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COUVERTURE

Le *N.G.C.C. «Louis S. St-Laurent,»* le plus puissant navire à propulsion classique au monde, est mis à flot aux chantiers de la Canadian Vickers Limited, à Montréal, au cours d'une imposante cérémonie. (Voir article en page 5).

Editor *Bryan Goodyer*
Rédacteur français *Edouard Deslauriers*

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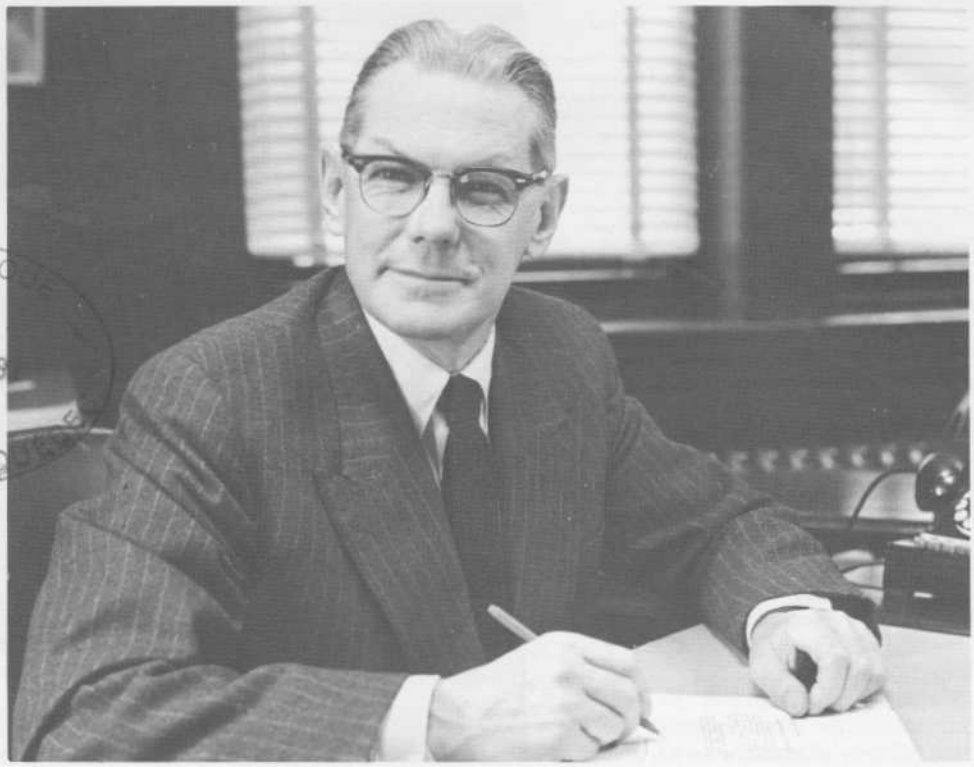


FROM THE DEPUTY MINISTER

Scores of things to do, to see and to remember will take place in 1967. They will result from effort at every level of public life—the federal and provincial, the municipal and the community. Our belief in Canada's future as well as its record supports every event.

The Department of Transport will play its part in several projects: in particular, historical works which will commemorate the growth of transportation in relation to our two largest operating services, marine and air.

To give our Centennial Year an even more direct meaning, I suggest to you the merit of individual or family projects which may be small in themselves—the planting of a tree, a historical pilgrimage, the erecting of a flagpole—but which leave even more personal and, therefore, more indelible memories. The Baldwin family is presently engaged in active discussion of what we will do. It must be something that will mark our nationhood and our future growth.

J. R. Baldwin

LE MOT DU SOUS-MINISTRE

Il y aura en 1967 une foule de choses à faire, à voir et à se rappeler. Elles seront le fruit de l'activité exercée à tous les échelons de la vie publique, fédéral, provincial, municipal et local. Chaque événement qui se produira découlera de notre foi en l'avenir du Canada d'après ses réalisations passées.

Le ministère des Transports contribuera à la réalisation de plusieurs projets, notamment à l'édification d'ouvrages historiques qui rappelleront l'évolution des transports au sein de nos deux plus importants services d'exploitation, les Services de la marine et les Services de l'Air.

Afin que l'année du Centenaire vous touche plus directement, je vous propose la satisfaction qu'apporte la réalisation d'initiatives particulières ou familiales peut-être modestes, comme la plantation d'un arbre, un pèlerinage historique, l'érection d'un mât de drapeau, mais combien riches en souvenirs plus personnels et, partant, plus vivaces. La famille Baldwin est en train d'étudier sérieusement les divers projets qu'elle pourrait accomplir. Ces projets devront constituer des jalons dans l'évolution de notre pays.

J. R. Baldwin

Le «Louis S. St-Laurent» mis à flot sous d'heureux auspices

Le nouveau brise-glace de la Garde côtière canadienne, le n.g.c.c. «Louis S. St-Laurent», a été mis à flot, le 3 décembre dernier, au cours d'une imposante cérémonie aux chantiers navals de Canadian Vickers, à Montréal. Le navire, le plus puissant de son genre au monde, ne pouvait être lancé sous de meilleurs augures. Il porte le nom d'un ancien premier ministre; sa marraine est l'épouse du premier ministre actuel, et il a reçu à son départ la bénédiction de Son Éminence le cardinal Paul-Emile Léger.

Une foule de personnalités, dont le très hon. Louis St-Laurent, le premier ministre Lester B. Person, le ministre des Transports, l'hon. J. W. Pickersgill, d'autres membres du Cabinet fédéral, des représentants de la Garde côtière des États-Unis, les dirigeants de Canadian Vickers et autres étaient sur les lieux au moment du lancement.

Immédiatement après la bénédiction du navire par le cardinal Léger, Madame Pearson a fracassé la traditionnelle bouteille de champagne sur la proue aux acclamations de la foule rassemblée pour saluer le lancement du plus puissant brise-glace non nucléaire au monde.

Prenant la parole au cours de la cérémonie, le ministre des Transports a rendu hommage à tous ceux qui ont travaillé à la construction du navire. Soulignant la présence des dignitaires au lancement, M. Pickersgill s'est dit convaincu qu'on ne pouvait inaugurer un navire sous de plus heureux auspices. Il s'est dit particulièrement heureux du fait que les noms de trois de nos plus distingués Canadiens—Louis S. St-Laurent, Lester B. Pearson et le cardinal Paul-Émile Léger—soient associés à cet événement historique.

A la réception qui a suivi le lancement, le premier ministre Pearson s'est joint aux dirigeants de Canadian Vickers pour faire l'éloge de l'ancien premier ministre Louis St-Laurent. «Il est juste, a-t-il dit, que le nom de M. St-Laurent soit honoré de cette façon.» (Agé de 84 ans, M. St-Laurent, en proie à la plus vive émotion, a assisté au lancement, mais, répondant aux désirs des membres de sa famille, il s'est abstenu de prendre part à la réception.)

Le premier ministre Pearson a également vanté les mérites de la Garde côtière canadienne, dont la création remonte au temps de la Confédération. Il a rappelé que la flotte de la Garde côtière compte maintenant quelque 200 navires de tous genres. L'acquisition du «Louis S. St-Laurent» porte à onze le nombre de brise-glace, et huit navires plus légers font à la fois fonction de brise-glace et de baliseurs.

Troisième lancement de l'année

Le «Louis S. St-Laurent» est le troisième navire de la Garde côtière mis à flot, cette année. Le navire météorologique-océanographique «Quadra» a été lancé aux chantiers de la

L'ancien premier ministre Louis St-Laurent a eu peine à contenir l'émotion qu'il ressentait au lancement du nouveau brise-glace canadien qui porte son nom. Il est photographié, à droite, en compagnie de la marraine du navire, Madame Lester B. Pearson, et du président de Canadian Vickers, M. R. C. Pearse.

Former Prime Minister Louis St-Laurent proudly looks on as the new Canadian ice-breaker bearing his name is about to be launched. Mr. St-Laurent, at right, appears here with Mrs. Lester B. Pearson, sponsor of the ship, and the president of Canadian Vickers, Mr. R. C. Pearse.

Burrard Dry Dock Company Limited, à Vancouver, le 4 juillet dernier. On prévoit que sa construction sera complétée au printemps de 1967. Il sera attaché à la station océanique «PAPA», au milieu du Pacifique. Le «Nicolet», navire de sondage utilisé dans les travaux qu'on effectue dans le chenal maritime du Saint-Laurent, a été lancé au mois d'août aux chantiers de Collingwood Shipyards. Il est entré en service au mois de décembre.

Le ministère des Transports a actuellement neuf navires en construction. Certains sont destinés à la Garde côtière et les autres à des services et agences du gouvernement. De plus, 24 autres bateaux plus légers sont en construction, dont 22 sont pour la Garde côtière et deux pour le service de pilotage du ministère des Transports.

On mettra bientôt en chantier un nouveau cotre de recherches et de sauvetage, le premier de six qui seront éventuellement construits pour la Garde côtière. On a également lancé des appels d'offres en vue de la construction d'un baliseur-brise-glace pour les Grands Lacs. D'une longueur de 234 pieds, ce navire sera un des plus gros du genre utilisé par la Garde côtière dans les Grands Lacs.

Le coût total des navires actuellement en construction s'élève à plus de $90,000,000. C'est certes un programme fort chargé dans le domaine de la construction navale au pays.

Patrouille de l'Arctique

Le «Louis S. St-Laurent» joindra la flotte de la Garde côtière au printemps de 1968. Il sera utilisé pour la patrouille de l'Arctique et dans les eaux de l'est canadien.

D'une longueur de 336 pieds et six pouces et d'une puissance de 24,000 chevaux-vapeur, le navire sera propulsé par un groupe turboélectrique.

Conçu pour faire face aux plus rigoureuses conditions de l'Arctique, le brise-glace a un tirant d'eau maximum de 31 pieds. Sa vitesse de croisière sera de 13 nœuds. Son équipage se composera de 122 officiers et marins.

