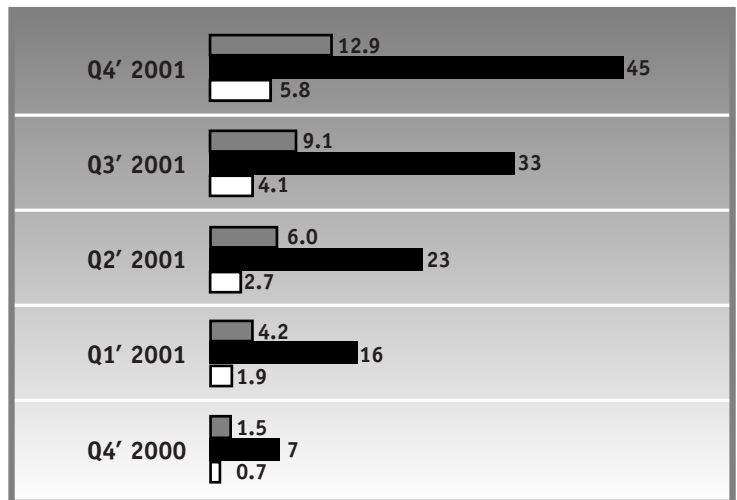
- Production of Lower Product Sulphur for blending
- Process more cracked feedstocks
- Increase Feed End Points
- Higher LHSV



*Sales of*

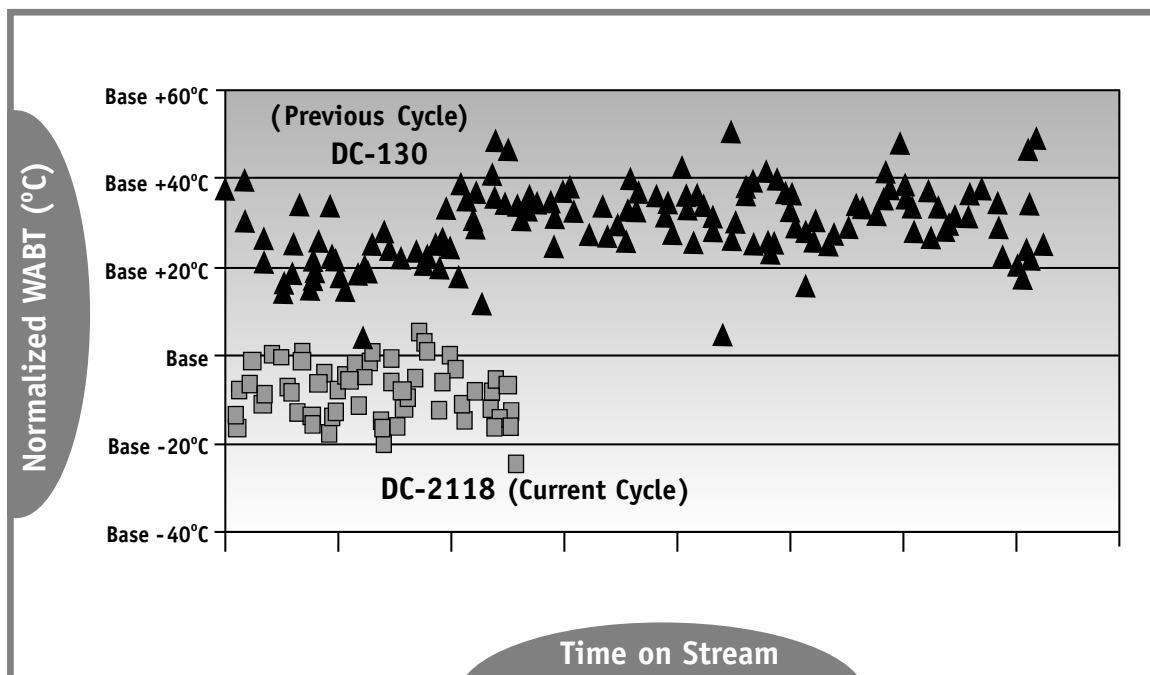
Criterion CENTINEL Technology

- Cumulative Millions of Lbs
- Cumulative No. of Units
- Cumulative Metric Tonnes ('000)



# Commercial Performance of DC-2118

*Refiner's are taking advantage of DC-2118's numerous benefits today.....*



## UNIT SUMMARY

- European Refiner
- Middle East Crudes
- 15% LCO
- H<sub>2</sub>pp = 30 bara/450 psia

