

Interest In Arctic Navigation Wanes

MELTING AWAY

BY CARLY FIELDS

It's been touted as the route with the most potential to impact global trade, but the Arctic's Northern Sea Route seems to have lost some of its luster.

While the melting of Arctic ice continues to give environmentalists sleepless nights, shipping companies have been able to overlook the global ramifications of climate change to revel in the promise of a shortened shipping route, shaving an average of 4,500 miles off a journey from East Asia to Northern Europe.

However, the initial and swelling hype around this route has eased off just as global oil prices have dropped off a cliff. Crude rates in the mid-US\$30s have stymied Northern Sea Route, or NSR, transits on two counts.

Firstly, at this pitiful price oil exploration has been curtailed, particularly in high-cost, high-risk regions such as the Arctic. Less oil exploration equates to less business for breakbulk operators.

Secondly, low oil rates bring lower marine fuel rates: the price for 380 centistoke intermediate fuel oil in Houston was US\$154 per tonne at the end of March. It was US\$301 per tonne a year previous. This near-halving of bunker fuel costs has meant that breakbulk carriers have throttled back on plans to utilize the NSR.



➤ The first Chinese cargo ship to complete the Northern Sea Route arrives in Rotterdam in 2013. / Credit: ROBIN UTRECHT/EPA/Newscom

Data from the Northern Sea Route Information Office confirmed the sharp drop in interest. In 2015 just 18 ships made the transit, carrying a total of 39,586 tonnes; only three were carrying project cargoes. In 2014, those figures

were 31 ships and 274,103 tonnes; in 2013, 71 ships made the transit carrying 1.4 million tonnes.



Capt. Andrew Kinsey

Allianz Global Corporate & Specialty

Lower fuel prices have impacted both the expansion and utilization of the Northern Sea Route, agreed Capt. Andrew Kinsey, senior marine risk consultant at Allianz Global Corporate & Specialty.

“We are now seeing vessels making the back-haul trip to Asia via the Cape of Good Hope rather than through the canals. If traditional trading routes are being impacted, then the Northern Sea Route will surely see

declining tonnage.” That said, Kinsey expected fuel prices to rebound, and that, in combination with the continued retreat of the ice shelf, will support the concept and the implementation of the NSR going forward.

YEAR-ROUND ARCTIC TRANSITS

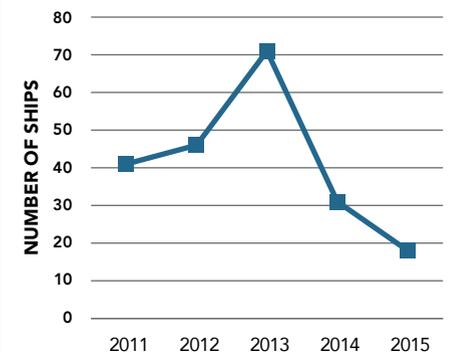
Hansa Heavy Lift is a carrier that has high hopes for the eventual year-round opening up of the Northern Sea Route. To date, the carrier has used the route 11 times, saving time, money, fuel and increasing security by avoiding piracy regions. All of its ships are ice classed to E3, the highest ice class for a non-ice-breaker. These ships can navigate through one-meter-thick ice and operate in temperatures as low as -19 degrees Celsius.

A “significant part” of HHL’s business in 2016 will involve the NSR, said Joerg Roehl, HHL’s chief commercial officer, especially in light of large projects that are planned in the Russian territory area, where the carrier has won sizeable contracts. A good part of this work will be navigated through the NSR.

The time saving is significant: up to

NSR INTEREST WANES

Number of NSR transits sinks to low of 18.



Source: Northern Sea Route Information Office

20 days depending on where you start the voyage.

However, Roehl acknowledges that the savings are not as great as they once were and rock-bottom bunker prices have reduced the need to find innovative ways to slash fuel consumption.

