

## Standard Information

**Standard Number:** UL 499

**Standard Name:** Electric Heating Appliances

**Standard Edition and Issue Date:** 14<sup>th</sup> Edition Dated November 7, 2014

**Date of Revision:** February 23, 2017

**Date of Previous Revision of Standard:** 14<sup>th</sup> Edition Dated November 7, 2014

## Effective Date of New/Revised Requirements

**Effective Date:** **February 23, 2018**

## Impact, Overview, and Action Required

**Impact Statement:** A review of all Listing Reports is necessary to determine which products comply with new/revised requirements and which products will require re-evaluation. **NOTE:** Effective immediately, this revised standard will be exclusively used for evaluation of new products unless the Applicant requests in writing that current requirements be used along with their understanding that their listings will be withdrawn on Effective Date noted above, unless the product is found to comply with new/revised requirements.

**Overview of Changes:** This revision of UL 499 includes requirement revisions for Steam Generators. Specific details of new/revised requirements are found in table below.

**If the applicable requirements noted in the table are not described in your report(s), these requirements will need to be confirmed as met and added to your report(s) such as markings, instructions, test results, etc. (as required).**

### Client Action Required:

**Information** – To assist our Engineer with review of your Listing Reports, please submit technical information in response to the new/revised paragraphs noted in the attached or explain why these new/revised requirements do not apply to your product (s).

***Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.***

**Description of New/Revised Technical Requirements**

Clause	Verdict	Comment																																																																																																				
Table 30.1		<p>Requirements detailing the pressure rating of various sized and types of common tubing are added in new Table 30.1.</p> <p><b>Minimum wall thickness for copper and steel tubing</b></p> <table border="1"> <thead> <tr> <th colspan="2">Outside diameter</th> <th colspan="2">Wall thickness</th> <th colspan="6">Maximum gauge pressure to which tubing is subjected, PSI (MPa)</th> </tr> <tr> <th>inch</th> <th>(mm)</th> <th>inch</th> <th>(mm)</th> <th colspan="2">Seamless copper</th> <th colspan="2">Butt-welded steel</th> <th colspan="2">Seamless steel</th> </tr> </thead> <tbody> <tr> <td>3/8 or less</td> <td>(9.5)</td> <td>0.016</td> <td>(0.41)</td> <td>500</td> <td>(3.45)</td> <td>600</td> <td>(4.14)</td> <td>1000</td> <td>(6.90)</td> </tr> <tr> <td>1/2</td> <td>(12.7)</td> <td>0.016</td> <td>(0.41)</td> <td>400</td> <td>(2.76)</td> <td>480</td> <td>(3.31)</td> <td>800</td> <td>(5.52)</td> </tr> <tr> <td>5/8</td> <td>(15.9)</td> <td>0.016</td> <td>(0.41)</td> <td>320</td> <td>(2.21)</td> <td>384</td> <td>(2.65)</td> <td>640</td> <td>(4.42)</td> </tr> <tr> <td>5/8</td> <td>(15.9)</td> <td>0.021</td> <td>(0.053)</td> <td>420</td> <td>(2.90)</td> <td>504</td> <td>(3.48)</td> <td>840</td> <td>(5.80)</td> </tr> <tr> <td>3/4</td> <td>(19.0)</td> <td>0.021</td> <td>(0.053)</td> <td>360</td> <td>(2.48)</td> <td>432</td> <td>(2.98)</td> <td>720</td> <td>(4.97)</td> </tr> <tr> <td>3/4</td> <td>(19.0)</td> <td>0.025</td> <td>(0.64)</td> <td>420</td> <td>(2.90)</td> <td>504</td> <td>(3.48)</td> <td>840</td> <td>(5.80)</td> </tr> <tr> <td>1</td> <td>(25.4)</td> <td>0.021</td> <td>(0.053)</td> <td>260</td> <td>(1.79)</td> <td>312</td> <td>(2.15)</td> <td>520</td> <td>(3.59)</td> </tr> <tr> <td>1</td> <td>(25.4)</td> <td>0.025</td> <td>(0.64)</td> <td>320</td> <td>(2.21)</td> <td>384</td> <td>(2.65)</td> <td>640</td> <td>(4.42)</td> </tr> </tbody> </table>	Outside diameter		Wall thickness		Maximum gauge pressure to which tubing is subjected, PSI (MPa)						inch	(mm)	inch	(mm)	Seamless copper		Butt-welded steel		Seamless steel		3/8 or less	(9.5)	0.016	(0.41)	500	(3.45)	600	(4.14)	1000	(6.90)	1/2	(12.7)	0.016	(0.41)	400	(2.76)	480	(3.31)	800	(5.52)	5/8	(15.9)	0.016	(0.41)	320	(2.21)	384	(2.65)	640	(4.42)	5/8	(15.9)	0.021	(0.053)	420	(2.90)	504	(3.48)	840	(5.80)	3/4	(19.0)	0.021	(0.053)	360	(2.48)	432	(2.98)	720	(4.97)	3/4	(19.0)	0.025	(0.64)	420	(2.90)	504	(3.48)	840	(5.80)	1	(25.4)	0.021	(0.053)	260	(1.79)	312	(2.15)	520	(3.59)	1	(25.4)	0.025	(0.64)	320	(2.21)	384	(2.65)	640	(4.42)
Outside diameter		Wall thickness		Maximum gauge pressure to which tubing is subjected, PSI (MPa)																																																																																																		
inch	(mm)	inch	(mm)	Seamless copper		Butt-welded steel		Seamless steel																																																																																														
3/8 or less	(9.5)	0.016	(0.41)	500	(3.45)	600	(4.14)	1000	(6.90)																																																																																													
1/2	(12.7)	0.016	(0.41)	400	(2.76)	480	(3.31)	800	(5.52)																																																																																													
5/8	(15.9)	0.016	(0.41)	320	(2.21)	384	(2.65)	640	(4.42)																																																																																													
5/8	(15.9)	0.021	(0.053)	420	(2.90)	504	(3.48)	840	(5.80)																																																																																													
3/4	(19.0)	0.021	(0.053)	360	(2.48)	432	(2.98)	720	(4.97)																																																																																													
3/4	(19.0)	0.025	(0.64)	420	(2.90)	504	(3.48)	840	(5.80)																																																																																													
1	(25.4)	0.021	(0.053)	260	(1.79)	312	(2.15)	520	(3.59)																																																																																													
1	(25.4)	0.025	(0.64)	320	(2.21)	384	(2.65)	640	(4.42)																																																																																													
30.10		<p>Additions to existing requirements are <u>underlined</u> and deletions are shown <del>lined-out</del> below.</p> <p>There shall be no shut-off <del>valve</del> <u>valve</u> between the pressure-relief means and the parts that it is intended to protect.</p>																																																																																																				
68.1		<p>Additions to existing requirements are <u>underlined</u> below.</p> <p>These requirements cover immersed electrode and sheathed resistance element type steam generators intended for both residential and commercial use. They are intended to be permanently connected to the electrical supply, water source and output piping. They are intended to generate steam into showers or rooms constructed for the purpose. <u>All units are intended to vent directly into the room without a pressure regulator on the output.</u></p>																																																																																																				
70.10		<p><i>New clause added;</i></p> <p><b>Output pressure regulating valve</b></p>																																																																																																				
70.10.1		<p>Steam-bath generators shall not be provided with a pressure regulating valve on the output.</p>																																																																																																				
		<p><b>CUSTOMERS PLEASE NOTE:</b> This Table and column "Verdict" can be used in determining how your current or future production is or will be in compliance with new/revised requirements.</p>																																																																																																				