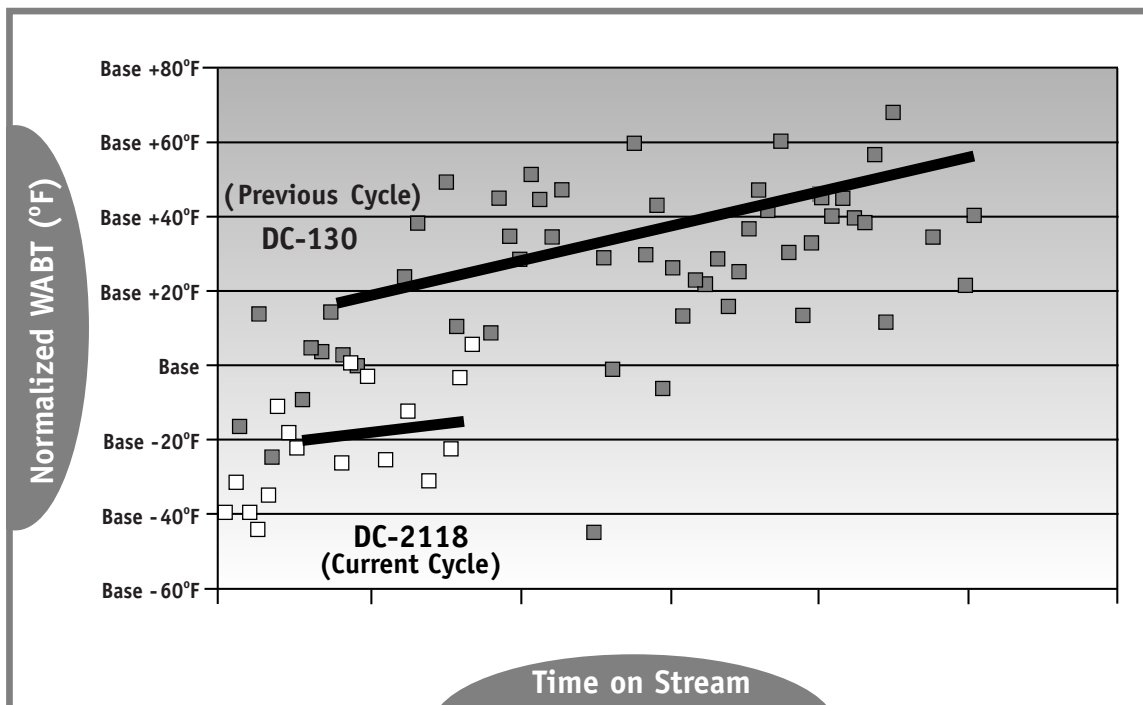
## BENEFITS REALIZED:

- HDS Activity: Increased 15°C/27°F
- Feedrate: Increased 12%
- Feed S: Increased 0.15 wt%
- Deactivation: Decreased 50%+

*..... While preparing for the future ULSD operation.*

# Commercial Performance of DC-2118

*Refiner's are taking advantage of DC-2118's numerous benefits today....*



## UNIT SUMMARY

- USA Refiner
- South American Crudes
- 15% LCO
- H<sub>2</sub>pp = 35 bara/525 psia

## BENEFITS REALIZED:

- HDS Activity:  
Increased 16°C/29°F
- Feedrate: Increased 37%
- Feed S: Increased 0.2 wt%
- Deactivation: Decreased 75%

*..... While preparing for the future ULSD operation.*

 **CRITERION** **Worldwide Offices:**  
CATALYSTS & TECHNOLOGIES

---

**HOUSTON:**

16825 Northchase Dr; Suite 1000  
Houston, Texas 77060-6029  
Telephone: (281) 874-2600  
Facsimile: (281) 874-2641

**CANADA:**

Suite 810, Centre 104  
5241 Calgary Trail Southbound  
Edmonton, Alberta T6H 5G8  
Canada  
Telephone: (1) 780-438-4188  
Facsimile: (1) 780-438-3473

**UNITED KINGDOM:**

1650 Parkway  
The Solent Business Park,  
Whiteley, Fareham,  
Hampshire, PO15 7AH  
England  
Telephone: (44) 1 489-881881  
Facsimile: (44) 1 489-881882

**SINGAPORE:**

298 Tiong Bahru Road  
#07-03 Central Plaza  
Singapore 168730  
Telephone: (65) 6276-3627  
Facsimile: (65) 6276-7455

**LUXEMBOURG:**

Route de Longwy, 420  
L-4832 Rodange, Luxembourg  
G.D. of Luxembourg  
Main Tel#: (352) 502-454  
Catalyst Regeneration Services  
Main Fax#: (352) 502-996

Visit us on the web: [www.criterioncatalysts.com](http://www.criterioncatalysts.com)  
e-mail address: [publicaffairs@criterioncatalysts.com](mailto:publicaffairs@criterioncatalysts.com)



**Important:** All information contained in this document is considered accurate at the time of the testing, based on the equipment, and specific conditions and other limitations during the testing process. It is being furnished upon the express condition that the user will make its own assessment to determine the accuracy and applicability for the user's particular purpose. Copyright Criterion Catalysts & Technologies, 2002