And there are still sizeable expenses to consider: aside from the ice-strengthening of ships – which can add 20 percent to the price of a newbuild – offi-

ARCTIC CIRCLE CASUALTIES

Number of reported incidents has increased for four years.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	TOTAL
Machinery damage/failure	3	5	13	14	16	12	13	20	27	46	169
Wrecked/stranded	4	10	11	14	9	9	8	10	14	6	95
Miscellaneous	-	5	1	4	4	2	6	5	5	6	38
Fire/explosion	-	3	1	2	6	6	1	4	2	4	29
Collision	-	-	1	4	10	4	4	2	-	3	28
Contact (eg Habor wall)	-	1	1	1	3	1	3	6	4	5	25
Hull damage	1	3	1	6	2	2	1	2	1	1	20
Foundered	-	1	1	2	-	3	1	1	2	-	11
TOTAL	8	28	30	47	50	39	37	50	55	71	415

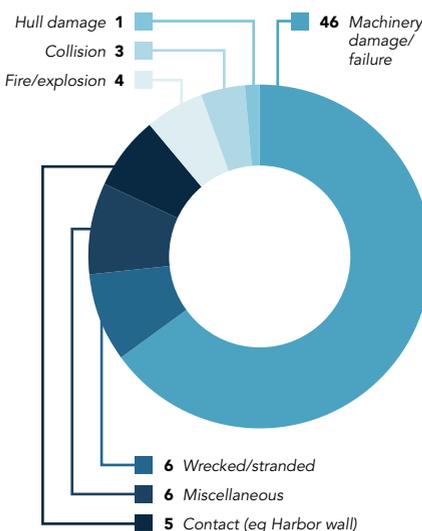
Source: Lloyd's List Intelligence Casualty Statistics, AGCS

cers need to be trained in operations in harsh environments and then there's the critical icebreaker escort costs.

In terms of operational issues, the extreme weather conditions can impact the ballast water tanks and fresh water tanks. Communications are also a challenge. Traditional VHF is out and only one satellite communication system, Iridium, functions beyond 75 degrees north and 75 degrees south.

2015 CASUALTIES

Arctic Circle incidents are up 29 percent year-on-year.



CASUALTIES: 71 TOTAL LOSSES: 0

Source: Lloyd's List Intelligence Casualty Statistics, AGCS

“Most people are not too thrilled with the capabilities of the current Iridium system,” said Tore Morten Olsen, president of maritime communication specialist Marlink Maritime. But developments are taking place: “There is a lot of capital coming to the satellite industry and I think there are trends of development for what we call polar orbiting satellite systems.

“I believe that the demand and the drive for global connectivity which is coming through the web will bring capabilities far beyond what we have seen to the northern regions, quite simply because all of the satellites need to move around the poles to be able to achieve global service, and when they are up there they are, in theory, idle, and there is a lot of capacity available.”

HANDLING CHALLENGES ABOUND

There are issues that are specific to the breakbulk sector too. Multipurpose and heavy-lift ships face challenges with the cranes needed for handling the huge and outsized project cargoes, and the forces and ice also influence the lashing and sea fastening necessary for the cargo. There is also a need for a specialized crew to apply extra lashing and welding.

“You need the right partners in Russia, extreme care in voyage planning, you need to follow icebreakers, you need to have permits in place, you need to have the specialists who know how to apply the permits and documentation – this is a big issue and it needs to be right – and you have to use specialized Russian crew. I wouldn't call it an art but you do

really need to know what you are doing,” said Roehl.

However, not all operators are as wise when it comes to operations in this hostile region, Kinsey said. “I feel strongly that operators do not fully understand the challenges of the Northern Sea Route.” There are several reasons for this, he explained. One is lack of experience and knowledge, taking for granted the knowledge built up over centuries on the more traditional sea lanes.



Tore Morten Olsen

Marlink Maritime

“This route will be very demanding on both the vessels and the crews, the environment and stress levels, and there is a lack of shore side support and infrastructure,” he said.

Another major factor is that regulations covering the Arctic region are still evolving with the IMO Polar Code due to come into force in January 2017.

Adding a further challenge into the mix, the length of the Northern Sea Route shipping season is variable and to a large extent depends on who you are asking. The Northern Sea Route Information Office gives the official season as from the beginning of July through the second half of November. There are no specific dates for commencement and completion of navigation, as it depends entirely on particular ice conditions that year.

