

JIS

JAPANESE INDUSTRIAL STANDARD

Low Frequency Therapy Equipment

JIS C 6310—1986

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Low Frequency Therapy Equipment

C 6310-1986

1. Scope

This Japanese Industrial Standard specifies low frequency therapy equipment for medical use, hereinafter referred to as the "therapy equipment", intended to cure a person of a disease by passing a low frequency current through the human body with the electrodes installed on the surface of skin. However, therapy equipment of internal source is excluded.

2. Definitions

The meaning of the terms used in this standard shall comply with following definitions in addition to JIS T 1001.

- (1) active electrode Electrode to be installed on the region to be cured. It is also termed as the "curing electrode". Further, the mobile electrode is one type of active electrode which is to move on the region to be cured and its circumference keeping contact with the skin.
- (2) passive electrode Of the electrodes necessary to flow current through the human body, the electrodes other than the active electrode.
- (3) active arm General term for the active electrode and the cord connected to it and the plug to be connected to the output terminal. Also termed as the "curing arm".
- (4) passive arm General term for the passive electrode and the cord connected to it and the plug to be connected to the output terminal.
- (5) fundamental frequency As shown in Fig. 1, when the time from the starting part of a certain wave of the fundamental waves to the starting part of the next wave is set as T sec., the frequency expressed by $\frac{1}{T}$ Hertz.
- (6) pulse duration In Fig. 1, time expressed by t .
- (7) rest period In Fig. 1, time expressed by $T-t$.
- (8) pulse envelope Wave form of the envelope composed by the modulation of the fundamental wave.
- (9) pulsating period In Fig. 1, time expressed by D .
- (10) pulsation rest period In Fig. 1, time expressed by P .

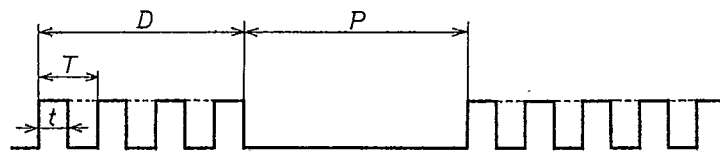
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- (11) constant voltage therapy system Output system wherein the output voltage is made nearly constant for the fluctuation of human body load.
- (12) constant current therapy system Output system wherein the output current is made nearly constant for the fluctuation of human body load.
- (13) waveform of output voltage Waveform of voltage, when a non-inductive resistance of $500\ \Omega$ is connected between output terminals of the therapy equipment.

Fig. 1. Fundamental Wave



3. Working Conditions

The working conditions shall comply with 3. of JIS T 1001 on condition that the rated source voltage is a.c. 100 V.

4. Safety

The items concerning safety shall comply with the following besides JIS T 1001.

- (1) The type and extent of protection against the electric shock shall comply with the relevant remarks in the following classifications specified in JIS T 1001.
 - (a) Classification by type of protection against electric shock Class I apparatus or Class II apparatus
 - (b) Classification by extent of protection against electric shock Type BF apparatus
- (2) For prevention of excessive current output, the output circuit of therapy equipment shall be provided with at least 2 or more safety devices. No. 110 Type plug and Type 238 jack specified in 6.2 (11) shall, not however, be regarded as safety device in the true sense of the word.

5. Performances

The performances shall comply with the following:

- (1) The oscillator shall be capable of generating at least one or more frequencies in each frequency band of 4 Classes, 5 Hz or under, 5 to 50 Hz, 50 to 500 Hz and 500 to 1000 Hz.