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Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Transport of Dangerous Goods

Fiftieth session

Geneva, 28 – 6 December 2016

Item 7 (c) of the provisional agenda

Issues relating to the Globally Harmonized System of Classification and Labelling of Chemicals: classification criteria for flammable gases

Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals

Thirty-second session

Geneva, 7– 9 (morning) December 2016

Item 2 (b) of the provisional agenda

Classification criteria and related hazard communication: work of the TDG Sub-Committee on matters of interest to the GHS Sub-Committee

Comments on document ST/SG/AC.10/C.3/2016/58-ST/SG/AC.10/C.4/2016/12

Note by the secretariat

This document contains proposals for editorial corrections to the proposal in document in ST/SG/AC.10/C.3/2016/58−ST/SG/AC.10/C.4/2016/12 for consideration of both sub-committees.

Proposed editorial corrections

Table 2.2.1

Place the cells with letters A and B (currently under the heading “Criteria”) under the heading “Category”.

Justification:

Letters A and B are not criteria but two different sub-categories within the hazard category 1A chemically unstable gases. Keeping them under the heading “criteria” may create confusion with letters (a) and (b) used to designate different criteria applicable to the classification of flammable gases (categories 1A and 1B).

This correction will also align table 2.2.1 with the layout of table A1.2 as proposed in document ST/SG/AC.10/C.3/2016/58-ST/SG/AC.10/C.4/2016/12, where A and B appear under the heading “Hazard category”.

Proposal

Replace table 2.2.1

Category		Criteria	
1A	**Flammable gas**	Gases, which at 20 °C and a standard pressure of 101.3 kPa: (a) are ignitable when in a mixture of 13% or less by volume in air; or (b) have a flammable range with air of at least 12 percentage points regardless of the lower flammability limit. unless data shows them to meet the criteria of category 1B	
	Pyrophoric gas	Flammable gases that ignite spontaneously in air at a temperature of 54 ºC or below	
	Chemically unstable gas	A	Flammable gases which are chemically unstable at 20°C and a standard pressure of 101.3 kPa
		B	Flammable gases which are chemically unstable at a temperature greater than 20°C and/or a pressure greater than 101.3 kPa
1B	**Flammable gas**	Gases which meet the flammability criteria for Category 1A, but which are not pyrophoric, nor chemically unstable, and which have at least either: a) A lower flammability limit of more than 6% by volume in air; or b) A fundamental burning velocity of less than 10 cm/s;	
2	**Flammable gas**	Gases, other than those of Category 1A or 1B, which, at 20 °C and a standard pressure of 101.3 kPa, have a flammable range while mixed in air.	

With the following (*changes are highlighted*)

Category			Criteria
1A	**Flammable gas**		Gases, which at 20 °C and a standard pressure of 101.3 kPa: (a) are ignitable when in a mixture of 13% or less by volume in air; or (b) have a flammable range with air of at least 12 percentage points regardless of the lower flammability limit. unless data shows them to meet the criteria of category 1B
	Pyrophoric gas		Flammable gases that ignite spontaneously in air at a temperature of 54 ºC or below
	Chemically unstable gas	**A**	Flammable gases which are chemically unstable at 20°C and a standard pressure of 101.3 kPa
		B	Flammable gases which are chemically unstable at a temperature greater than 20°C and/or a pressure greater than 101.3 kPa
1B	**Flammable gas**		Gases which meet the flammability criteria for Category 1A, but which are not pyrophoric, nor chemically unstable, and which have at least either: (a) A lower flammability limit of more than 6% by volume in air; or (c) A fundamental burning velocity of less than 10 cm/s;
2	**Flammable gas**		Gases, other than those of Category 1A or 1B, which, at 20 °C and a standard pressure of 101.3 kPa, have a flammable range while mixed in air.