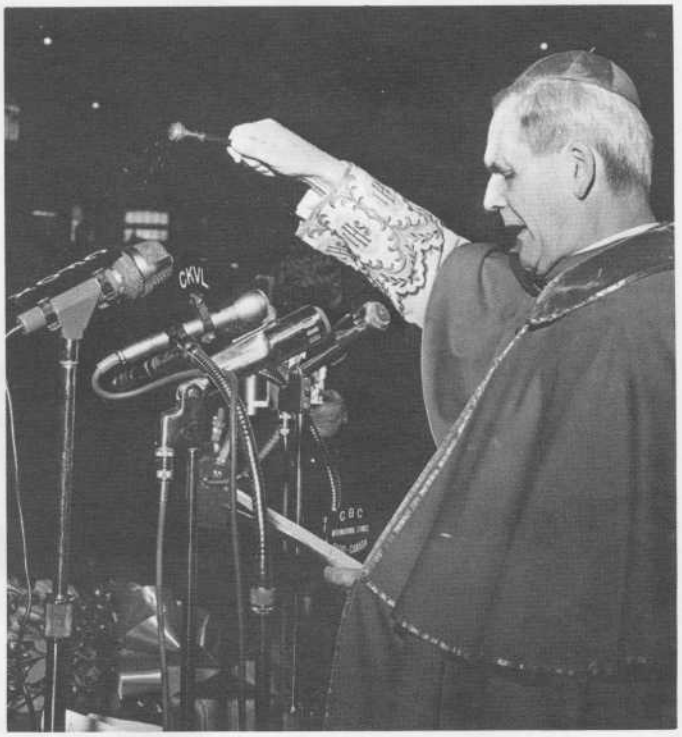
Il sera muni d'un pont d'envol pour deux hélicoptères qui seront logés dans un hangar situé sous les ponts. Un ascenseur servira à monter les appareils jusqu'au pont d'envol.

Le navire sera également doté d'un hôpital pouvant accueillir une quinzaine de patients. Il sera pourvu des installations nécessaires aux travaux d'océanographie, d'hydrographie et d'autres travaux scientifiques connexes qui seront entrepris à bord.

Le brise-glace pourra de plus servir de navire-école pour les cadets du Collège de la Garde côtière. A cette fin, on aménagera à bord une salle de cours, une salle d'étude et un salon. Les cadets y trouveront les moyens de parfaire leur formation en mer à bord d'un navire pourvu de l'outillage le plus moderne qui soit. La Direction des télécommunications du ministère des Transports fera installer à bord les plus nouvelles aides électroniques à la navigation et le matériel de communications le mieux adapté aux exigences de notre époque. La timonerie renfermera des pupitres de commande et de navigation d'un nouveau genre conçus par le Conseil de recherches pour la défense et mis au point par la Garde côtière.

L'appareil à gouverner, de son côté, sera du type hydro-électrique et comprendra un servomoteur de secours. Un système de commande entièrement électrique permettra la conduite depuis la timonerie, le toit de la timonerie et le nid-de-pie.

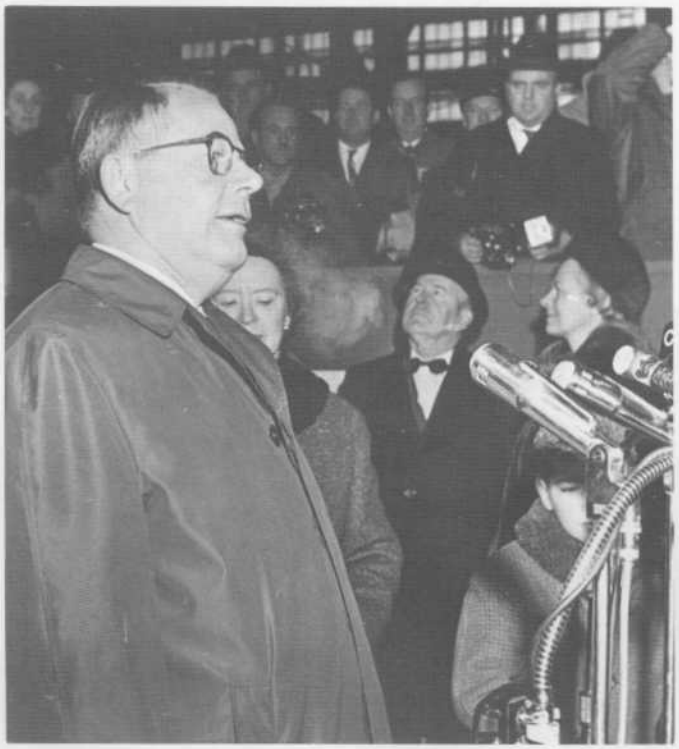
Le «Louis S. St-Laurent» est appelé à jouer un rôle de première importance comme principale aide à la navigation dans le golfe Saint-Laurent et dans les eaux de l'Arctique canadien. Il n'y a pas de doute qu'il saura se révéler à la hauteur de la tâche et faire honneur au nom qu'il porte de même qu'au pays tout entier.



Son Eminence le cardinal Paul-Émile Léger bénit le "Louis S. St-Laurent", nouveau brise-glace de la Garde côtière canadienne, lors de son lancement à Montréal en décembre.

His Eminence Paul-Émile Cardinal Léger blesses the new Canadian Coast Guard ice-breaker "Louis S. St-Laurent" shortly before its official launching in Montreal in December.

Strongest Conventional Icebreaker Launched for Coast Guard



The Minister of Transport, Hon. J. W. Pickersgill, speaks to the gathering at the launching of CCGS "Louis S. St-Laurent" at the Canadian Vickers shipyards in Montreal.

Le ministre des Transports, l'hon. J. W. Pickersgill, s'adresse à la foule au moment du lancement du n.g.c.c. "Louis S. St-Laurent" aux chantiers de Canadian Vickers, à Montréal.

The CCGS "Louis S. St-Laurent", the most powerful icebreaker of its kind in the world, was launched Dec. 3 in an impressive ceremony held in the Montreal yard of Canadian Vickers Limited.

The ship, which bears the name of former Prime Minister Louis S. St-Laurent, was sponsored by Mrs. Lester B. Pearson, wife of the present prime minister, and received the blessing of His Eminence Paul-Emile Cardinal Leger.

A large group of dignitaries was present at the launching, including Mr. St-Laurent, Mr. Pearson, Transport Minister J. W. Pickersgill, and other members of the federal cabinet, representatives of the United States Coast Guard, directors of Canadian Vickers and others.

Immediately after the vessel was blessed by Cardinal Leger, Mrs. Pearson broke the traditional bottle of champagne over the ship's bow to the cheers of a large crowd which gathered to watch the launching of the world's most powerful non-nuclear icebreaker.

Speaking at the launching ceremony, Mr. Pickersgill paid tribute to all those who had worked on the ship's construction.

Referring to the fact that the names of three distinguished Canadians—Mr. St-Laurent, Mr. Pearson and Cardinal Leger—were associated with the launching, he expressed the feeling that this might have a significant bearing on the future in store for the newest addition to the Coast Guard fleet.

Mr. Pickersgill said he felt the ship could not have been launched under more favourable auspices.

At the reception that followed the launching, Mr. Pearson joined with the directors of Canadian Vickers in praising the former prime minister.

"It is fitting," he said, "that the name of Mr. St-Laurent should be honored in this way."

(The 84-year-old Mr. St-Laurent, who was overcome with emotion at the launching, did not attend the reception in accordance with the wishes of his family.)

Mr. Pearson also had high praise for the Canadian Coast Guard, the government-operated antecedents of which were established at the time of Confederation.

He recalled that the Coast Guard fleet now numbers about 200 ships of all types. The acquisition of the "Louis S. St-Laurent" brings to 11 the number of icebreakers in the fleet. Eight lighter vessels serve both as icebreakers and as supply and buoy vessels.

Arctic Patrol

The "Louis S. St-Laurent" will join the D.O.T. fleet in the spring of 1968 when it will be assigned to Arctic patrol and service in Eastern Canadian waters.

The ship, which is 336 feet, six inches in length and has a shaft horsepower of 24,000, will be powered by a steam turbo-electric propulsion system.

Designed to cope with the severest Arctic conditions, it has a maximum draft of 31 feet, will have a cruising speed of 13 knots and will carry a crew of 122 officers and men.

The ship will have a flight deck for helicopter operations and room to house two of the "choppers" in a hangar below decks with an elevator to raise them to the flight deck.

The icebreaker will have hospital facilities for approximately 15 patients and provision will be made for the working requirements of oceonographic, hydrographic and related scientific undertakings that will be carried out aboard ship.

The "Louis S. St-Laurent" will also be able to serve as a training vessel for cadets from the Coast Guard College. For that purpose, accommodation will be provided for a classroom, a study and a lounge. There, cadets will be able to complete their training at sea on a ship provided with the latest equipment anywhere.

The Telecommunications Branch will be responsible for the installation of the most modern electronic aids to navigation and communications equipment best suited to present day requirements.

The ship's wheelhouse will contain the latest operational and navigational consoles based on an initial concept submitted by the Defence Research Board and developed by the Canadian Coast Guard.

Its steering gear will be electric-hydraulic, with emergency power steering. An all-electric control system will permit the ship to be steered from the crow's nest and wheelhouse top, in addition to the wheelhouse itself.

Third Launching

The "Louis S. St-Laurent" is the third Coast Guard ship to be launched this year.

The oceanographic-weathership "Quadra" was launched at the Burrard Dry Dock Company Limited yards in Vancouver last July 4. It is scheduled for completion in the spring of 1967 when it will be assigned to weather station Papa in the mid-Pacific Ocean.

