

1064. cont'd.

- g. Gravimeters
"Software" specially designed to correct motional influences of gravity meters or gravity gradiometers;
- h. Radar
 1. Air Traffic Control "software" application "programmes" hosted on general purpose computers located at Air Traffic Control centres and capable of any of the following:
 - a. Processing and displaying more than 150 simultaneous "system tracks";
 - b. Accepting radar target data from more than four primary radars;
or
 - c. Automatically handing over primary radar target data (if not correlated with secondary surveillance radar (SSR) data) from the host ATC centre to another ATC centre;
 2. "Software" for the design or "production" of radomes which:
 - a. Are specially designed to protect the "electronically steerable phased array antennae" embargoed by 1061.8.e.; **and**
 - b. Limit the average side-lobe level increase by less than 13 dB for frequencies equal to or higher than 2 GHz.

1065. Technology

1. Technology according to the General Technology Note for the "development" of equipment, materials or "software" embargoed by 1061., 1062., 1063. or 1064.;
2. Technology according to the General Technology Note for the "production" of equipment or materials embargoed by 1061., 1062. or 1063.;
3. Other technology:
 - a. Acoustics – None
 - b. Optical Sensors – None
 - c. Cameras – None
 - d. Optics
 1. Optical surface coating and treatment technology required to achieve uniformity of 99.5% or better for optical coatings 500 mm or more in diameter or major axis length and with a total loss (absorption and scatter) of less than 5×10^{-3} ;
 2. Optical fabrication technologies, as follows:
 - a. For serially producing optical components at a rate exceeding 10 m² of surface area per year on any single spindle and with:
 1. An area exceeding 1 m²; **and**
 2. A surface figure exceeding $\lambda/10$ rms at the designed wavelength;
 - b. Single point diamond turning techniques producing surface finish accuracies of better than 10 nm rms on non-planar surfaces exceeding 0.5 m²;
(See also 1025.3.d.)
 - e. Lasers
 1. Technology for optical filters with a bandwidth equal to or less than 10 nm, a field of view (FOV) exceeding 40° and a resolution exceeding 0.75 line pairs per milliradian;
 2. "Technology" "required" for the "development", "production" or "use" of specially designed diagnostic instruments or targets in test facilities for "SHPL" testing or testing or evaluation of materials irradiated by "SHPL" beams;
 - f. Magnetometers
Technology "required" for the "development" or "production" of fluxgate "magnetometers" or fluxgate "magnetometer" systems having a noise level:
 1. Less than 0.05 nT rms per square root Hz at frequencies of less than 1 Hz; **or**
 2. 1×10^{-3} nT rms per square root Hz at frequencies of 1 Hz or more;
 - g. Gravimeters – None
 - h. Radar – None

1070. Navigation and Avionics

1071. Equipment, Assemblies and Components

1. Accelerometers designed for use in inertial navigation or guidance systems and having any of the following characteristics, and specially designed components therefor:
 - a. A "bias" "stability" of less (better) than 130 micro g with respect to a fixed calibration value over a period of one year;
 - b. A "scale factor" "stability" of less (better) than 130 ppm with respect to a fixed calibration value over a period of one year;
 - c. Specified to function at linear acceleration levels exceeding 100 g;
2. Gyros having any of the following characteristics, and specially designed components therefor:
 - a. A "drift rate" "stability", when measured in a 1 g environment over a period of three months and with respect to a fixed calibration value, of:
 1. Less (better) than 0.1° per hour when specified to function at linear acceleration levels below 10 g; **or**
 2. Less (better) than 0.5° per hour when specified to function at linear acceleration levels from 10 to 100 g inclusive;
 - b. Specified to function at linear acceleration levels above 100 g;
3. Inertial navigation systems (gimballed and strapdown) and inertial equipment for attitude, guidance or control having any of the following characteristics, and specially designed components therefor:
 - a. For "aircraft":
 1. Navigation error (free inertial) of 0.8 nautical mile per hour (50% Circular Error Probable (CEP)) or less (better) subsequent to normal alignment;
 2. Not certified for use on "civil aircraft" by civil aviation authorities of a member country; **or**
 3. Specified to function at linear acceleration levels exceeding 10 g;
 - b. For land or "spacecraft":
 1. Navigation error (free inertial) of 0.8 nautical mile per hour (50% CEP) or less (better) subsequent to normal alignment; **or**
 2. Specified to function at linear acceleration levels exceeding 10 g;
4. Gyro-astro compasses, and other devices which derive position or orientation by means of automatically tracking celestial bodies or satellites, with an azimuth accuracy of equal to or less (better) than 5 seconds of arc;
5. Global Positioning Satellite (GPS) receiving equipment having either of the following characteristics, and specially designed components therefor:
 - a. Employing encryption/decryption; **or**
 - b. A null-steerable antenna;
6. Airborne altimeters operating at frequencies other than 4.2 to 4.4 GHz inclusive, having either of the following characteristics:
 - a. "Power management"; **or**
 - b. Using phase shift key modulation.

Note:

(For automatic pilots for underwater vehicles, see Category 1080.

For radar, see Category 1060. For inertial navigation equipment for ships or submersibles, see Item 2009.e. on the Munitions List.)

1072. Test, Inspection and Production Equipment

1. Test, calibration or alignment equipment specially designed for equipment embargoed by 1071., except equipment for Maintenance Level I or Maintenance Level II;

Technical Notes:

1. Maintenance Level I

The failure of an inertial navigation unit is detected on the aircraft by indications from the control and display unit (CDU) or by the status message from the corresponding sub-system. By following the manufacturer's manual, the cause of the failure may be localised at the level of the malfunctioning line replaceable unit (LRU). The operator then removes the LRU and replaces it with a spare.