Decision logic 2.2

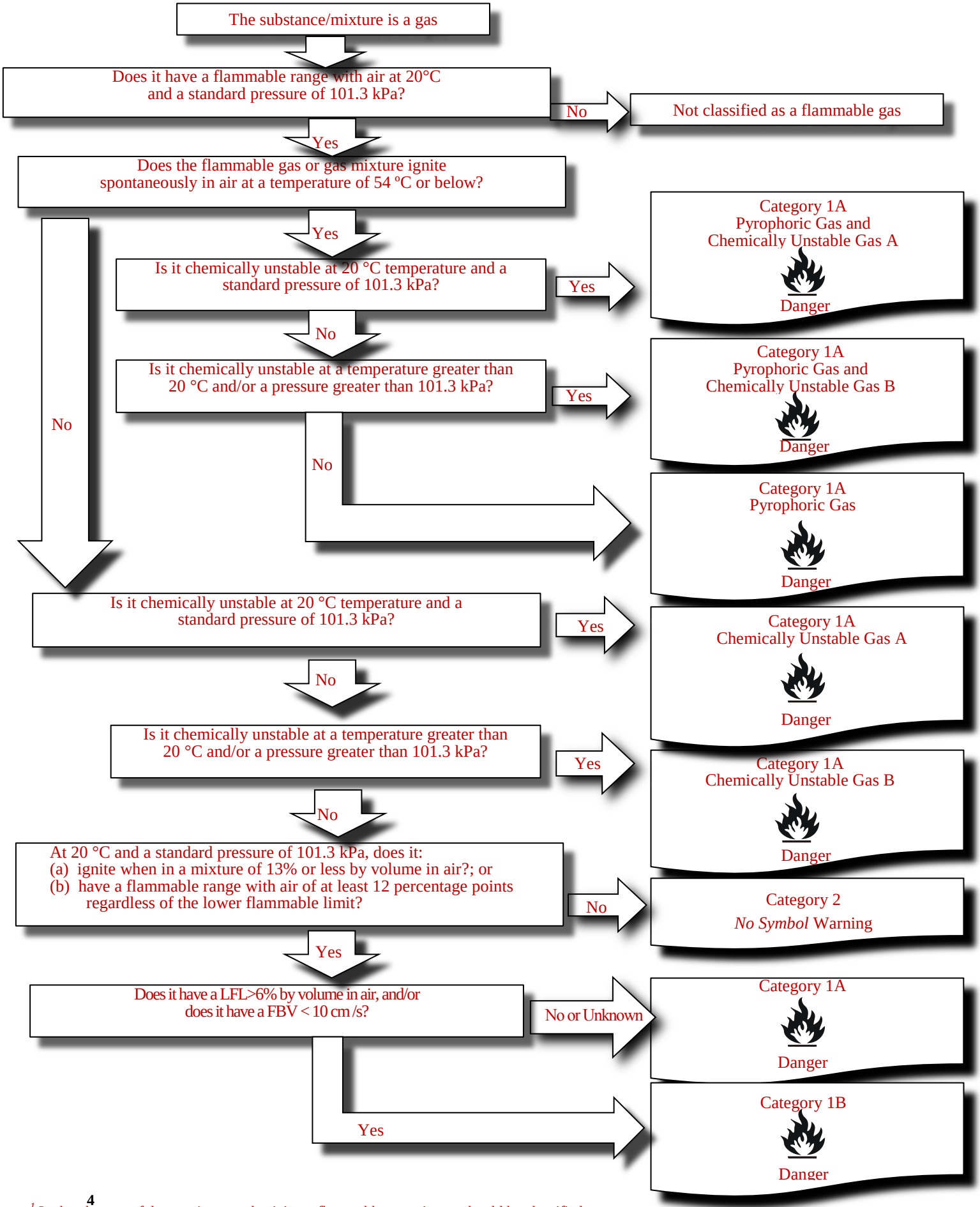
Split the decision logic so that it fits within the margins of the document and avoid overlapping of text boxes.

Insert the missing reference to footnote 1 in the decision logic, at the end of the question "Does the flammable gas or gas mixture ignite spontaneously in air at a temperature of 54°C or below?"

Consider the editorial amendments to the text of some of the decision logic *(this will allow gaining some extra space)*.

