Decree of the President of the Russian Federation

On Amending and Supplementing the List of Equipment, Materials, and Technology Used in Developing Missile Weapons Subject to Export Control, Approved by Russian Federation Presidential Decree No. 1194, 16 August 1996, "On the Control of Exports from the Russian Federation of Equipment, Materials, and Technology Used in Developing Missile Weapons"

For the purposes of supporting fulfillment of the Russian Federation's international obligations under control of the export of equipment, materials, and technology used in developing missile weapons, and pursuant to Article 16 of the Federal Law "On State Regulation of Foreign Trade Activity", I hereby decree:


2. That this Edict shall come into force 3 months from the day of its official release.

President of the Russian Federation
Boris Yeltsin
Moscow, the Kremlin
4 January 1997
No. 7

Amendments and Supplements to the List of Equipment, Materials, and Technology Used in Developing Missile Weapons Subject to Export Control, Approved by Russian Federation Presidential Decree No. 1194, issued on 16 August 1996 1.

Supplement Note 1 after item I.1.10 with item 1.4 reading:

"1.4. Liquid fuel rocket engines referred to in item I.1.8 and developed or modified for use in satellites may be classified as category II equipment if these subsystems are exported under a promise regarding their stated final use and in quantities in keeping with such final use, and if they possess all of the characteristics hereunder:

"nozzle mouth diameter--20 mm or less;

"combustion chamber pressure--1.5 MPa (15 atm) or less"."
2. Render item II.1.1.7 as:

"II.1.1.7. Zirconium, beryllium, magnesium, boron, and their alloys taking the form of particles less than 500x10^{-6} \text{m} (500 \text{microns}) in size having a spherical, spheroidal, flake, or granulated shape and containing 97 percent or more of any of the stated metals by weight."

3. Delete items II.1.1.7.1-II.1.1.7.4.

4. Add item II.1.2.1a reading:

"II.1.2.1a. Duplex stainless steel alloyed with titanium suitable for systems referred to in items I.1.1 and I.1.2 and having all of the characteristics hereunder:

"concentration (by weight) of chromium--17-23 percent, and nickel--4.5-7 percent, and a ferrite-austenite microstructure (also known as a two-phase microstructure) containing 10 percent or more austenite by volume;

and any of the following forms:

"ingots or bars with each dimension being 100 \text{mm} or more;

"sheets having a width of 600 \text{mm} or more and a thickness of 3 \text{mm} or less;

"tubing having a diameter of 600 \text{mm} or more and a wall thickness of 3 \text{mm} or less."

5. Render items II.2.7.1.1 and II.2.7.1.2 as:

"II.2.7.1.1. metering mixers with a total volume of 110 liters or more having at least one mixing drive positioned off-center in the mixer;

"II.2.7.1.2. continuous mixers with two or more mixing drives and an accessible mixing chamber".

6. Delete items II.2.7.1.3-II.2.7.1.5.

7. Render item II.2.7.2 as:

"II.2.7.2. Equipment for manufacture of powdered metals of spherical or spheroidal shape in a controlled environment, referred to in items II.1.1.6 or II.1.1.7."

8. Add items II.2.7.2.1-II.2.7.2.3 reading:

"II.2.7.2.1. plasmotrons (high frequency electric-arc) used to obtain sprayed or spherical powdered metals by a process run in an argon-hydrogen environment;
"II.2.7.2.2. electric ignition devices used to obtain sprayed or spherical powdered metals by a process run in an argon-hydrogen environment;

"II.2.7.2.3. devices used to manufacture spherical powdered aluminum by spraying melt in an inert medium (nitrogen for example)".

9. Render item II.2.7.3 as:

"II.2.7.3. Mills with a flow-through energy resource used to crush and mill ingredients referred to in item II.1.1.4.1-II.1.1.19.5."

10. Render item II.2.9.8 as:

"II.2.9.8. All types of gyroscopes suitable for use in systems referred to in items I.1.1 and I.1.2, with theoretical stability of drift velocity less than 0.5 angular degrees per hour (1 sigma) at normal gravity."

11. Add items II.2.9.9.3-II.2.9.9.7 and Note 20a after item II.2.9.9.2.11 reading:

"II.2.9.9.3. balancing machines having all of the characteristics hereunder:

"unsuitable for balancing rotors/gyroscopes weighing over 3 kg;

"suitable for balancing rotors/gyroscopes at velocities over 12,500 revolutions per minute;

"possessing the capability for correcting an imbalance in two or more planes;

"possessing the capability for balancing to a residual imbalance of 0.2 g-mm per kilogram of rotor weight;

"II.2.9.9.4. indicator heads (known also as balancing measuring equipment) developed or modified for use with machines referred to in item II.2.9.9.3;

"II.2.9.9.5. dynamic turntables (equipment capable of simulating motion) having two or more axes;

"contact rings capable of transferring electric energy and/or information signals; and possessing any of the characteristics hereunder:

"worst rotation stability equal to or better than (less than) plus or minus 0.05 percent, averaged over an interval of 10 degrees or more;

"positioning precision equal to or better than 5 angular seconds;
for any discrete axis: rotation velocity 400 degrees/sec or more or 30 degrees/sec or less; and rotation velocity resolution equal to or less than 6 degrees/sec with a precision equal to or less than 0.6 degrees/sec;

II.2.9.9.6. positioning tables (equipment capable of precise rotational positioning on any axis) having two or more axes and a positioning precision equal to or better than 5 angular seconds;

II.2.9.9.7. centrifuges capable of generating accelerations above 100 g and having a slide ring capable of transferring electric energy and signal information.