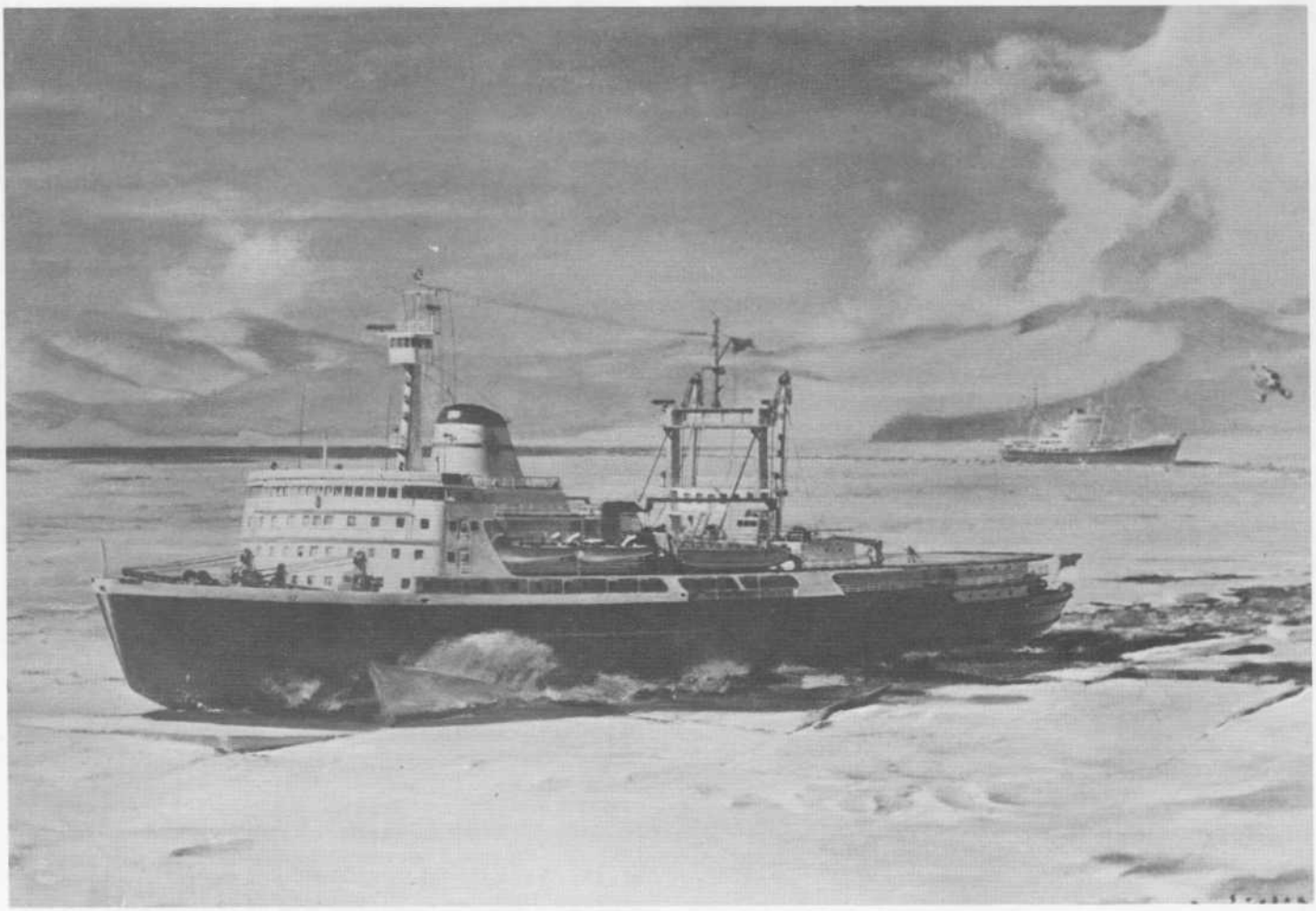
The "Nicolet," a sounding vessel used in the work carried out in the St. Lawrence Ship Channel, was launched in August at the Collingwood Shipyards and entered service in December.

The Department of Transport now has nine vessels under construction for the Coast Guard and other government services and agencies. Another 24 lighter vessels are under construction, 22 for the Coast Guard and two for the Pilotage Service.

Construction is expected to start soon on a new search and rescue cutter, the first of six to be built for the Coast Guard.

Tenders have also been called for the construction of a light icebreaker, supply and buoy vessel for the Great Lakes which, at 234 feet in length, would be one of the largest of its kind used by the Coast Guard on the Lakes.

Total cost of all vessels now under construction amounts to more than $90,000,000.



Artist's conception of CCGS "Louis S. St-Laurent".

Esquisse du n.g.c.c. "Louis S. St-Laurent".

The Next Hundred Years in Canadian Transportation

The following article has been prepared expressly for the use of the Maclean-Hunter Publishing Company as part of its Centennial report, and may not be reprinted without special permission.

Let us assume first what seems probable: that the population of Canada will grow from its present 20 million to 35 million in the next 25 years, and to 100 million by 2067. The trend to concentration in urban areas can be expected to accelerate. Within a generation there may be an almost continuous urban area from Windsor to Quebec City, and other agglomerations will appear elsewhere in Canada; in subsequent years the population density in these areas will continue to increase. The work week will continue to be reduced, leaving the bigger population with more leisure time and more inclination to travel for recreation and pleasure.

Will it always remain a pleasure to travel? Will people be able to move freely in the midst of such widespread congestion? What kind of transportation system will move them and the goods of commerce? Today about 85% of intercity passenger-miles is provided by the private auto, with the remainder divided more or less equally between bus, rail, and air. Railways account for about 42% of the ton-miles of goods carried between cities, water carriers 27%, trucks 9%, oil and gas pipelines 22%, and air carriers less than 1%. How will these patterns change in the future?

Local Transportation

Perhaps the most urgent future problems are in local transportation in our growing cities. Already we can see the threat of road and street saturation looming to a point where we are immobilized in one giant traffic jam. Already there is a growing concern with air pollution, to which the motor vehicle contributes a considerable share. Within ten or fifteen years bigger cities may find it advisable to limit the use of private autos in business centres and other areas of congestion. Improved methods of pollution control will be imposed, and the electric cars now being developed could become popular. Within twenty-five to fifty years autos and trucks could be largely prohibited in all except residential areas.

Mass transit media will expand rapidly in a variety of forms during the next hundred years. Moving sidewalks will be popular for short distances, perhaps with seats, but most of the service will be underground. Vehicles and systems will be fully automatic. Downtown buses will disappear, and surface and subway trains as we know them may give way to other tube-borne vehicles, which will be propelled by air pressure, linear electric motors or rockets. There will be sophisticated adaptations of the continuous flow vehicle, of which the moving sidewalk is a simple example, allowing individuals or small groups to be taken aboard and let off at will without stopping the main movement.

The local distribution of goods a hundred years from now will be by conveyor belts, pneumatic tubes, and other underground systems. Processing and commercial establishments will receive goods by this means. Retail deliveries will be made to central points in residential areas, where the customer can pick them up or have them delivered to his door by a mechanized delivery service.

Intercity Passenger Travel

Intercity passenger traffic will continue to grow rapidly, particularly for the next twenty-five years. The private car will remain the main vehicle during that period, even for long distance travel, but it will yield a good deal of ground to other surface vehicles and aeroplanes. Thereafter it could lose first place to the small private aircraft able to land in a small area, and during the rest of the century these planes could fill much of the role that the private auto fills today.

The auto of the future will move on an expanded system of throughways. It will in many cases be controlled by a form of automatic guidance system, so that the driver need control it fully only on less heavily travelled roads and in residential areas. Speeds and density of traffic will be greater; hence safety engineering will receive major emphasis. Trucks and buses will travel on separate highways or in separate lanes.

Air transport will be the leader in passenger traffic growth; airlines are now ordering and buying millions of dollars worth of new jet aircraft to meet the coming demand. The main growth will be in hauls of something more than 500 miles. There will be two new developments in this field within ten years. One is the subsonic jet, able to carry 500 to 900 passengers; it is hoped that this aircraft will substantially reduce fares on high density routes. Another is the supersonic transport. It will cut air times in half, but it will be more costly at least initially and hence its appeal may be limited to those willing to pay a premium price. Moreover, the problem of the sonic boom has not yet been fully overcome, so there will be a need for a much more complex air traffic control for the supersonic craft.

The big breakthrough of the century in the air could be the hypersonic plane, travelling at more than three or four times the speed of sound and beyond the "heat barrier", rocket propelled. Another spectacular development may be the modifica-

tion of present space vehicles for long-distance and medium-distance passenger service. Needless to say there will have to be tremendous accompanying improvements in ground transportation, ticketing, and baggage handling.

The development of short-haul aircraft for use between major cities is taking place already. Air-bus jet aircraft, capable of carrying over 250 passengers should be in production in the next few years. STOL and VTOL aircraft are now in the advanced experimental stage and should be in commercial usage before many years have elapsed. These aircraft are capable of using limited size landing areas close to or in the center of major cities. As their flexibility increases and their operating costs decrease these air vehicles could be used for shuttle services between suburban centres of large cities. Smaller versions can be developed for personal transportation, and these could be a typical family vehicle of Canada's second century.

Runways have reached their maximum length now; navigational aids will allow fully automatic landings on all scheduled airlines within ten years and weather delays will be a thing of the past. Within twenty-five years air navigation will be automatic from take-off to landing; computers will program the entire journey including flight planning, weather, and passenger loading. Automatic devices will keep track of air vehicles and control them to prevent deviation or collision.

