



Deep within the bottom of the petroleum refining barrel is petroleum coke (“petcoke”), a dry residue of the refining process that looks similar to coal. Though useful as a fuel, petcoke’s typically high sulfur content restricts its use to industrial processes where sulfur can be removed (for example, in fluidized bed combustion where sulfur is precipitated out after limestone is added). Petcoke’s high heat makes it very useful for the kilns used in cement production.

For traditional shipping people, petcoke was at the intersection of backhaul cargoes for Panamax bulk carriers moving from the Pacific (Long Beach, California) into Rotterdam, and sometimes a palliative for Panamax owners at times of reduced grain stems out of the U.S. Gulf. The refineries in Texas, and the Caribbean origins such as Amuay Bay were always a source of cargoes at the margin. The cargoes were generated after refinery shut-downs, when accumulations in “coker” units were loaded into drybulk ships.

In the total scheme of things, petcoke movements are dwarfed by the shipments of major and even minor bulk materials. Drewry Shipping data shows annual petcoke seaborne tonnages averaging 29 million tonnes in the period 2002- 2006, some 1% of all drybulk trade. The website www.petcokeconsulting.com estimates overall annual production at double the amount traded at sea. These days, with owners in the captain’s seat, there is less transparency of movements because of more shipment on time-charter terms. Nevertheless, a window into the petcoke trades can be seen from fixtures compiled for Fairplay by Maritime Research Inc. (shown below).

The fixtures show the predominance of movements in Handymax and Panamax sizes, with three main loading areas- the U.S. Pacific, the U.S. Gulf, and the Caribbean (Venezuela). Where cargoes are fixed on a voyage basis, load/ discharge terms are generally SHINC- petcoke, like coal, is a fast mechanized business. The timecharter fixtures also provide a hint that petcoke is contract business, where operators (such as K-Line or MOSK) charter vessels to fulfill contractual commitments. However, Maritime Research’s fixture list also shows liftings by energy traders and end-users such as SSM or Irish Cement. Oil majors active in the business include Conoco Phillips and Chevron. Private companies Aimcor, part of privately held Oxbow Industries, along with SSM (acquired by Oxbow in August 2007) and Koch Industries (through its Koch Carbon subsidiary- the operator of the Long Beach, California terminal) are also important participants in the trades.



Oxbow, controlled by **Americas Cup** sailor Bill Koch (whose brothers control Koch Industries), also bought petcoke stalwart Great Lakes Carbon Corporation (once owned by the Skakel family- related to the Kennedy clan by marriage) earlier this year.

As a by-product of oil refining, supply of the material is not a constraint. However, the demand side of petcoke's economic equation is paramount. Higher steam coal prices mean more demand for petcoke, because the two materials can be substituted in the power generation sector. Indeed, SSM and Oxbow are now aligned under a common corporate umbrella). As coal gasification becomes economical with rising oil prices, petcoke may find a new role in the energy chain, very possibly creating new shipping trades.

DATES	ORIGIN	DESTINATION	TERMS	VESSEL NAME	BUILT	SIZE	COMMODITY	RATE	CHARTER
							SPEED/CONSUMPTION		
Jan 26/28	Del Kashima	Redel Japan	North Pacific round	MAJA VESTIDA	1994	70213	14k/33t	\$32000/day	K-Line
Jan 25/30	Houston	Toros	FIO;15000tShinc/15000tShinc	SHENG QIANG	1998	40000	PetroleumCoke	\$ 36.00	na
Feb 5/15	Xingang	Bourgas	FIO;10000tShinc/8000tShinc	ERATO	2004	45000	PetroleumCoke	\$ 40.00	CTP
Mar 1/3	DelPointComfort	Redel Skaw/CapePassero	TripOut+\$600000Bonus	LOWLANDS MAINE	2005	76784	14k/35t	\$34000/ day	BHP-Billiton
Mar 21/28	Del Muroan	Redel Japan	LosAngelesRound trip	ARABELLA	2001	75563	14k/31t	\$43000/ day	na
Apr 11/15	Del Fukuyama	Redel Japan	LongBeachRoundtrip	NORDMOSEL	2001	75257	14.25k/33t	\$41500/ day	1st40, tM-OSK
May 23/25	Del Immingham	Redel Spain	NCSouth America Round	BULK CEDAR	1998	73322	14k/31t	\$54500/ day	SSM
Jun 10/20	Del Mizushima	Redel Singapore/Japan	Singapore/JapanRound	DARYA RADHE	1999	73705	13.5k/30.5t	\$41000/ day	Sinobulk
Jun 27/30	Del Lianyungang	Redel Piombino	TripOut	GAURAV PREM	2005	73901	14k/34t	\$45000/ day	NoChinaSh
Jul 1/4	Del Iskenderun	Redel Black Sea	VenezuelaRound trip	HEBEI EXPRESS	1984	65204	13k/38t	\$43000/ day	Daeyang
Jul 15/28	Del CapePassero	Unrtd	2LadnLegViaUSGlf&Belledue	GREAT BRIGHT	1997	73242	14k/32t	\$62000/ day	PCL
Aug 15/17	DelCorpusChristi	RedlSkaw/CPassViaBrazil	2LLg1stPetCke+\$1100000Bonus	SCENERY SEA	1991	69358	12.7k/27t	\$58000/ day	Oceanbulk
Sep 1/10	Lake Charles	Genoa	PtC;FIO;15000tShinc/10000tShex	COS JOY	2001	55000	PetroleumCoke	\$ 59.75	Interbulk
Oct 29/31	USGulf	Dublin	FIO;12000tShinc/9000tShinc	DS MANATEE	2002	25000	PetroleumCoke	\$ 75.00	IrishCement

fixtures courtesy of **MARITIME RESEARCH INC.**

