C. B. No. 14 / 75 OG No. 5, 849 (January 29, 1979)

[BATAS PAMBANSA BLG. 8, December 02, 1978]

AN ACT DEFINING THE METRIC SYSTEM AND ITS UNITS, PROVIDING FOR ITS IMPLEMENTATION AND FOR OTHER PURPOSES.

Be it enacted by the Batasang Pambansa in session assembled:

SECTION 1. *Adoption of the metric system*.—Effective January one, Nineteen hundred and eighty-three, the metric system (SI) as denned herein, shall be the sole measurement system to be used in the Philippines for all products, commodities, materials, utilities, services, and commercial transactions, in all contracts, deeds and other official and legal instruments and documents, in accordance with the provisions of Presidential Decree Numbered One hundred eighty-seven as amended by Presidential Decree Numbered Seven hundred forty-eight and this Act and their implementing rules and regulations.

SEC. 2. *Definition of the metric system*.—For the purpose of this Act, the term "metric system" means the International System of Units, or SI in brief, as established by the General Conference of Weights and Measures and as interpreted or modified by the Metric System Board, established pursuant to Presidential Decree Numbered One hundred eighty-seven, as amended by Presidential Decree Numbered Seven hundred forty-eight, hereinafter referred to as the Board, to suit Philippine conditions.

SEC. 3. *Definition of other terms*.—For purposes of this Act:

a. "Unit" means a value, quantity or magnitude, in terms of which other values, quantities or magnitudes are expressed.

b. "Base Unit" means a well-defined unit which by convention is regarded as dimensionally independent.

c. "Derived Unit" means a unit that is formed by combining base units and/or supplementary units according to the algebraic relations linking the other corresponding quantities.

d. "Supplementary Unit" means a unit which is neither a base nor a derived unit.

e. "Standard" means a physical embodiment of a unit.

f. "National Standard" means the primary standard of the country.

g. "Measurement" means quantitative expression of the state of phenomenon or matter such as length, mass, time, electric current, temperature, light intensity, surface area, volume, velocity, acceleration, force, pressure, work, power, beat, angle, and others.

SEC. 4. *Definitions of base units of the metric system*.— For purposes of this Act:

a. The base unit of length shall be the metre, which is the length equal to 1 650 763.73 wavelengths in vacuum of the radiation corresponding to the transition between the levels 2p10 and 5d5 of the krypton-86 atom.

b. The base unit of mass shall be the kilogram, which is equal to the mass of the international prototype of the kilogram, made of platinum-iridium, the standard of which is kept at the Bureau of International Weights and Measures at Sevres, France.

c. The base unit of time shall be the second, which is the duration of 9 192 631 770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the cesium-133 atom.

d. The base unit of electric current shall be the ampere, which is that constant current which, if maintained in two parallel conductors of infinite length, of negligible circular cross-section, and placed one metre apart in vacuum, would produce between these conductors a force equal to 2 x 10-7 newton per metre of length.

e. The base unit of thermodynamic temperature shall be the. kelvin, which is the fraction 1/273.16 of the thermodynamic temperature of the triple point of water.

f. The base unit of luminous intensity shall be the candela, which is the luminous intensity, in the perpendicular direction, of a surface of 1/600 000 square metre of a blackbody at the temperature of freezing platinum under a pressure of 101 325 newtons per square metre.

g. The base unit of amount of substance shall be the mole, which is the amount of substance of a system which contains as many elementary entities as there are atoms in 0.012 kilogram of carbon 12. When the mole is used, the elementary entities must be specified and may be atoms, molecules, ions, electrons, other particles, or specified groups of such particles.

SEC. 5. *Definitions of supplementary units of the metric system*.—For purposes of this Act:

a. The supplementary unit of a plane angle shall be the radian, which is defined as the plane angle between two radii of a circle which cut off on the circumference an arc equal in length to the radius.

b. The supplementary unit of solid angle shall be the steradian, which is defined as the solid angle which, having its vertex in the center of a sphere, cuts off an area of the surface of the sphere equal to that of a square with sides of length equal to the radius of the sphere.

SEC. 6. *National standards for metric units*.— a. For the purpose of deriving the value of the base units, the National Institute of Science and Technology shall establish and maintain national standards of these units with the concurrence of the Board for certification by the International Bureau of Weights and Measures, when necessary.