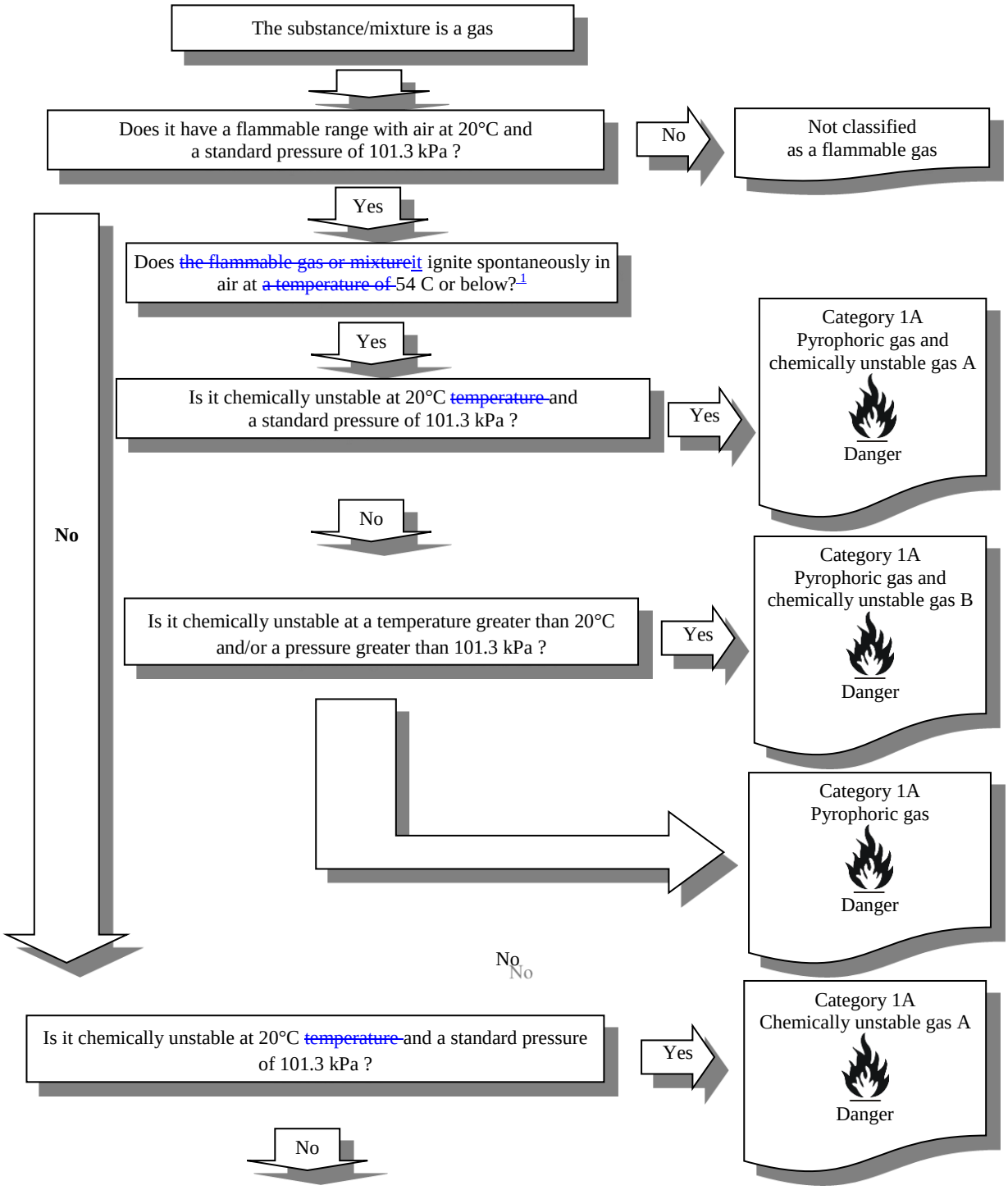
Proposal

Replace:

