

### 1023. Materials

None.

### 1024. Software

1. "Software" specially designed or modified for the "development", "production" or "use" of equipment embargoed by 1021. or 1022.;
2. Specific "software", as follows:
  - a. "Software" to provide "adaptive control" and having both of the following characteristics:
    1. For "flexible manufacturing units" (FMUs) which consist at least of equipment described in b.1. and b.2. of the definition of "flexible manufacturing unit"; **and**
    2. Capable of generating or modifying, in "real time processing", "programmes" or data by using the signals obtained simultaneously by means of at least two detection techniques, such as:
      - a. Machine vision (optical ranging);
      - b. Infrared imaging;
      - c. Acoustical imaging (acoustical ranging);
      - d. Tactile measurement;
      - e. Inertial positioning;
      - f. Force measurement;
      - g. Torque measurement;

**Note:**

1024.2.a. does not embargo "software" which only provides rescheduling of functionally identical equipment within "flexible manufacturing units" using pre-stored part programmes and a pre-stored strategy for the distribution of the part programmes.

- b. "Software" for electronic devices other than those described in 1022.1.a. or b., which provides the "numerical control" capability of the equipment embargoed by 1022.1.

**Note:**

1022.1. and 1024.2. embargo any combination of electronic devices or systems that collectively contain software enabling such devices or systems to function as a CNC capable of coordinating simultaneously more than 4 axes for "contouring control".

### 1025. Technology

1. Technology according to the General Technology Note for the "development" of equipment or "software" embargoed by 1021., 1022. or 1024.;
2. Technology according to the General Technology Note for the "production" of equipment embargoed by 1021. or 1022.;
3. Other technology, as follows:
  - a. Technology:
    1. For the "development" of interactive graphics as an integrated part in "numerical control" units for preparation or modification of part programmes;
    2. For the "development" of generators of machine tool instructions (e.g. part programmes) from design data residing inside "numerical control" units;
    3. For the "development" of integration "software" for incorporation of expert systems for advanced decision support of shop floor operations into "numerical control" units;
  - b. Technology for metal-working manufacturing processes, as follows:
    1. Technology for the design of tools, dies or fixtures specially designed for the following processes:
      - a. "Superplastic forming";
      - b. "Diffusion bonding";
      - c. "Direct-acting hydraulic pressing";
    2. Technical data consisting of process methods or parameters as listed below used to control:
      - a. "Superplastic forming" of aluminium alloys, titanium alloys or "superalloys":
        1. Surface preparation;
        2. Strain rate;
        3. Temperature;
        4. Pressure;
      - b. "Diffusion bonding" of "superalloys" or titanium alloys:
        1. Surface preparation;

2. Temperature;
  3. Pressure;
- c. "Direct-acting hydraulic pressing" of aluminium alloys or titanium alloys:
    1. Pressure;
    2. Cycle time;
  - d. "Hot isostatic densification" of titanium alloys, aluminium alloys or "superalloys":
    1. Temperature;
    2. Pressure;
    3. Cycle time;
- c. Technology for the "development" or "production" of hydraulic stretch-forming machines and dies therefor, for the manufacture of airframe structures;
  - d. Technology for:

The application of inorganic overlay coatings or inorganic surface modification coatings, specified in column 3 of the following Table of Deposition Techniques ;

    - a. to non-electronic substrates, specified in column 2 of the following Table;
    - b. by processes specified in column 1 of the following Table and defined in the Technical Note;
- d. Technology for:

The application of inorganic overlay coatings or inorganic surface modification coatings, specified in column 3 of the following Table of Deposition Techniques ;

    - a. to non-electronic substrates, specified in column 2 of the following Table;
    - b. by processes specified in column 1 of the following Table and defined in the Technical Note;