The railway share of passenger traffic has declined sharply in the past 15 years, but it can be expected to increase in the coming years. Long haul traffic has suffered most and may decline further. The increase will be in trips up to 500 miles, including commuter service as well as inter-urban movement, and will occur principally in high density areas. The C.N.'s new service between Toronto and Montreal and its planned turbo-train are promising first moves. They will be followed by more advanced versions operating at increasingly higher speeds. A possible design will be air-cushion vehicles moving on a suitable track-way at speeds up to 400 miles an hour, propelled by linear electric motors. Another will be "tube coaches" borne in a tube of air at speeds between 200 and 2000 miles per hour, possibly rocket-propelled. These have been dubbed "fluid-supported" vehicles. Other possibilities include the use of overhead monorail systems, which might offer another application of the linear electric motor. Such services will carry a large part of the short-haul traffic in competition with air travel.

Inter-city bus traffic has shown little or no growth trend for more than 15 years and may remain at present levels for some years. Buses and trucks should in due course have exclusive use of their own highways and traffic lanes. They will be able to operate without drivers, controlled by a computer programmed guidance system.

Other vehicles such as hovercraft, hydrofoil vessels, helicopters, and auto-gyros will be perfected for specialized uses.

Bulk Freight

Railways, waterways, and pipelines will remain the main carriers of heavy bulk cargoes over long distances for at least another generation. All will continue to experience traffic growth for that period, though the rates of growth may vary and their relative position may change. By the year 2067, however, pipelines or tubes of some sort could take over much regular bulk movement, solids as well as liquids.

In water transportation the modern trend to large bulk carriers has been reflected in the Great Lakes trades. Carriers of dry bulk cargo are now typically of 25,000 ton capacity or more, limited only by the size of the canal locks. A new U.S. lock at Sault Ste. Marie soon to be opened will pass vessels of over 40,000 tons, and even this is not necessarily the final limit. Larger locks will be required in the Welland and St. Lawrence canals. The main technological advance in sight is marine nuclear propulsion; as yet it is not economic, but in time it may be developed to offer substantial cost savings. Other possibilities such as submarine transport promise little for domestic application but could become important for our foreign trade.

A major advance in the rail handling of bulk cargo is the integral train. It is made up of a pre-determined number of cars designed for one commodity and used for that purpose only. The train remains coupled as a unit. It is operated as part of the processing industry rather than as part of a railway service, and this makes possible substantial economies. It will probably take at least a generation to explore its full possibilities.

Pipelines now carry oil and gas almost exclusively. Some success has been achieved already in the movement of solids, and within ten years it will be possible to handle anything that can be put in suspension and moved as sludge. Eventually a way will be found to handle grain and other commodities by pipeline. When that day comes the pipeline may take over most of the basic load from both the rail and the water carriers.

Manufactures and Miscellaneous Freight

The larger population and greater affluence will increase the importance of regional markets, and this together with the greater use of lightweight plastics and other synthetics will reduce the relative burden of transportation costs. Most manufactured goods will be transported in containers. The containers will be of standard sizes interchangeable between road, rail, water, and air carriers. Research is going forward on the pipeline movement of solids in capsules or bubbles and success is only a question of time. It is reasonable to expect that by the year 2067 pipelines will be able to handle standard containers as well as other capsules, making them a major element in the transportation of goods of all kinds.

Highway freight transport has increased more than twelve fold in the past thirty years. This growth rate is unlikely to be maintained, but the rate will probably be greater than the rate of population growth for at least another generation. Truck "trains" will be developed, turbine powered, and can grow to a length of 500 feet or more; in this even they should be moved automatically on exclusive highways or highway lanes. Motor vehicles will be used mostly in moves of under 500 miles and mostly for containerized and other miscellaneous freight, though some may be used in special circumstances to carry as much as a railway car.

Air cargo has made a rather slow start but is expanding rapidly. So far it has carried mostly articles of a high value per pound or emergency production components. Business firms are now finding that air cargo can be used to reduce total distribution costs in a widening range of commodities, and jumbo jets on the drawing boards could carry as much cargo in a week as a good-sized liner could deliver in the same time. The air carriers expect that their cargo revenue will be greater than their passenger revenue by 1980; by the year 2067 domestic air cargo will probably take second place behind pipeline movement.

The Role of Government

Both industry and government must share the responsibility for achieving an efficient and balanced transportation system. Vision, planning and initiative will be required on both sides.

One of the greatest immediate needs is for more research on how one mode of transport links to another, research directed from an overall view seeking a sound basis for integration or co-ordination. We need to know more about the demand needs and relationships between fields of transport. Another important factor is to plan and formulate policy which takes full account of the total implications for the whole of the transportation system, instead of treating railways, ships, aircraft, pipelines, in separate compartments. The role of government agencies will be to work with industry in this spirit to make sure that the transportation system develops in the way that will best serve the public need and the public good.

Planning Airports for the Future

by W. A. Ramsay

W. A. Ramsay, B. Arch., M.R.A.I.C., has been in the fore of airport planning and development since 1952, when he became D.O.T.'s chief architect and thus assumed an important role in the Department's $100,000,000 major air terminal building program in the following decade. Last summer, he was appointed senior architectural adviser to D.O.T. This article, which will be in two instalments, is based on a recent talk by Mr. Ramsay to the Ottawa Branch of the Engineering Institute of Canada.

Toronto International Airport

Air terminal buildings in Canada are recognized by international airport planners as the best in the world. Formerly, airport planners used to visit air terminals in Britain and the United States for planning guidance—but today these terminals are visited to observe the difficulties which have shown up with the increase in traffic over recent years.

Since the opening of the Montreal terminal in December 1960, Winnipeg November 1963, Edmonton in December 1963 and Toronto in January 1964, airport planners, architects and engineers have come from every part of the world to observe, admire and indeed to follow many of the planning concepts in these Canadian terminals.

The winning design as well as the second prize winners in a recent competition for a new terminal concept at Berlin, Tegel Airport, are patterned after the Toronto concept.

The airport authority for a new airport to serve Paris has made several on-site studies of both Toronto and Montreal terminals and is developing a unit expansion type concept, first introduced in the Toronto plan.

The design success of Canadian air terminal buildings is due primarily to the co-operative spirit and team effort of a wide range of professional specialists, economists, mathematicians, public relations officers, lawyers, interior designers, landscape architects, artists, sculptors, engineers and architects—to mention only the principal contributors.

Influence on Design

In many countries it is the responsibility of the community to establish and finance its own airport, with grants-in-aid from the government for special facilities, provided that zoning, safety and other minimum regulations are followed.

This is not the case in Canada. All major airports and all save one or two minor ones have been designed and constructed under the supervision and at the expense of D.O.T., which also operates them.

In 1952 the Government of Canada commenced a program of new facilities for the safe navigation and control of Canadian air lanes. This was followed by a construction program to lengthen and strengthen the runways to accommodate new aircraft with heavier wheel loadings and faster take-offs and landings.

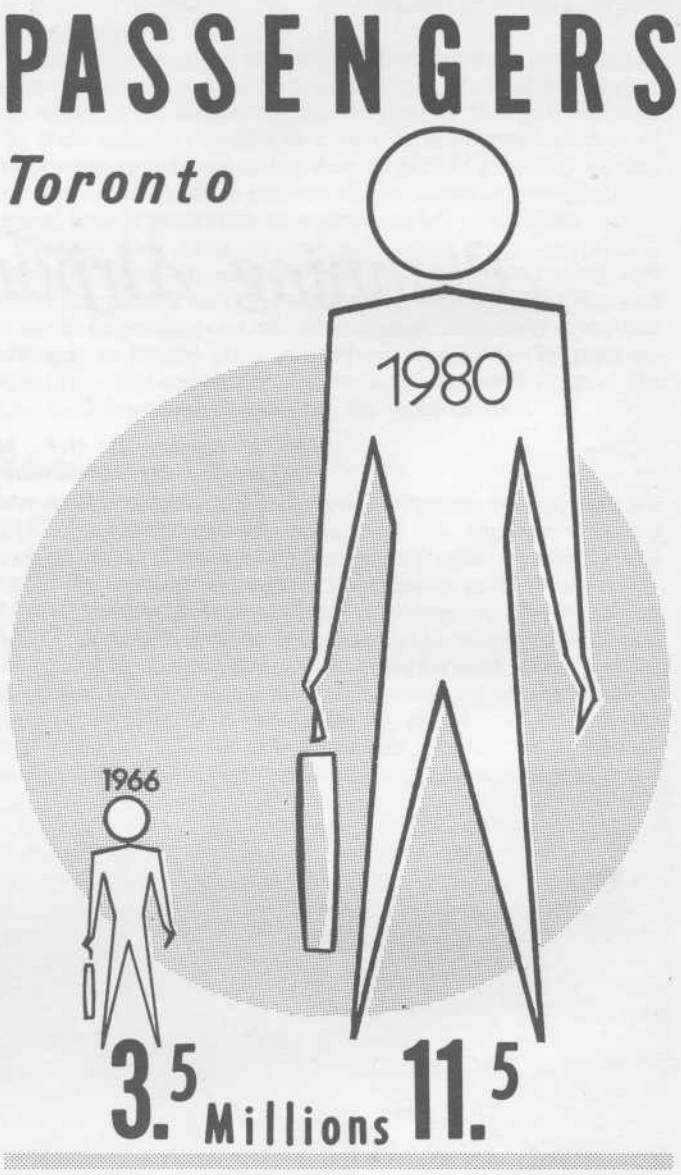
In phase with these two undertakings, there was a program for the construction of new terminal buildings. The terminal building program has now exceeded $200,000,000 (apart from runways, land, ground services, radar, radio, communications or other facilities.)

It was important at the commencement of this building construction program to establish policies and procedures to govern the size and facilities to be accommodated.

It was decided to construct terminal buildings to allow for a 10-year growth after completion of construction, and to pre-plan for further expansion and possible changes in airlines operations. Allowing time for studies, preparation of plans and specifications, tenders, contract award, construction and installation of airline equipment, it may be seen that for major terminals, all projections must be made almost 15 years in advance. With the rapid advances in civil aviation over the past years, it may be appreciated that this represents a challenge to the most imaginative team of architects and engineers.

