CONCOURS POUR L'ADMISSION EN FORMATION DES INGENIEURS DE L'ECOLE NATIONALE SUPERIEURE MARITIME AU TITRE DE L'ANNEE 2016

ANGLAIS / FRANÇAIS

(Durée : 3 heures)

THE BOX IS KING

The city of Busan, South Korea's largest port, feels like a room crammed with oversize furniture. Apartment buildings and hotels crowd into a narrow strip between steep hills and a deep harbor. There is no view of the water from the claustrophobic main street, even though it follows the harbor's edge, because the road is blocked on both sides by steel shipping containers in basic red, green and blue, stacked two or three high like children's blocks.

One's car is surrounded by tractor-trailers hauling[1] containers, and occasionally traffic grinds to a halt as long railway trains creep across an intersection hauling--you guessed it--still more containers.

In Busan (population: 4.7 million), there's not much question about what rules trade: the Box, as they call it, is king. The city's livelihoods depend on the 24/7 conveyor belt [2]that in 2004 handled 11.4 million TEUs--"twenty-foot equivalent units," the basic unit of measurement in the container trade--up from 2.3 million in 1990. That makes Busan the world's fifth largest port by volume, and earlier this year it opened a state-of-the-art terminal 52 kilometers to the west, hoping to siphon a majority of the container traffic away from the strained city center.

For its total devotion to the Box, Busan is an apt place to ponder the rise of container shipping, which celebrates its 50th anniversary this month, as a vital and increasingly controversial cornerstone of global commerce. With roughly 20 million containers moving around the world today, carrying as much as 95 percent of goods coming into America, containers have become the essential baggage compartment of modern life. Economist Marc Levinson, author of "The Box: How the Shipping Container Made the World Smaller and the Economy Bigger," argues that this simple innovation "made globalization possible."

Indeed, it is hard to imagine how world trade could have grown so fast--quintupling in the last two decades--without the "intermodal shipping container," to use the technical term. The invention of a standard-size steel box that can be easily moved from a truck to a ship to a railroad car, without ever passing through human hands, cut down on the work and vastly increased the speed of shipping. It represented an entirely new system, not just a new product. The dark side is that these steel containers are by definition black boxes, invisible to casual

[1] Hauling : transporting
[2] Conveyor belt : :a device for continuously transporting loads such as cartons, bags and boxes on a belt

inspection, and the more of them authorities open for inspection, the more they undermine the smooth functioning of the system.

So containers have become a perfect vessel for the smuggling of just about anything, from counterfeit goods and currency to people and even nuclear weapons--a fear that underlay the recent furor over a Dubai company's bid to take over terminal operations at several U.S. ports. Security experts have warned repeatedly that a container carrying a "dirty" nuclear weapon would make the ultimate "poor man's missile," and nations the world over are now searching for new technology capable of searching every single box that crosses their borders. The Bush administration's Container Security Initiative aims to enlist the help of other countries in identifying suspicious containers in ports of origin before they're loaded onto ships bound for the United States. "A hidden revolution has been going on," says maritime-security expert Stephen Flynn. "And now we've become so dependent upon it that it's like the air we breathe. We don't notice it until it's not there. Then you notice it big time."

It's impossible to miss now. The recently busted nuclear smuggling network run by top Pakistani scientist A.Q. Khan shipped all of its goods inside containers, notes former U.S. State Department official David Asher. And there was the famous case, in early 2002, when Italian officials opened up a container being shipped from Egypt to Canada only to discover a man named Amid Farid Rizk, traveling with all the conveniences that a presumed terrorist could want: a laptop computer, a satellite phone--and several airport-security passes.

Ironically, anonymity was originally a key selling point. Back in the 1950s, when an American trucking magnate named Malcolm McLean first dreamed up the Box, ports were messy, chaotic places--far from today's smoothly geometrical container terminals. Stevedores[3] used cranes to lift individual loads of all shapes, sizes and packagings out of ships, then placed them in dockside warehouses until they could be trucked away. It was usually impossible to calculate how long the process would take, or how many of the goods would be stolen along the way. McLean realized that standardized containers would increase efficiency, and thwart thieves. Crafting new containers was just a start. McLean built new ships and trucks specially designed to handle the boxes, launching the modern industry of business "logistics," a term that had previously been used exclusively by armies, says Levinson.

McLean's first container ship sailed in 1956, but the idea didn't begin to catch on for another decade. The impetus came from the Pentagon, which needed to speed the movement of war matériel to U.S. forces in Vietnam. Profits were impressive, but McLean realized that many of his containers were making the trip back to the United States empty. So he began scheduling stops in Japan, then the world's most rapidly expanding economy, where businessmen were exporting increasingly large numbers of transistor radios, calculators and cars to America.

