

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS C 9219 : 2005

(JEMA)

Electric storage tank water heaters

ICS 91.140.65

Reference number : JIS C 9219 : 2005 (E)

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee, as the result of proposal for revision of Japanese Industrial Standard submitted by The Japan Electrical Manufacturers' Association (JEMA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14. Consequently **JIS C 9219 : 1993** is replaced with this Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

Date of Establishment: 1981-01-15

Date of Revision: 2005-01-20

Date of Public Notice in Official Gazette: 2005-01-20

Investigated by: Japanese Industrial Standards Committee
Standards Board
Technical Committee on Electricity
Technology

JIS C 9219:2005, First English edition published in 2005-05

Translated and published by: Japanese Standards Association
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

© JSA 2005

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan

FM/AT

Contents

		Page
1	Scope	1
2	Normative references	1
3	Definitions	2
4	Classification	2
5	Rated voltage and rated frequency	3
6	Performance	3
6.1	Voltage fluctuation characteristic.....	3
6.2	Power consumption	3
6.3	Insulation resistance.....	3
6.4	Dielectric withstand voltage	3
6.5	Leakage current	3
6.6	Wet insulation performance.....	3
6.7	Normal temperature.....	3
6.8	Abnormal temperature	4
6.9	Automatic temperature control	4
6.10	Temperature limiter	4
6.11	Thermal fuse	5
6.12	Heating performance	5
6.13	Heat insulating performance	5
6.14	Service performance	5
6.15	Hydrostatic pressure resistance of tank	5
6.16	Corrosion resistance of tank.....	5
6.17	Corrosion resistance of heating element	5
6.18	Overload of heating element	6
6.19	Flame retardance of thermal insulating material.....	6
6.20	Tank capacity	6
6.21	Low temperature resistance	6
6.22	Water hammer protection	6
6.23	Back current protection	6

6.24	Resistance to destruction by vacuum pressure	6
6.25	Effect to water quality	6
7	Construction	8
7.1	Construction in general	8
7.2	Live parts	11
7.3	Wiring	15
7.4	Grounding terminal and grounding lead wire	16
7.5	Power supply cable	16
7.6	Switch	17
7.7	Heating element	17
7.8	Automatic temperature control	17
7.9	Temperature limiting control	17
8	Materials	18
9	Tests	19
9.1	Standard conditions for testing	19
9.2	Test methods	19
10	Inspections	26
10.1	Type inspection	26
10.2	Product inspection	27
11	Designation of product	27
12	Marking	27
13	Precaution for installation and use	28
13.1	Requirement at installation of water heater	28
13.2	Precaution for use of water heater	29
Annex 1 (normative)	Transitional provisions for JIS C 9219	32

Electric storage tank water heaters

1 Scope This Japanese Industrial Standard specifies household electric storage tank water heaters of push-up type used at the maximum working pressure not exceeding 0.1 MPa with the rated power consumption not exceeding 10 kW (hereafter referred to as “water heaters”).

2 Normative references The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

- JIS B 8410 *Pressure reducing valves for water works*
- JIS B 8414 *Relief valves for hot water appliances*
- JIS C 0445 *Identification of equipment terminals and of terminations of certain designated conductors, including general rules for an alphanumeric system*
- JIS C 0446 *Identification of conductors by colours or numerals*
- JIS C 2520 *Wires and rolled wires for electrical heating*
- JIS C 3301 *Rubber insulated flexible cords*
- JIS C 3306 *Polyvinyl chloride insulated flexible cords*
- JIS C 3312 *600 V Grade polyvinyl chloride insulated and sheathed portable power cables*
- JIS C 3327 *600 V Rubber insulated flexible cables*
- JIS C 8303 *Plugs and receptacles for domestic and similar general use*
- JIS C 8304 *Small switches for indoor use*
- JIS C 8371 *Residual current operated circuit breakers*
- JIS G 0571 *Method of oxalic acid etching test for stainless steels*
- JIS G 0576 *Stress corrosion cracking test for stainless steels*
- JIS G 3555 *Woven wire cloth*
- JIS H 6125 *Magnesium galvanic anodes for cathodic protection*
- JIS K 2240 *Liquefied petroleum gases*
- JIS K 5600-5-4 *Testing methods for paints—Part 5 : Mechanical property of film—Section 4 : Scratch hardness (Pencil method)*
- JIS K 7202-2 *Plastics—Determination of hardness—Part 2 : Rockwell hardness*
- JIS S 3200-1 *Equipment for water supply service—Test methods of hydrostatic pressure*
- JIS S 3200-2 *Equipment for water supply service—Test method of low temperature resistant*
- JIS S 3200-3 *Equipment for water supply service—Test method of water hammer*