

## Jetliner Successor

Avro Aircraft Ltd., it seems, is giving serious thought to an advanced type of jet airliner capable of spanning the Atlantic in two and a half hours at 1,500 mph. If a decision is reached to proceed with design, the aircraft would be projected for a 1965 market.

During a recent visit from Britain, Avro Chairman Sir Roy Dobson told a company gathering:

"We have put the Jetliner to bed now, but we shall probably have a go at another one, and it won't be anything like the one we've just done. It will be a truly supersonic job that will go across the Atlantic at, let us say, 1,500 mph and do the Atlantic in two and a half hours with real regularity and in comfort and safety."

Other Avro officials declined to elaborate on their chief's remarks other than to say that they are always examining forward-looking projects.

## Bendix Affiliation

Bendix Aviation Corp. of the U.S. has acquired a substantial interest in Aviation Electric Ltd. of Montreal and AEL will henceforth operate as a Bendix affiliate. There will be no change in policy or management, but Aviation Electric intends to expand its activities in the aviation and marine fields.

An additional 19,000 sq. ft. of plant space has been created to provide in-

creased facilities for engineering and research and space for expansion of other departments. The latest Bendix engineering and production techniques are now available to Aviation Electric customers.

## New Prencos Plant

J. K. Chmel, president of Prencos Progress & Engineering Corp. Ltd., has announced the purchase of 56 acres of industrial site in the town of Uxbridge, Ont., about 25 miles north of Toronto. Plans for the building of a modern factory are progressing and it is hoped, Mr. Chmel says, that work on the foundation will start this spring.

The first section of the new factory will cover 40,000 sq. ft. and will incorporate not only the present activities of Prencos, but also some new items in "super" light metal design. A feature of the new plant will be an "Employees' Colony", with adjacent recreation facilities, and a section of land is being reserved for this purpose.

Prencos notes that the new plant will be a wholly Canadian venture, with no foreign capital or interests being involved.

## Bogue in Canada

Bogue Electric of Canada Ltd., early in December opened new production and administrative headquarters in a modern 80,000 sq. ft. plant which has recently been completed at Gloucester,

near Ottawa.

When the plant gets into full production, approximately 350 persons will be engaged in the manufacture of motor-generator sets, magnetic amplifiers and control systems, power equipment for a wide variety of precision applications, rectifiers, aircraft ground support and service equipment, and water conditioning equipment.

At the plant opening, E. P. Schinman, president of Bogue Electric Mfg. Co., Paterson, N.J., noted that . . . "With the RCAF now engaged in the greatest peacetime build-up in its history, Bogue equipment specially designed to serve its needs—from tiny components for guided rockets and missiles to unique aircraft testing, servicing and starting equipment—will make important contributions to Canadian air power."

Rear Admiral John G. Knowlton, RCN (Rtd.), has been elected president of Bogue of Canada (see "Names in the News", this issue).

## Titanium Blade Order

Canadian Steel Improvement Ltd. announced early this month that it had received an order from a major U.S. manufacturer for a quantity of titanium jet engine blades. C. J. Luby, CSI president, said that other orders were in the offing.

"We believe this is a most significant development," Mr. Luby said, "in that it indicates our technical leadership in processing this new metal. We have developed a process which eliminates much of the difficulties encountered in forging titanium, resulting in a substantial reduction in cost. We can forge a finished precision blade as cheaply as a rough forging. This eliminates the costly process of finishing the blade surfaces."

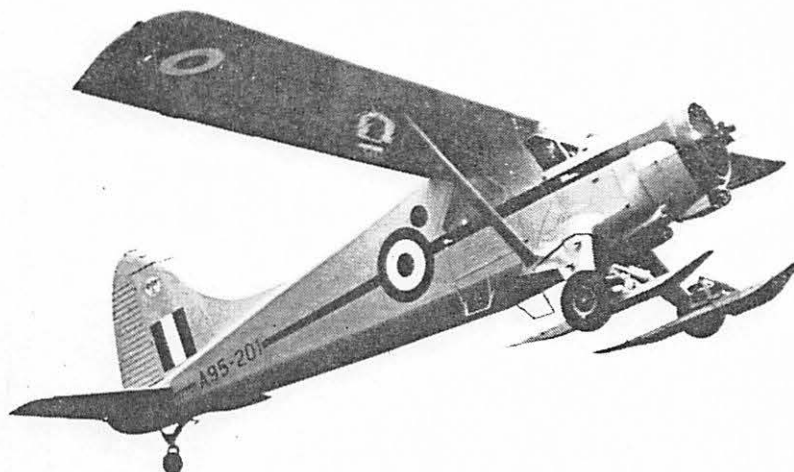
While the process was described as secret by the CSI president, he noted that it protects the material during heating, forging and heat treatment from problems normally associated with titanium and also prevents distortion of extremely thin sections, another processing difficulty. "Titanium has a great affinity for hydrogen and oxygen and has been referred to as 'the streetwalker of all metals' because it will pick up almost anything."

Hydrogen pick-up causes the metal to become brittle, thereby lowering its fatigue life. This has been one of the major problems with titanium, but the CSI process is said to overcome this, and also to eliminate the need



**ENHEAT DELIVERS THE GOODS:** Enheat Aircraft Div., Enamel & Heating Products Ltd., recently delivered, on schedule, its first completed CS2F empennage assembly, comprising horizontal stabilizer, vertical fin, elevators, rudder & rudder trim. Enheat Aircraft is producing a total of 240 such tailplane sets under subcontract to The de Havilland Aircraft of Canada Ltd.