Having established the growth period, D.O.T.'s economics branch made a forecast of the typical peak passenger traffic per hour in the terminal in the last year of the growth period. The forecast figure was developed by three different methods and then averaged for the final figure.

The first method involved an analysis of current traffic, related to the actual number of persons in the building, projected



to the year concerned, onto a curve of the annular growth in air traffic in Canada.

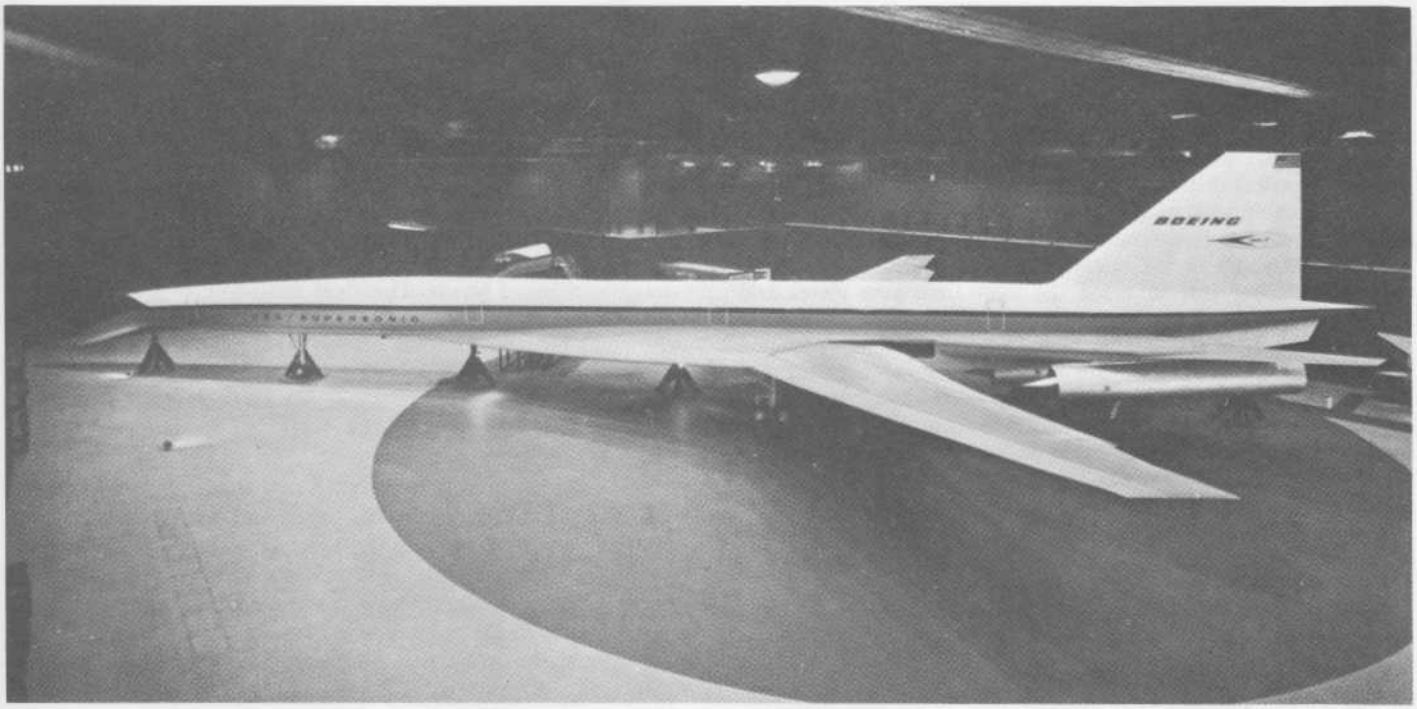
The second method compares current traffic at the airport with the population which the airport serves, and then projects this proportion to the increase in population for the year concerned.

Both first and second methods are adjusted for anticipated changes in airline routes to or from the airport as well as changes in rights of the operating airlines.

The third method summarizes the traffic predictions of the operating airlines and then with adjustments, the final figure derived is averaged with the figures of the first two methods.

Based on the established typical peak passenger hour (T.P.H.) at the end of the 10 year growth period, space and facilities standards are applied to provide the total air terminal requirement. At least that was the theory, and every effort was made to adhere to it.

In some cases, it was necessary to depart from this space requirement theory—for example at Toronto. On the basis that construction would be completed in 1961, the 10 year forecast was 1,720 T.P.H. for 1971, or 4,195,000 passengers annually.



A shadow of future passenger-handling and other problems for airports is cast by this full-scale mock-up of the 100-yards-long Boeing SST, recently chosen for production by the United States government. The wings are designed to fold back when flying at supersonic speeds. The craft, which is expected to be in service early in the 1970's, will fly from New York to London—3,546 miles—in two hours, 41 minutes, carrying as many as 350 passengers.

For this traffic load and for future projections our consultants, John B. Parkin Associates, developed a concept of four unit terminals, two of which were to provide for the passenger load to 1971. For budgetary reasons, only one unit was constructed. Due to unsettled labor conditions throughout the construction period, it was not completed until January 1964. T.P.H. estimates during the past summer went as high as 4,000 and current annual estimate of passengers is approximately 3,000,000.

It has proved fortunate that the second unit at Toronto was not constructed in 1964, because we now are better prepared to plan for future demands. The same was true at Montreal where, because the fingers and aeroquay at Montreal were not committed until one year before the building opened, it was possible to design these facilities to accommodate current jet aircraft (DC8's) although at the time designs were started, the airlines stated that they had no confidence that the travelling public would accept flights at speeds of over 500 m.p.h.! Because the second unit was not constructed at Toronto by 1964, it is now possible to develop a concept to accommodate projected types of aircraft, the super-jet seating 350 to 500 (or more) passengers and supersonic transports. It is significant to note that many airlines until recently had the same attitude to the super-jet and SST that they had 10 years ago to the 500 m.p.h. jet—"the travelling public will not accept them"; "economics are against them."

To return to the subject of Toronto, studies are in progress to determine the projected requirements based on a balanced systems planning approach to the airport as a whole. This requires many new and additional professional specialists using modern techniques of mathematical modeling, regression analysis, applying operational and cost variables for computer analysis. To be completely realistic this study must examine and make projections on the traffic potential of the communities served by Toronto Airport, the method and flow of this traffic from point of origin to and from the airport, the socio-economic influence on the pattern, as well as projections for traffic, on flights to points not yet determined.

Space and facilities standards are applied to the T.P.H. to produce the total space allowance for the public areas in a terminal deserve a few words of explanation. Predicated on overall averages a peak passenger is allowed 25 square feet in the terminal. There is no variable—whether the passenger moves from the ticket counter to the departure room or elsewhere in the building. Thus, if 100 passengers find themselves crowded

together, this indicates that elsewhere in the building they could find any number of vacant 25 square feet areas. From the economist's and taxpayer's standpoint this procedure is justifiable—but it challenges the best architectural designers to solve the problem of proper space distribution.

Standards are also applied to the allowable areas for mechanical and electrical distribution centres. The engineer often has to crowd the equipment in with a shoe-horn—giving certain problems to the maintenance engineer.

Standards apply to the number of toilet facilities—related to the T.P.H. Bear this in mind the next time you travel and remember that these facilities were located to meet the convergence of lines of traffic flow. Notwithstanding, standards are a necessary control and they are employed by the architectural designer on occasion to deny unrealistic space demands.

Space requirements of the primary tenants, the airlines, are only loosely prescribed. For example, space used exclusively by airlines must be jointly rented, or rented by one airline which, in turn, recovers proportionate costs from joint users. Airlines are required to rent space behind the back wall of their ticket counters, to correspond to the length of the ticket counter frontage.

Space requirements for inspection service facilities are predicted on the proportionate mix of foreign aircraft arrivals, related to the T.H.P. (In many other countries the airlines are charged for inspection services on a pro-rata basis). Space allowance for store concessions and restaurants are calculated on the basis of an economic return to amortize the cost.

Before final approval is given to the plan of any major terminal, an economic feasibility study is made to demonstrate that the estimated capital cost of the project will be amortized by rentals and other revenues. More correctly stated, this study indicates the future year in which amortization and operating costs break even with revenues.

In undertaking these economic feasibility studies, it is assumed that all space occupied by the D.O.T. and other government agencies are rent-paying tenants—although in the case of other government agencies the payment is a book entry and no funds actually changed hands. This does not apply to airline or other tenants, although in some cases concessionaires are assessed on the basis of a floor rental plus a percentage of gross revenue, often established on a tender basis. A few exceptional concessions are operated on a management fee basis, with the D.O.T. picking up either the profit or deficit, as the case may be, the latter as a service to the public.

The establishment of the rental rate structure is a topic too complex to be included in this paper, but one significant factor may be mentioned because it acts as a control on space requirements. The highest rental rate in a terminal is applied to airline ticket counter frontage to deter airlines from overstating their requirements in the premium cost area of the terminal.

Although the problem of establishing the overall space requirements of a terminal is difficult and complex for departmental planners, the problem for an airline to establish its space requirements is equally difficult, because they too are required to com-

In this illustration from a Boeing brochure, it is proposed that baggage handling be facilitated by means of numbered and, perhaps, color-coded baggage containers with a relatively small number of compartments. These would go on and off the aircraft intact and be delivered by conveyor belts into the terminal where passengers could find their luggage with ease.

mit for their space for a ten year period, at least in critical premium space areas.