"Note 20a.

1. Balancing machines developed or modified for dental or other medical purposes are not controlled under item II.2.9.9.3.

2. Revolving tables (turntables) developed or modified for machine tool equipment or medical purposes are not controlled under items II.2.9.9.5 and II.2.9.9.6.

3. High-speed tables are not controlled under item II.2.9.9.5, and the corresponding characteristics of positioning tables are assessed in accordance with item II.2.9.9.6".

12. Render items II.2.11.12.1 and II.2.11.12.2 as:

"II.2.11.12.1. microcircuits for analog-to-digital conversion with elevated radiation resistance in a sealed execution with a quantization resolution of 8 bits or more corresponding to 8 bits or more with binary coding, and able to operate at a temperature below -54°C and above +125°C;

"II.2.11.12.2. electric components on printed boards or modules for input analog-to-digital conversion with elevated radiation resistance in a sealed execution, with a quantization resolution of 8 bits or more corresponding to 8 bits or more with binary coding, and able to operate at a temperature below -54°C and above +125°C and including integrated microcircuits with characteristics stated in item II.2.11.12.1."

13. Render item II.3.6.11 as:

"II.3.6.11. the design of equipment for acquisition of powdered metals of spherical or spheroidal shape in a controlled environment referred to in items II.1.1.6 or II.1.1.7 and the procedures for manufacturing it:"

14. Add items II.3.6.11.1-II.3.6.11.3 reading:
"II.3.6.11.1. the design of plasmatrons (high-frequency electric-arc) used for acquisition of sprayed or spherical powdered metals by a process run in an argon-hydrogen environment and the procedures for manufacturing them;

"II.3.6.11.2. the design of electric ignition devices used for acquisition of sprayed or spherical powdered metals by a process run in an argon-hydrogen environment and the procedures for manufacturing them;

"II.3.6.11.3. the design of devices used for acquisition of spherical powdered aluminum by spraying melt in an inert medium (nitrogen for example) and the procedures for manufacturing them".

15. Render items II.3.6.12 as:

II.3.6.12. The procedure for manufacturing powdered zirconium, beryllium, magnesium, boron, and their alloys taking the form of particles less than 500x10^-6 m (500 microns) in size having a spherical, spheroidal, flake, or granulated shape and containing 97 percent or more of any of the stated metals by weight".


17. Render item II.3.6.14 as:

"II.3.6.14. The design of mills with a flow-through energy source for crushing or milling ingredients stated in item II.1.1.4.1-II.1.1.19.5 and the procedures of their manufacture".

18. Render items II.3.6.28.1 and II.3.6.28.2 as:

"II.3.6.28.1. metering mixers with a total volume of 110 liters or more having at least one mixing drive positioned off-center in the mixer;

"II.3.6.28.2. continuous mixers with two or more mixing drives and an accessible mixing chamber".

19. Delete items II.3.6.28.3-II.3.6.28.6.

20. Add item II.3.7.1a reading:

"II.3.7.1a. The procedure for manufacturing duplex stainless steel alloyed with titanium suitable for systems referred to in items I.1.1 and I.1.2 and having all of the characteristics hereunder:

"concentration (by weight) of chromium--17-23 percent, and nickel--4.5-7 percent, and a ferrite-austenite microstructure (also known as a two-phase microstructure) containing 10 percent or more austenite by volume;"
and any of the following forms:

"ingots or bars with each dimension being 100 mm or more;

"sheets having a width of 600 mm or more and a thickness of 3 mm or less;

"tubing having a diameter of 600 mm or more and a wall thickness of 3 mm or less".

21. Render items II.3.11.12.1 and II.3.11.12.2 as:

"II.2.11.12.1. microcircuits for analog-to-digital conversion with elevated radiation resistance in a sealed execution, with a quantization resolution of 8 bits or more corresponding to 8 bits or more with binary coding, and able to operate at a temperature below -54°C and above +125°C;

"II.2.11.12.2. electric components on printed boards or modules for input analog-to-digital conversion with elevated radiation resistance in a sealed execution, with a quantization resolution of 8 bits or more corresponding to 8 bits or more with binary coding, and able to operate at a temperature below -54°C and above +125°C and including integrated microcircuits with characteristics stated in item II.2.11.12.1".