

## DeWitt 2008 Global Pygas Study

Pyrolysis gasoline (pygas) is a liquid by-product derived from steam cracking of various hydrocarbon feedstocks in olefin plants. Benzene is a key component in pygas. On a capacity basis, pygas extraction accounts for approximately 36% of global benzene.

Recently pygas supplies have become scarce as demand increased because consumers are interested not only in the contained benzene, but also the toluene, mixed xylenes and even raffinate for blending into motor gasoline.

Despite increased demand, however, pygas production has recently been constrained by the changing economics of cracking naphtha to make ethylene and its co-products. Fundamentally, natural gas in North America and global LPG have become heavily discounted to crude oil on an energy equivalent basis. Olefins units have moved to lighter feed slates not only in US flexible crackers but also to a limited degree in Europe and Asia. Additionally, most expansions are planned using lighter feedstock in the Middle East although Asian expansions still prefer naphtha. As a result, less pygas has been produced recently and less is expected in the future.

DeWitt & Company is undertaking a detailed analysis of the pygas market for the next few years to determine availability in the different regions utilizing our Olefins database coupled with our Aromatics database and recovery models. In doing so, we can assess not only the raw make of molecules based on expected feedstocks and conversion levels by cracker but also the commercially practical recovery of the Pygas and then the benzene. Analysis of the inconsistencies can then define potential new extraction sources according to logically developed criteria.

The study will both define the reasons for today's shortages, which continue to develop, as well as identify the needed sources and options for tomorrow's supply. It should be a must read for all involved in the production, consumption or trade of benzene, xylenes, toluene or even raffinate for blending.

The Pygas Supply/Demand Model 2008-2012 report will define pygas-yield at different olefins operating severities. A live spreadsheet of regional results will be provided to allow the client to modify cases as desired. The Study was completed August, 2008.

The fee will be \$25,000, with 3 hard copies included. Additional copies within the same company can be obtained for \$500 each.

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# PYGAS STUDY 2007 - 2012

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