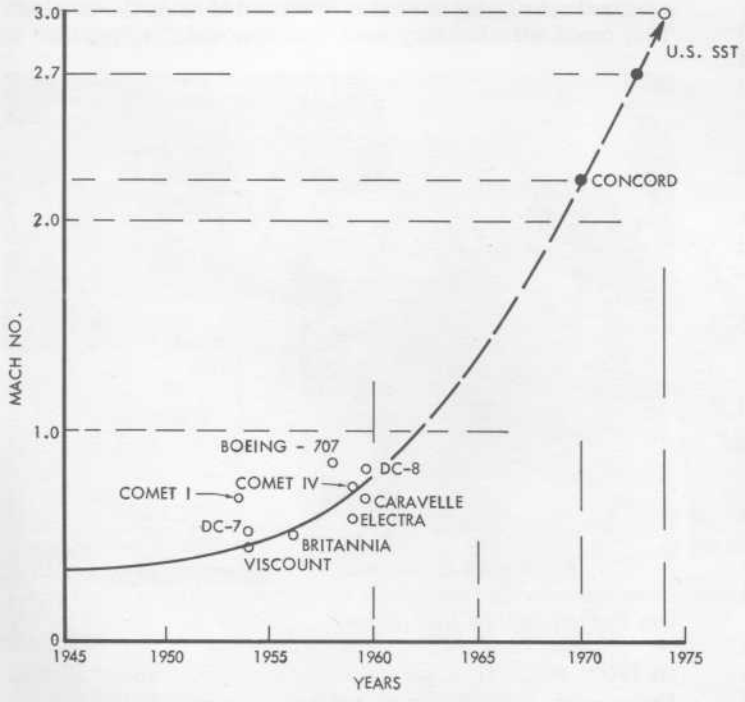
In addition to commitment for the rental rate, the airline is responsible for the provision of, or capital cost of special equipment, used exclusively by it or provided especially at its request, such as the outgoing baggage equipment, closed circuit television systems, pneumatic tube systems, special power outlets (plus power charges) special finishes or built in facilities of any kind. Apart from the consideration of the capital recovery, this practice and policy is necessary for the D.O.T. in order to avoid charges by one airline that another airline obtained more or better facilities at the same rental rate. The converse is also found, where an airline seeks to lower the applicable rental rate, by offering to accept a lower than the standard of finish, illumination level, heating, etc.

Incoming baggage equipment and other specialties, generally utilized by all airlines, are provided and installed by D.O.T. and included in the total capital cost when calculating the rental structure.

The costing of the public areas in terminal buildings follows another complex procedure, but generally speaking this is apportioned among all of the building tenants and incorporated into the rental structure.

Initially the rental structure was predicated on pre-final capital costs and estimated costs for operation and maintenance, but all tenants are informed of D.O.T.'s intention to revise the structure when and if necessary to recover actual costs.

In our next issue, Mr. Ramsay writes about the new era of supersonic and jumbo aircraft and the pressing problems they pose in the design and modification of our airports.



Speed growth history of commercial transport.—Prepared by Lockheed-California Company

Interfering with Interference

by William Dunstan

Information Services Division

When Ralph Bunt joined the civil service as a ship's radio operator back in 1925, he was nicknamed "Sparks" along with the rest of his fraternity.

The name originated with the first type of wireless transmitter, which broadcasted dots and dashes by shooting electricity across a gap between two terminals in the form of an arc, or spark. These bursts of energy went into the air from the ship's aerial to be picked up by receiving sets.

But times have changed. The sparks that were then the life force of radio communications still are with us, but they no longer are wanted. For they remain as the static created by automotive and electrical motors, short circuits, and a variety of electrical disturbances. In a more sophisticated age of electronics, they constitute a recurrent nuisance which Ralph Bunt, in his later capacity as part of the radio inspection service, has been seeking out and trying to eliminate for the past 36 years.

The early part of his service was high adventure. In 1926 he was radio operator aboard a revenue cutter engaged in trying to break up the lucrative, private foreign-aid program of supplying rum to thirsty, prohibition-bound Americans. There were storms which he recalls with no pleasure—one blanketed everything so heavily with ice that he barely managed to get a radio signal which helped the skipper find his bearings. The weight of the ice had created a dangerous list long before the ship staggered into port. Nor did he get much pleasure when the customs officers seized $40,000 in contraband rum hidden under a dock: the entire load—"except for a few bottles that may have been quietly set aside"— was poured down the drain!

Next, he went as a radio operator with the Hudson Straits expedition which in 1927 began a study of ice formation and other conditions in the area which formed a basis for the establishment of the port of Churchill. In 1929, by which time he was in charge of one of the radio stations there, he was posted to Ottawa and in 1930 joined the radio inspection service.

Inspections then included, in addition to tracking down interference, inspection of radio licenses for broadcast receivers and prosecution of radio owners who had not purchased a license, as was required in those days.

There are no such license checks nowadays, but still they manage to keep busy. There are some 32 field offices throughout Canada—from Whitehorse, Yukon to St. John's, Newfoundland—from which approximately 175 inspectors investigate an average of 17,000 complaints of interference, travelling about 800,000 miles a year in 80 specially-equipped automobiles.

Inspectors also check the operation of all radio stations, to ensure that their equipment meets specifications, they keep to their own wavelength, and operate only within the terms of their licenses. Ship radios, for instance, must meet the minimum standards of the International Safety of Life at Sea Convention.

Examination of all candidates for radio-operators' certificates is another duty of the inspectors. Canada's standards are well above the minimum international standard and our certificates are highly regarded throughout the world.

Tracking down and rectifying radio interference hasn't changed basically during Ralph Bunt's service. A major implement then—and now—is a large, two-handed mallet with which the inspector goes about whacking power poles. This is not as silly as it may seem. Interference often is caused by some loose connection in an electronic field. Connections and other hardware concerned with wind-tossed, weather-beaten power lines and supporting posts are apt to come somewhat loose or lose insulation in the course of time. Whacking the pole sets up extensive vibrations which are almost certain to expose to the inspector's instruments any faults that have been responsible for radio interference.

A major cause of interference for many years was a variety of heating pads. One guilty little heating pad could disrupt radio reception in an entire neighbourhood. Tracking it down was not usually difficult. The inspectors drove around in their specially-equipped car, playing an electronic version of "hide-the-thimble". They could tell when they were "hot" or "cold" by the level of

In 1927, Ralph Bunt occasionally broke the tedium of life as a radio operaror on Nottingham Island, where Hudson Strait opens into Hudson Bay, by hunting seal.

En 1927, Ralph Bunt, qui était alors opérateur radio sur l'île Nottingham, où le détroit d'Hudson débouche dans la baie du même nom, brisait à l'occasion la monotonie de son travail en chassant le phoque.

disturbance. When it "peaked", they knew they were in the immediate vicinity. Improvements in heating-pad design have almost eliminated this source of disturbance. Any faulty electrical appliance, however, can disrupt both radio and television reception. A frequent offender these days is the fluorescent light: some of them are improperly filtered, resulting in interference.

There always is a shortage of radio inspectors, partly because to date it has been necessary to recruit them from fully qualified radio operators. The situation should improve in the near future, if plans materialize for graduates of technical schools to be hired and trained at D.O.T.'s Air Services School.

Inspectors currently undergo considerable retraining to keep them up to date with developments in the field. Ralph Bunt, whose radio experience dates back to 1920, when he first became a "ham" radio operator, frequently lectures at the department's own school.

A radio inspector needs many sterling qualities, not the least of which is the ability to understand and get along with people. He is, Mr. Bunt claims, the only civil servant who is required to do his work in private homes and, since complaints frequently can erupt into neighbourhood quarrels, he often must be a pretty adept psychologist as well as a skilled technician.

In 1930 Ralph Bunt, above, investigated radio interference with the aid of headphones, a portable receiver and loop antenna. Today John Demers (in fur hat) and Bob Coxe, Ottawa, are shown, left, tracing sources of interference by means of an all-wave communications receiver mounted in a specially-constructed radio van.

En 1930, Ralph Bunt, ci-dessus, repérait les sources de brouillage au moyen d'écouteurs, d'un récepteur portatif et d'un cadre. De nos jours, John Demers (portant casque en fourrure) et Bob Coxe, Ottawa (photo ci-contre) repèrent les sources de brouillage au moyen d'un récepteur de trafic toutes ondes, installé dans une voiture spécialement construite à cette fin.

Suppression du brouillage

par William Dunstan

Services d'information

A son entrée dans la Fonction publique en 1925 à titre d'opérateur radio de navire, Ralph Bunt fut affublé du surnom «Sparks» (étincelles) que portaient également ses collègues.

Ce surnom remonte à l'époque du premier type d'émetteur de tsf qui transmettait des points et des traits au moyen d'impulsions électriques entre deux pôles sous forme d'arc ou d'étincelle. L'énergie qui jaillissait dans l'atmosphère en passant par l'antenne du navire était captée par les appareils récepteurs.

Les temps ont changé. Les étincelles qui constituaient l'essence même des radiocommunications existent toujours mais leur présence n'est plus souhaitée. Elles sont à la source des parasites produits par les moteurs d'automobile et électriques, les courts circuits et diverses perturbations d'origine électrique. En dépit des progrès que connaît l'électronique, ces parasites persistent toujours, et Ralph Bunt, du service d'inspection de la radio, s'applique depuis 36 ans à les déceler et à les supprimer.

Ses premières années de service furent fort aventureuses. En 1926, il occupe un poste d'opérateur radio à bord d'un cotre des douanes chargé de mettre fin au commerce lucratif consistant à fournir du rhum aux Américains qu'assoiffait la prohibition. M. Bunt se rappelle certaines tempêtes qui n'étaient pas de tout repos; au cours de l'une d'elles, la couche de glace recouvrant le navire était si épaisse qu'il réussit à peine à capter un signal radio devant permettre au capitaine de faire le point. Le navire, en raison du poids de la glace, donnait fortement de la bande bien avant d'entrer au port, tant bien que mal. Mais Bunt n'était pas trop enchanté quand les douaniers saisirent du rhum de contrebande pour une valeur de $40,000 caché sous un quai; toute la cargaison, «sauf quelques bouteilles mises discrètement de côté», fut déversée dans les égouts.