LESS DEMAND FOR CARGOES

The drop in transits is also reflective of a decline in business from engineering, procurement and construction companies in the region, with one telling *Breakbulk* that at least one of its Arctic operations had been a “special challenge” due to missing infrastructure, a lack of workforce and the inhospitable climate.

Italian multinational oil and gas company ENI has also felt the sting of the harsh operating environment. Production from Goliat, the first oil field to start output in Norway’s Arctic waters, finally started in March after delays of more than two years. Its investments are recorded as US\$5.6 billion, nearly 50 percent more than was initially budgeted for the field. It’s the second field in operation in the cold and remote waters of the Barents Sea, following Statoil’s Snoehvit natural gas field. Eni claimed a break-even price on Goliat of oil prices at less than US\$50 per barrel, but whether that included prices down to US\$35 per barrel is unclear.

In September 2015, Shell stopped its Arctic oil and gas exploration off the coast of Alaska after “disappointing” results from a key well in the Chukchi Sea. Seven years ago, Shell and other companies — ConocoPhillips, Statoil of Norway, Repsol of Spain and Eni of Italy — together paid US\$2.7 billion for leases for the fields off Alaska, but oil prices then were five times the rate they are today.

Despite the negativity, there are still opportunities that support the revival of the NSR as a viable commercial route, but they come in Russian form. Both Gazprom and Rosneft have plans for Arctic exploration this year and next, albeit at a reduced level. Minister of Natural Resources Sergey Donskoy confirmed recently that the rate of issuing licenses for Arctic offshore fields has slowed dramatically, with only three being issued over the past six months.

Kinsey believed that the industry would continue to see Russia pushing the NSR to support its own exploration and extraction goals, but given current trade levels, freight rates and fuel prices he concluded that “we will not see the tonnage numbers increase dramatically in the next five years.” ■■



The nuclear-powered icebreaker *Yamal* forges a path along the Northern Sea Route.

Credit: ВикиКорректор / Wikimedia

HOLD OFF ON ICE-CLASS INVESTMENT

In exclusive research for *Breakbulk* magazine, researchers at Copenhagen Business School’s maritime division have applied their Arctic shipping calculation tool to determine when investment in ice-reinforced multipurpose vessels for operation on the Northern Sea Route becomes favorable, in comparison to an ordinary multipurpose vessel sailing along the traditional Suez Canal route.

Inputting variables specific to multipurpose vessels, or MPVs, contributed by Drewry Shipping Consultants, the researchers found that the navigation season on the Northern Sea Route, or NSR, is too short for investments in ice-class MPVs to be economically viable until at least 2029.

The researchers used Ust-Luga, Russia, as the port of loading and Pusan, South Korea, as the destination port, shaving 4,173 miles off the west-east route over the traditional Suez Canal Route. Newbuilding costs of US\$15 million were set against a premium of 20 percent for an ice-strengthened ship. Fuel consumption was adjusted up by 20 percent on the NSR to take account of the different hull shape of an ice-strengthened vessel.

In the medium oil price scenario, the investment in an ice-reinforced MPV would be favorable

from 2032. This reduces to 2029 in the high oil price scenario, whereas in the low oil price scenario it will not be favorable to invest in ice-reinforced MPVs before 2035.

“The reason that using the NSR will not be favorable in the near future is the incredibly low Suez Canal fee of US\$111,000 caused by the low oil prices of late,” explained Peter Grønstedt, senior researcher at Copenhagen Business School. “This results in the operating expenses of the Suez Canal Route to be significantly lower than those of the NSR despite the much longer voyage distance.”

However, if the Suez Canal fee reverts to its previous levels of about US\$300,000, investment in ice-reinforced MPVs becomes advantageous regardless of the oil price scenario, added Grønstedt.

Copenhagen Business School’s tool allows researchers to calculate the comparative costs taking into account more than a dozen variables including vessel specification and size, engine type and capacity, average speed and distance, navigation season, transit fees, and load factors. According to the study’s authors the tool combines an economic framework with applied naval engineering and is the first of its kind specifically designed to compare Arctic shipping to traditional routes.