As the container caught on, costs plummeted. In 1959, by Levinson's estimate, freight could make up as much as 25 percent of a product's cost. Today shipping costs are a negligible fraction of the total. In 2006 the cost of shipping a standard 40-foot box from China to the United States, complete with up to 32 tons of cargo, can run as low as $2,000. That "makes the postage stamp seem overpriced," notes Flynn.

By lowering shipping costs, McLean had neutralized the advantage of geographic proximity, and set the stage for Asia's "tiger" exporters, and later China's rapid rise as factory to the

[3] Stevedore : dockworker

world. There were other trade-offs, too. As Levinson notes, container shipping "assisted the rapid economic growth of Korea while offering precious little to [landlocked] Paraguay."

Ports, once seamy, dangerous and vaguely romantic, became profoundly rational, even soulless places. As Japanese-style "just in time" manufacturing began to spread around the world, shippers began employing more and more advanced technology, and ever-bigger container ships, to deliver ever-larger shipments on increasingly exact time schedules. Today the global container-terminal business is dominated by shipping companies, and the two biggest hail from the two highest-volume container ports, Hong Kong and Singapore. "The container-terminal industry has globalized very rapidly," says Neil Davidson, research director for Drewry Shipping in London. "I think it's partly because certain operators made strategic decisions, and they happened to be Chinese-owned and Singaporean and Danish rather than American or German. It's partly historical accident, partly just a greater desire by other companies to come to the fore."

Most Americans haven't been paying much attention--a point dramatically borne out by Dubai Port World's decision to unload its newly acquired container operations in U.S. ports, after the public uproar against placing the facilities in Middle Eastern hands. Dubai has since run into more controversy in India, where trade unions and politicians are attacking the fact that its recent purchases would also place DP World in control of more than 50 percent of India's container-terminal capacity. Clearly, the very anonymity of containers feeds concerns over who exactly should be allowed to handle them.

The controversy over DP World has drawn attention to just how little has been done to shore up port security since 9/11. A "port-security war game" staged back in October 2002 by consultants Booz Allen Hamilton demonstrated that a few terrorist attacks on U.S. port facilities could result in a $58 billion loss to the national economy. And U.S. officials would probably block entrance to all uninspected containers--now 95 percent of the total--triggering a ripple effect through the global economy as goods began to pile up in overseas ports. "What I'm most concerned about is that no one has ever stopped the intermodal-transport system," notes Flynn. "To this day there is still no plan in the U.S. government for how to turn the system back on."

Flynn places his hopes in a system that he's helped to install in Hong Kong. It snaps a gamma-ray picture, and conducts a radiation check, of every container coming into the terminal, helping to pre-empt any terrorist plots. In the event an attack succeeded, the stored images would help security officials track the perpetrators, and restore public confidence. Flynn notes that the quick capture of suspects in the London bombings last summer minimized the terror, and likely gave terrorists reason to think twice about targeting London again.

Other technologies hold promise as well. The Pentagon recently signed a $424.5 million contract with Savi Technology, a California-based company that has pioneered a sophisticated radio-frequency tag that allows military planners to keep close tabs on container contents. IBM and Maersk Moeller have been developing a new device called a TREC, for "tamper-resistant embedded controllers." The TRECs use wireless technology to monitor container locations, and to send an alert whenever the boxes are opened.

To be sure, terrorism isn't the only problem that shippers are worrying about these days. The congestion afflicting many ports is likely to get worse, considering that worldwide container

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traffic is expected to double again within the next six years. Just as in Busan, planners are responding by shifting port facilities away from inhabited areas. Singaporeans have been tossing around the idea of basing a port expansion on man-made islands, while the British are discussing a new megaport in the Orkney Islands, using small feeder ships [4]to move cargo on to where people live.

There's no time to waste. Shipbuilders and shipping lines are already planning for the next generation of ships, vessels up to a quarter-mile long, carrying 18,000 TEUs, twice as much as current heavyweights like the MSC Pamela, a 9,200-TEU ship that recently unloaded in Busan. The new giants would fill a line of trucks 68 miles long. But there's just one catch: so far there aren't many ports around big enough to take them.

Christian Caryl, *Newsweek*, April 2006

QUESTION (valeur = 20)

Résumer le texte en français en environ 300 mots (+ ou – 10 %).
Le non-respect de cette consigne entrainera de fait une diminution de la note.

Nota:

1. Aucun document n'est autorisé.

2. Délits de fraude : "Tout candidat pris en flagrant délit de fraude ou convaincu de tentative de fraude risque l'élimination, sans préjudice de l'application des sanctions prévues par les lois et règlements en vigueur réprimant les fraudes des examens ou concours publics".

[4] Feeder ship : a ship for the transshipment of containers from major to smaller ports and vice-versa