Il fait ensuite partie, à titre d'opérateur radio, de l'expédition du détroit d'Hudson qui en 1927 entreprend dans cette région une étude de la formation des glaces et d'autres conditions en vue d'y établir le port de Churchill. En 1929, alors qu'il a la charge d'une des stations radio de l'endroit, il est affecté à Ottawa et entre en 1930 au Service d'inspection de la radio.

A cette époque, en plus de repérer les sources de brouillage, l'inspecteur devait examiner les licences radio des propriétaires de récepteurs et poursuivre ceux qui n'en avaient pas.

De nos jours, même s'il n'a pas à effectuer ce travail, l'inspecteur a de quoi s'occuper. Le Service d'inspection compte environ 32 bureaux disséminés par tout le Canada, de Whitehorse (Yukon) à Saint-Jean (Terre-Neuve). Le personnel comprend environ 175 inspecteurs qui examinent en moyenne 17,000 cas de brouillage et parcourent environ 800,000 milles par année dans 80 automobiles dotées d'un matériel spécial.

L'inspecteur contrôle également l'exploitation de toutes les stations radio pour s'assurer que leur matériel répond aux normes, qu'elles ne s'écartent pas des fréquences qui leur ont été assignées et qu'elles ne sont utilisées qu'en conformité des conditions mentionnées dans leurs licences. Par exemple, les stations radio de navire doivent satisfaire aux normes minimums de la Convention internationale pour la sauvegarde de la vie humaine en mer.

L'examen des candidats aux certificats d'opérateur radio constitue une autre fonction des inspecteurs. Les normes fixées par le Canada dans ce domaine sont bien supérieures aux normes minimums internationales et nos certificats sont très bien cotés dans le monde entier.

Les méthodes de repérage et de suppression du brouillage n'ont pas changé fondamentalement depuis que Ralph Bunt a commencé à s'occuper de ce travail. L'outil dont l'inspecteur se servait surtout alors et dont il se sert encore dans la plupart des cas demeure un gros maillet avec lequel il frappe à coups redoublés sur les poteaux qui supportent les lignes de transmission. Ce manège n'est pas aussi stupide qu'on pourrait le croire. Le brouillage est souvent causé par une connexion lâche dans un champ électrique. Les connexions et autres ferrures des lignes de transmission et des poteaux à la merci des intempéries finissent par se desserrer et par perdre leur qualité isolante. Les coups répetés sur les poteaux produisent de fortes vibrations grâce auxquelles l'inspecteur décèle, à l'aide de ses instruments, les défectuosités à l'origine du brouillage.

Durant plusieurs années, le coussin chauffant a constitué une source importante de brouillage. La réception radio pouvait être brouillée dans tout un quartier par un seul coussin en mauvais état. Le repérage était habituellement facile. Les inspecteurs circulaient dans leur voiture, munie du matériel approprié, et jouaient une version «électronique» d'un jeu d'enfant; c'est ainsi que le niveau du brouillage leur indiquait s'ils «brûlaient» ou s'ils «gelaient». Si le niveau était au maximum, ils se trouvaient dans le voisinage immédiat de la source. Cette source de brouillage a presque disparu en raison des améliorations apportées aux coussins chauffants. Toutefois, tout appareil défectueux peut nuire à la réception des émissions de radio et de télévision. De nos jours, il en est souvent ainsi des appareils d'éclairage fluorescents qui ne sont pas munis de filtres appropriés.

Il y a toujours pénurie d'inspecteurs; c'est que, jusqu'ici, on devait les recruter parmi les opérateurs radio attitrés. La situation devrait s'améliorer sous peu si le projet d'engager des diplômés d'écoles techniques et de les former à l'École des Services de l'Air du ministère des Transports se réalise.

Pour se tenir au fait des perfectionnements qui interviennent dans leur domaine, les inspecteurs doivent subir un recyclage très poussé. Ralph Bunt, dont l'expérience en radio remonte à 1920 alors qu'il était radioamateur, enseigne fréquemment à l'école du Ministère.

Un inspecteur doit posséder de nombreuses qualités, notamment celle de pouvoir comprendre les gens et de s'entendre avec eux. Au dire de M. Bunt, c'est le seul fonctionnaire tenu d'effectuer son travail dans des maisons privées et comme les plaintes peuvent souvent dégénérer en querelles entre voisins, il doit être un psychologue doublé d'un technicien compétent.

En frappant, au moyen d'un maillet, un poteau supportant une ligne de transmission, Jean Demers utilise la méthode classique pour produire sur une ligne des vibrations permettant de déceler toutes connexions défectueuses. Bob Coxe, au moyen du récepteur de trafic, vérifie si les coups de maillet produisent du brouillage.

Bashing a power pole with a mallet, John Demers uses the standard method of setting up vibration on a line to check for faulty connections. Bob Coxe checks the communications receiver for any interference which may result from the blow.

Novel Flashing Floaters For Expo-bound Boaters

A special set of buoys selected by the D.O.T.'s Aids to Navigation division will be "directing traffic" in waters near Montreal this year.

The division came up with the remarkable new buoys as the answer to an unprecedented increase in small boat traffic expected to visit Expo 67 during the summer months.

D.O.T. crews will begin installing 300 of the buoys, made of lightweight glass-reinforced plastic and featuring a unique Xenon signal, early in April.

Each will be placed roughly 4,000 to 6,000 feet apart to mark channels along the Ottawa River between Ottawa and Calumet, on the St. Lawrence from Montreal to Sorel, and on the Richelieu River from Sorel to Granby.

Measuring three feet in diameter, and with a draught of about 28 inches, each of the unsinkable buoys will be anchored in the conventional way, using a 500-lb. weight attached by a synthetic rope such as nylon or polypropylene.

With its signal located four feet above the water line, each is also equipped with a rubber fender to ward off anything which may strike it by accident.

Total weight of the buoy is less than 500 lbs. and its unique design is reported to help the buoy function well in currents of up to four or five knots.

The buoys will have their color impregnated in the plastic, 150 of them a distinctive black and 150 colored bright red. The black buoys will flash a green signal while the red buoys will be equipped with red flashing lights.

Their Xenon signal, visible at a distance of three miles at night, is a type of light never before used in Canada and radically different from the filament-type now in use. Every four seconds, it will flash five pulse-like signals in half a second, followed by an interval of darkness lasting three and a half seconds.

The buoy's battery is built to last eight months at 14 hours a day and will maintain the light's intensity even as its power diminishes. Near the end of its life, the signal varies to warn of the waning power.

Each buoy is equipped with a light-sensitive control which automatically shuts its signal off during the daylight hours.

Overall, say D.O.T. engineers, the new buoys will make the small-boat channel in the Montreal area quite distinct from the regular commercial channel.

The division is so enthusiastic about the buoys, originally developed in England by Stone-Chance and being supplied to the D.O.T. by Computing Devices of Canada, that it is planning to test six of them independently with the Victoria marine agency in British Columbia next year.

Retirements

G. V. (Gerry) Clancey, district purchasing agent for the Dartmouth marine depot in Nova Scotia, retired last October, ending 39 years of service with the agency.

A native of Halifax, Mr. Clancey began his career in June 1927 as a stenographer. In 1938, he transferred to the stores section and was promoted to purchasing storekeeper in 1953. In April 1963, he was promoted to purchasing agent for the Dartmouth marine depot, a position he held until his retirement.

Mr. Clancey was very active during his years with the Department in various employee's associations, holding several offices in the depot bowling league and serving for a time as third vice-president of the Canadian Marine National Employee's Association.

During his off-duty hours, he could be found busily engaged with the Dartmouth Lions Club or out promoting one of its projects. His keen interest in the club led him to the offices of secretary, president, zone chairman and deputy district governor of Lions International.

Fellow employees at the depot, who gathered to extend their good wishes on his retirement, presented Mrs. Clancey with a bouquet of red roses and Gerry with an electric razor, attache case and travel bag.

An ardent sports fan, Mr. Clancey plans to enjoy a leisurely retirement at his summer home in eastern Nova Scotia. With no firm plans for a second career, he says he will be content to enjoy his favorite sports, remain active in the Lions Club, and still remain in touch with the employees of the marine agency through the Wednesday night matches of the bowling league.

Gerry Clancy, left, accompanied by his wife, receives congratulations from F. M. Weston, regional director of marine services at Dartmouth, N.S., after completing 39 years of service. Adding her own farewell is Mrs. E. Spears, right, secretary to the regional director.

Jack Gervais, right, receives a retirement gift and congratulations from Lorne Greenwood, regional superintendent of radio regulations for Toronto. Mrs. Gervais is at centre.

Retirement didn't last long for *J. A. (Jack) Gervais*.

Within a month after the Canadian radio pioneer wound up a 40-year career with D.O.T., he had "signed on" as a radio officer with the Upper Lakes Shipping Company vessel "Cape Breton Minor" and sailed for Rotterdam.

During his lengthy career, which ended in a testimonial dinner held in October, Mr. Gervais spent the last 27 years in Kitchener, Ont., as inspector in charge of the radio regulations office.

Mr. Gervais began in radio in 1925 when he attended the Marconi Marine School of Wireless Telegraphy in Toronto.

His first job was with the Canadian Marconi Company, after which he joined the government service on June 1, 1927, on the Coast Guard ship "Lady Laurier" at Dartmouth, N.S. Later he was transferred to the Red Head direction-finding station at Saint John, N.B., and Canso, N.S., direction-finding station..

In Sept. 1927, he was sent to establish and serve at the first government marine radio station at Churchill, Man. A year later he was transferred to Amery, Man., at the then end of steel of the Hudson Bay Railway.

Mr. Gervais came to the "outside" for an extended vacation in October 1928, then received an assignment to the Coast Guard ship "Mikula," an icebreaker based at Quebec City.

He was posted to headquarters Ottawa in December 1928, where he operated radio station VAA which communicated with stations on Hudson Bay and Hudson Straits. A year later, he was transferred to the Ottawa traffic section and from this position moved to the radio inspection and interference staff.

