

LETTER FROM LONDON



# Metrics and the tunnel

**Britain's aim at Europe's  
markets is plagued by  
delays and conversion worries**

by Larry Miller

There are the Europeans, and then there are the English. This distinction, especially significant to the French whose maps locate the British Isles just outside of New York harbor, is caused by the world's smallest ocean—the 20 to 100-mile wide English Channel. Although the channel has been England's bulwark against foreign invasion for centuries, it has also been a political, economic and cultural barrier between England and the rest of the continent.

The British have been thinking in European terms, especially since their frustrated attempts to join the Common Market, and they are now living in a twilight period: urged to prepare for entry into Europe but without any firm commitment that this will occur. This has had a disquieting effect on British industry, and through industry on science and technology.

The problem involves making goods to continental specifications—the desperate change to metric measurements—and then getting them across the channel. For many, the starting point for getting the goods to European markets is the long-sought channel tunnel. But a decision to build it will not be taken for another two years. In the meanwhile rising costs and fast-developing new means of cross-channel transportation are challenging the very life of the project.

Generations of engineers have dreamed of building a cross-channel tunnel to link Britain and the continent. One hundred years ago it was first formally proposed by British and French engineers to Napoleon III. Fifty years ago a pilot tunnel was driven and is now used for testing soil conditions.

There are two possible methods of building the tunnel, using submerged tubes or burrowing beneath the bed of the sea like a mole. In the first method, long lengths of tube are towed out to sea, sunk in a dredged trench and joined. This is the simpler of the two methods, but the strong currents and severe weather conditions in the channel may make it too hazardous. If so, the engineers will have no choice but to burrow.

The most favored idea is a railroad tunnel, since trains would be more economical than trucks for mass shipments of goods and pose fewer human and technical problems. A road tunnel, as opposed to a railway tunnel, would create problems of ventilation, emergency service and driver tension.

One scheme calls for a trial excavation, which would be enlarged to ac-

commodate two tunnels, each with a single rail line. The length of the tunnel would be 34 miles long, 24 miles of it underwater.

But as time passes, the cost for building the tunnel increases. At present the cost is estimated at 300 million pounds (\$720 million), double what it was five years ago. To industry, the important point is that the arguments in favor of building the tunnel were based on the original cost estimates; these however, took no account of new means of transportation that have been or are being developed. Some say that the economics of the situation may have changed so that the tunnel ought not be built after all.

One such transportation form is the giant SRN hovercraft. Brought into service last September, it is now being modified to make it less vulnerable to waves. A freight-carrying version of the craft could readily be built, as could freight-carrying jumbo jets and the European air bus, a short-range airplane still in the design stage. Engineers are even talking about reviving flying dirigibles to cross the channel.

The uncertainty naturally makes industry hesitant, and because it is hesitant it has an excuse for delaying decisions that might radically affect technological innovation, such as the development of ports and harbors and automating factories, areas in which progress must be made if integration with the continent is to be made.

Another factor is that the longer a decision to build the tunnel is delayed, the more time the skeptics have to oppose the idea. They are already saying that exports to Europe will be funneled through a narrow corridor that will cut southern England in two, with disastrous results to the landscape.

But whether industrial products are pushed through a tunnel, flown over the channel or ferried across, there is still the growing need for manufacturers to produce their goods in metric units instead of British units. The machines now used for manufacturing are all constructed to British specifications. These machines cannot be replaced overnight. The British, now going metric, operate under Government insistence that the change be made first with the construction industry. Many engineers, however, are convinced that pandemonium will result from piecemeal conversion. English currency goes on a decimal system in 1971, and products will then be available in mixed sizes and paid for in mixed currency.