**SKIS FOR AN AUSTRALIAN BEAVER?** Shown taking off at Melbourne is an RAAF Beaver fitted with de Havilland Canada wheel/skis. Though it appears that some DHC salesmen have been doing some fast talking, actually, this application of skis to an Australian aircraft is quite legitimate. The Beaver is attached to the Australian Antarctic Expedition and its skis are being put to good use.

for removing surface scale caused in the presence of oxygen. The new process also prevents distortion, thereby eliminating the need for straightening and subsequent annealing.

CSI's leadership in the titanium field is largely the result of work done for Oreanda Engines Ltd., an associate firm, in the development of the new PS-13 supersonic turbojet engine.

CSI expects to complete next month a \$3,500,000 expansion program at its Etobicoke, Ont., facilities.

## CS2F Tailplane Deliveries

On-schedule delivery of the first Grumman CS2F tailplane unit was made by Enheat Aircraft Div. of Enamel & Heating Products Ltd., Amherst, N.S., Dec. 14.

Enheat's contract calls for 240 empennage units, with the delivery rate set at from three to six sets per month. Each set consists of elevators, rudder (including rudder trim), and vertical and horizontal stabilizers. After completion, the empennages are delivered to the prime contractor, The de Havilland Aircraft of Canada Ltd., Toronto.

Enheat Aircraft received the production contract on June 25, 1954, and the tooling contract on June 28. The actual tooling was undertaken late in October of 1954, while empennage fabrication got underway on April 14, 1955. Enheat officials point out that their Amherst plant is the only subcontractor entirely doing its own tooling.

## Contracts Awarded

Contractors awarded business in excess of \$10,000 by the Department of Defence Production during the period of October 16-November 15, 1955, include the following. The list does not include orders placed by the Department outside Canada, or with other agencies and amendments to orders placed earlier—nor do orders classified as secret appear here.

(Names appearing in bold face type are current *Aircraft* advertisers.)

Aviation Electric Limited, Montreal, \$299,166, for automatic flight control systems for aircraft.

Aviation Electric Limited, Montreal, \$18,138, for aircraft switches.

Aviation Electric Limited, Montreal, \$181,375, for aircraft instruments.

Bancroft Industries Ltd., Montreal, \$25,059, for spares for aircraft oxygen equipment.

S. F. Bowser Company Ltd., Hamilton, \$13,618, for spare parts for aircraft refuelling units.

Canadian General Electric Co. Ltd., Toronto, \$417,434, for radar equipment.

Field Aviation Company Ltd., Oshawa, \$43,688, for aircraft oxygen equipment.

Field Aviation Co. Ltd., Oshawa, \$388,856 for spare parts for aircraft ejection seat.

Garrett Manufacturing Corporation of Canada Ltd., Toronto, \$22,487, for aircraft accessories and electrical equipment.

Hancock Tire Tread Co., Toronto, \$10,000 for repair, retread and inspect aircraft tires during period April 1/55 to March 31/56.

Leland Electric Canada Ltd., Guelph, Ont. \$31,080, for aircraft spares.

Lucas-Rotax Ltd., Toronto, \$15,846, for aircraft spares.

P.S.C. Applied Research Ltd., Toronto, \$54,031, for photographic equipment.

P.S.C. Applied Research Ltd., Toronto, \$40,203, for aircraft instruments.

Standard Telephones & Cables Mfg. Co. (Canada) Ltd., Montreal, \$80,278, for communications equipment.

Amphenol (Canada) Ltd., Toronto, \$22,386, for electrical equipment.

British Thomson-Houston Export Co. Ltd., Toronto, \$10,872, for aircraft spares.

Canadair Limited, Montreal, \$134,045, for aircraft spares.

Canadian Arsenal Ltd., Ottawa, \$10,000, for filling, final assembly and packaging of rockets.

Canadian General Electric Co. Ltd., Ottawa, \$14,784, for engine test equipment.

Canadian General Electric Co. Ltd., Toronto, \$82,779, for aircraft instruments.

Cossor (Canada) Limited, Halifax, \$35,478, for electronic equipment.

Dartmouth Machine Co. Ltd., Dartmouth, N.S., \$15,000 for repair and modification of aircraft ground handling equipment and components.

Garrett Manufacturing Corporation of Canada Ltd., Toronto, \$119,661, for aircraft accessories.

McColl-Fontenac Oil Co. Ltd., Montreal, \$58,800, for aviation turbine fuel during period April 1/55 to Mar. 31/56.

Mussens Canada Ltd., Montreal, \$13,482, for field kits for aircraft servicing equipment.

Nova Scotia Armature Works Ltd., Halifax, \$10,000, for repair and modification or aircraft energizers and components.

Renfrew Aircraft & Engineering Co. Ltd., Renfrew, Ont., \$120,000, for repair of aero engine flame tubes and associated equipment.

Ross-Smith Co. Ltd., Montreal, \$112,326, for aircraft towed target gear.

Shell Oil Co. of Canada Ltd., Toronto, \$17,095, for aviation gasoline during period April 1/55 Mar. 31/56.

Trans-Canada Air Lines, Montreal, \$10,000 for aircraft passenger seats.



**BOGUE OF CANADA:** This is the new Bogue Electric of Canada Ltd. plant at Gloucester, Ont., near Ottawa. The 80,000 sq. ft. plant, which will eventually employ some 350 people, will produce motors and generators, power supplies, control and communications systems and electronic components. Products for the aircraft industry will include jet starters, circuit testers and other service equipment.