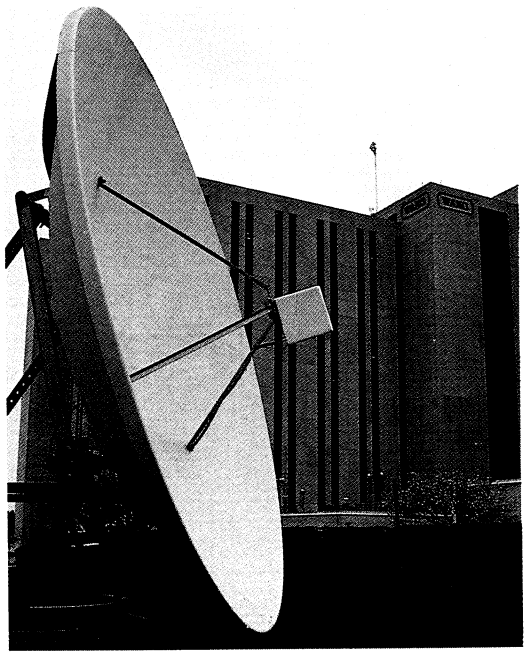
Versatile Coating



At right and in closeup at far right is a large radome at Logan Airport, Boston, Massachusetts; the lower photo shows a large parabolic antenna at the Wang Building in Lowell, Massachusetts. These facilities are protected from weather, corrosion and ultraviolet radiation by a coating, specially designed for antennas and radomes, known as CRC Weathertite 6000 and produced by Boyd Coatings Research Company, Inc., Hudson, Massachusetts.

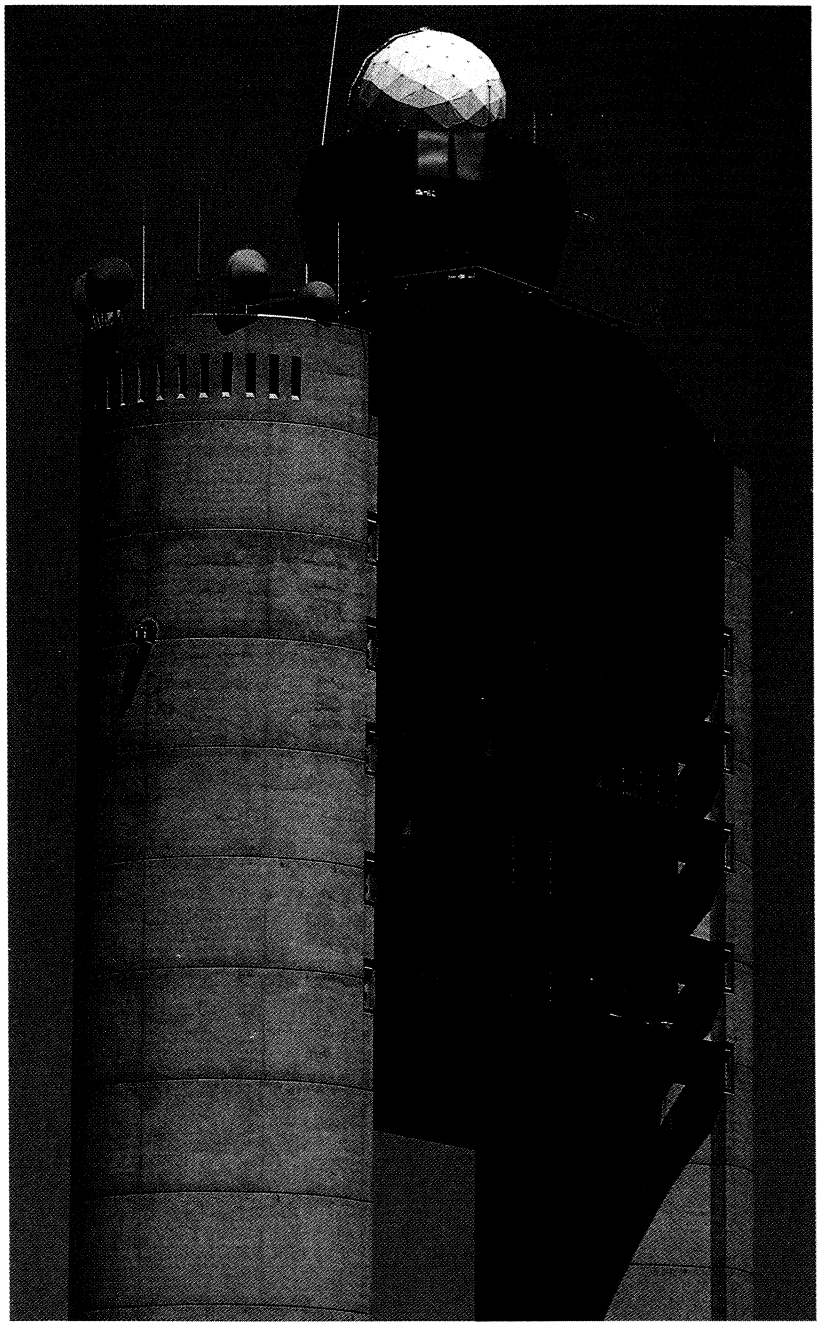
The CRC 6000 line represents a multiyear Boyd Coatings development, aided in part by NASA technology described in *NASA Tech Briefs* and other technical reports. *NASA Tech Briefs* is a monthly publication intended to let potential users know what new NASA developed technologies are available for transfer (see page 150).

On occasion, *Tech Briefs* reports contain sufficient information by themselves to inspire and guide development of a spinoff product or process. More often, *Tech Briefs* provides an initial lead; prospective users can follow up by requesting of NASA a Technical Support Package (TSP) that supplies more detailed information about a particular innovation.

Boyd Coatings used both approaches, using *Tech Briefs* information by itself over a period of years and sometimes following up with a request for a TSP. Says Boyd Coatings president Pedro A. Diaz:

"First work started 13 years ago and since then information and data generated by NASA has contributed on a steady basis to the development of the product. A small company such as ours could not have developed such a sophisticated coating without basic data on the performance of many materials, data supplied to a large extent by *NASA Tech Briefs.*"

Diaz mentioned as particularly useful a *Tech Briefs* report that described development of a stable thermal control coating with low solar energy absorption and another detailing a survey investigation of several high performance solar-selective coatings. In addition, Boyd Coatings development effort benefited from use of the NASA Handbook on Passive Thermal Control



Coatings, prepared for Marshall Space Flight Center by Teledyne Brown Engineering, Huntsville, Alabama.

The CRC 6000 line that emerged from Boyd Coatings' development work is a solid dispersion of fluorocarbon polymer and polyurethane that yields a tough, durable film with superior ultraviolet resistance and the ability to repel water and ice over a long term. Additionally, it provides resistance to corrosion, abrasion, chemical attacks and impacts.

The material can be used on a variety of substrates, such as fiberglass, wood, plastic and concrete in addition to steel and aluminum. A single coat is adequate for most applications. The coating has been on field trials for five years and has shown no significant loss of properties over that span.

In addition to its use on radar and antennas, Boyd Coatings sees CRC 6000 applicability as an anti-icing system coated on the leading edge of aircraft wings.