In 1937, Mr. Gervais was appointed radio inspector in charge of the Ontario radio regulations office in Kingston. Two years later, he was appointed to the Kitchener office.

Guests at Mr. Gervais' retirement party included H. R. Nason and V. J. R. Brister, both retired regional superintendents of radio regulations.

Chief Steward Retires

C. M. (Larry) Houston, chief steward aboard the CCGS "Alexander Henry", retired recently, ending 18 years of service with the Department of Transport.

A gift from the officers and crew of the ship was presented to Mr. Houston by F. K. McKean, district marine agent at Parry Sound, while Mrs. Eileen Docherty, the ship's waitress, presented a bouquet of yellow roses to Mrs. Houston.

Mr. Houston began his service with the Department in 1948, serving as chief steward on the CCGS "C. P. Edwards" until he was transferred to the "Alexander Henry".

The Houstons plan to enjoy their retirement in their new home in nearby Midland and, as Mr. Houston says, take a few trips to see Canada by land "since I've seen plenty of it by water."

F. K. McKean, left, district marine agent at Parry Sound, Ont., presents a farewell gift from the officers and crew of the CCGS "Alexander Henry" to retiring Chief Steward Larry Houston, while Mrs. Houston, who received a bouquet of roses, looks on.

Cross Canada Dateline

Thompson, Man.—A new air terminal to serve this northern Manitoba mining centre was declared officially open last Nov. 11 by the province's Industry and Commerce Minister Sidney Spivak.

The terminal building was financed partly by the local government District of Mystery Lake with the assistance of some $83,000 from D.O.T.

The new terminal will house the Department's aeradio and meteorological facilities in addition to freight and passenger services for the community of 11,500 people.

Industry and Commerce Minister Sidney Spivak of Manitoba snips the ribbon to open the new air terminal at Thompson. Assisting him are W. E. Fenn, left, regional director of air services at Winnipeg, and T. M. Gaetz, right, assistant vice-president of the International Nickel Company of Canada. The company helped finance construction of the original airport.

Proposal to Monitor Runway Discharge Beacons Wins Award

J. F. Hawkes, Edmonton district electrical serviceman, is $80 richer through suggesting a monitor system for condenser discharge beacons which are used as runway threshold identifiers.

The system will enable airport operating personnel to confirm that the beacons are in operation during periods of bad weather and will be particularly important to airports in isolated areas.

Prior to Mr. Hawkes' suggestion, visual confirmation was the only way the beacons could be checked.

A $30 award was presented to L. S. Bates, a radio inspector at Sydney, N.S., who suggested that all marine casualty reports issued by search and rescue authorities contain specific reference to D.O.T. stations that originate them.

Mr. Bates, who is attached to the Department's Moncton region, made his suggestion "as a means of providing better public awareness of the services which are provided by the marine radio stations."

Officials at all Canadian Forces' search and rescue stations have readily agreed to co-operate.

A $15 suggestion award went to S. C. Larade, a fireman at the Sydney, N.S., airport, who suggested that smoke pots be used to train airport firemen to pinpoint fires in the field.

A $10 award was presented to P. W. Copeman, a radio operator at Alert Bay, B.C., for suggesting that a morning weather broadcast would aid local salmon fishermen to make an early start if weather conditions appeared favorable.

Floyd Budd, who was reported in our previous issue as a suggestion award winner, usually is known as Lloyd Judd. Sorry, Lloyd!

Vancouver—A service established last year by the Vancouver weather office in co-operation with interested radio stations in the area, has been given credit by the B.C. Safety Council for a significant drop in the number of lives lost among small craft owners operating in coastal waters.

In a letter to T. G. How, regional director of air services, the council said that four lives were lost during the 1966 season compared to 33 persons, who died the year before because boaters took their vessels out in weather for which the craft were not equipped.

"We place a great deal of emphasis in the saving of lives on the weather reports designed and issued by your office," the council said. "Our board of directors has discussed this matter and they will be writing you an official letter of thanks for this service."

W. H. Mackie, regional superintendent of observing services for the Vancouver region, presents a book award to P. Plaistowe, chief officer of the S.S. Waihemo on behalf of the Meteorological Branch.

SHIP HONORED

Vancouver—A New Zealand ship, one of 140 merchant and government ships making voluntary marine weather observations for Canada, was recently honored for its work by the Meteorology Branch.

The S.S. Waihemo, owned by the Union Steamship Company of New Zealand and under the command of Captain A. Dodds, made close to 10,000 weather reports during her nearly 20 years of sailing between Vancouver and Australasia which ended last year as the result of sale to new owners.

The ship's award, a copy of the book "The Wondrous World of Fishes," was presented to Chief Officer P. Plaistowe by W. H. Mackie, regional superintendent of observing services for the Vancouver Air Services Region.

The ship's senior radio officer, R. F. Elsom, also received an award in recognition of his valuable assistance in transmitting the weather reports to shore receiving stations.

The Branch makes these awards annually to certain masters, deck officers and radio officers in recognition of outstanding work in providing weather observations on the high seas, Canadian coastal waters, and the Great Lakes.

In selecting the award winners, the number of observations made and their overall accuracy are taken into account. Of the 140 participating ships, the best 20 per cent are singled out to receive the awards.

Tribute to Snag

Snag—With the closing of the Department's weather station at Snag, an era has passed into history.

For years the very name has been synonymous with frigid temperatures. No place in North America registered official temperatures as low as those at Snag.

On the coldest of mornings there was a measure of comfort to be gained from learning how much colder it was at the Yukon weather outpost.

Of course, local pride may have been wounded on occasion when records of 50 or 60 below were compared with the continent's all-time record of 81.4 below, recorded at Snag on Feb. 3, 1947.

But this was an easy price to pay for the insulation provided against our cold by the knowledge that men at Snag were facing much worse and surviving.

It remains to be seen whether the new location of the weather station (it's now at Burwash Landing) can produce temperatures to excite the imagination like those of Snag.

"SHE"

Why is a ship always referred to as "she?" One admirer has come up with 14 good reasons:

1. She's all decked out and often well stacked.
2. She has a waist and stays and requires a lot of rigging.
3. There is usually a lot of bustle around her and she always manages to show her superstructure to advantage.
4. Bows and bells are standard equipment and she sometimes wears a bonnet.
5. She has pleasing lines from stem to stern and there's usually a gang of men around her.
6. It's not the initial expense that breaks you, it's usually the upkeep.
7. It takes a lot of paint to maintain her best appearance.
8. In some parts of the world the man who takes care of her is known as her husband but she leaves him at home when she goes out.
9. She always knows her destination and her watchword is caution.
10. When entering port, she heads for the buoys.
11. When you want to attract her attention, a whistle is the appropriate signal.
12. As soon as she gets home, all her lines are busy.
13. On a balmy day or a moonlit night, she can make any tired businessman forget his troubles.
14. Once you get to know her, you never want to leave her.

Georges Martin

Un maire aux Transports

Ottawa—Depuis le 5 décembre dernier, le ministère des Transports compte un maire à son emploi. Il s'agit de M. Georges Martin, agent technique à la Direction des télécommunications et de l'électronique.

Georges, célibataire age de 33 ans, a été élu maire de Rockland, ville sise à 25 milles à l'est d'Ottawa. Il a défait le maire sortant, M. Eugène Laviolette, avec une majorité de 102 voix.

Georges a de grands projets pour sa ville. Malgré son jeune âge, il a une vaste expérience de l'administration, ayant siégé comme conseiller municipal pendant quatre ans.

Au lendemain de sa victoire aux urnes, ses compagnons de travail lui ont présenté une «chaîne d'office» faite de papier. Une nouvelle inscription à la porte de son bureau se lisait ainsi: «Georges Martin, maire de Rockland.»

Membre du club Richelieu et des Chevaliers de Colomb, le nouveau maire de Rockland est un ardent sportif qui s'intéresse surtout à l'organisation des loisirs des jeunes.

The Mayor of D.O.T.

Ottawa—A 33-year-old technical officer in the Telecommunications Branch has been elected mayor of Rockland, Ont., a town of 4,000 located 25 miles east of the Capital.

Georges Martin, a D.O.T. employee for the past four years and a former town councillor, beat his opponent, who had been mayor of Rockland for six years, in a close race during the December election.

Fellow employees presented the youthful mayor with a "chain of office" made from paper and a hand-lettered sign for his desk labelled "Mayor."

Mr. Martin, a bachelor who has three brothers and a sister, says he plans to "put Rockland on the map."

A member of the Richelieu Club and the Knights of Columbus, the new mayor is an active sports supporter.

NEW SKIPPER—Captain E. J. Vezina, shown on bridge of the CCGS "Alexander Henry", has taken command of the ship at Parry Sound, Ont. Capt. Vezina, who sailed the CCGS "Skua" out of the Parry Sound marine agency during the summer, has 33 years experience behind him, including a stint in the navy and D.O.T. duty on the East Coast and in Arctic waters.

The *CCGS "C. D. Howe,"* assigned to Eastern Arctic Patrol and lighthouse supply duty, is based at the Department of Transport marine agency at Quebec City.

CCGS. "C. D. HOWE"

LENGTH: 295 feet
BREADTH: 50 feet
DRAFT: 18 feet, six inches
POWER: Steam, 4,000 I.H.P.
GROSS TONNAGE: 3,628 tons

Le n.g.c.c. «*C. D. Howe*», affecté à la patrouille de l'est de l'Arctique et au service de ravitaillement des phares, a son port d'attache à l'Agence de la marine du ministère des Transports à Québec.

N.G.C.C. «C. D. HOWE»

LONGUEUR: 295 pieds
LARGEUR: 50 pieds
TIRANT D'EAU: 18 pieds, six pouces
PUISSANCE: vapeur, 4,000 cvi
JAUGE BRUTE: 3,628 tonneaux