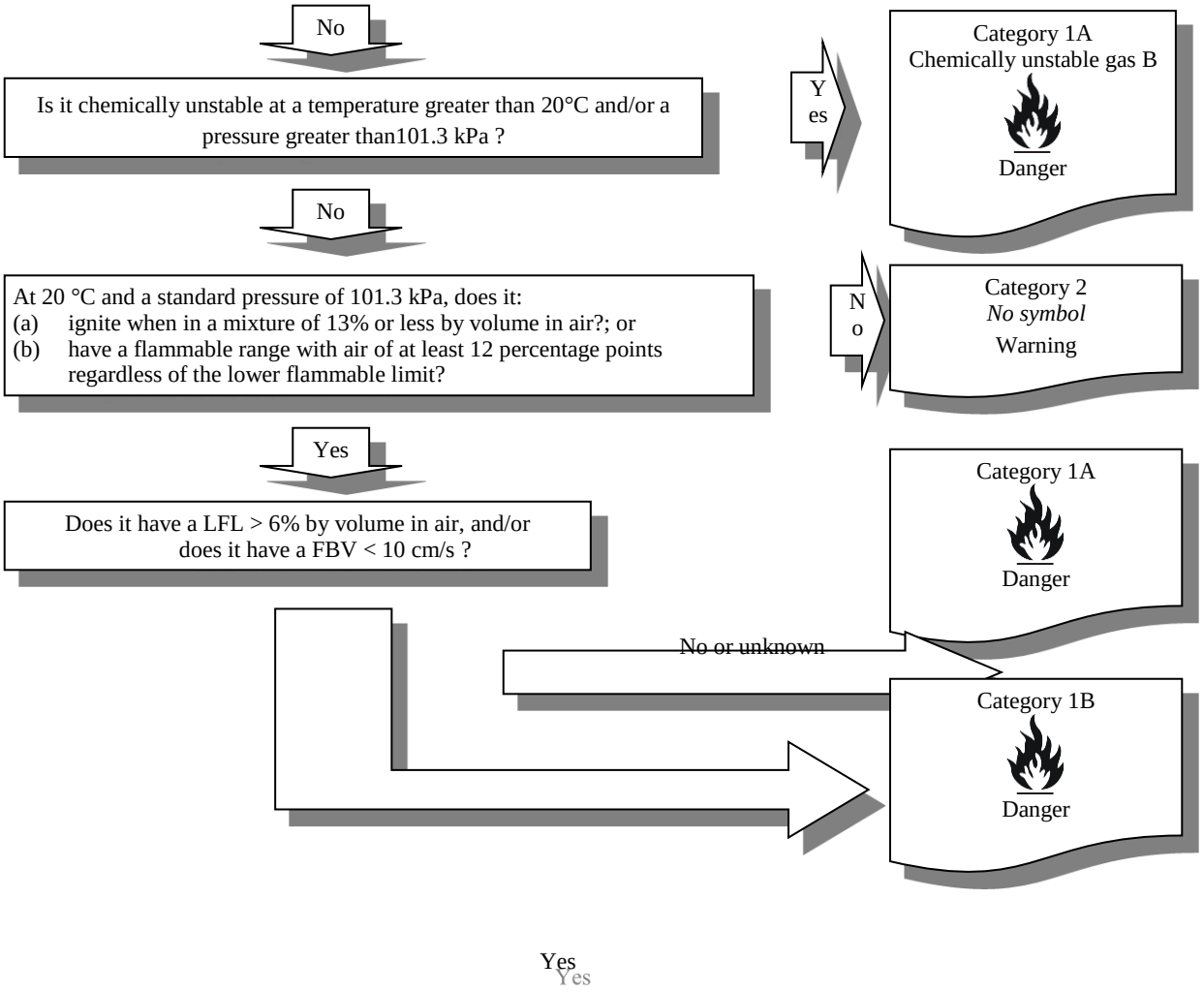


[1] *In the absence of data on its pyrophoricity, a flammable gas mixture should be classified as a pyrophoric gas if it contains more than 1% (by volume) of pyrophoric component(s).*

With the following, as amended *(proposed changes are indicated)*:



[1] *In the absence of data on its pyrophoricity, a flammable gas mixture should be classified as a pyrophoric gas if it contains more than 1% (by volume) of pyrophoric component(s).*


No
Is it chemically unstable at a temperature greater than 20°C and/or a pressure greater than101.3 kPa ?
Yes
Category 1A
Chemically unstable gas B
Danger
No
At 20 °C and a standard pressure of 101.3 kPa, does it:
(a) ignite when in a mixture of 13% or less by volume in air?; or
(b) have a flammable range with air of at least 12 percentage points regardless of the lower flammable limit?
No
Category 2
No symbol
Warning
Yes
Does it have a LFL > 6% by volume in air, and/or does it have a FBV < 10 cm/s ?
Category 1A
Danger
No or unknown
Category 1B
Danger

Yes

Yes

Table A1.2

Under the heading “Hazard category” the use of the word “category” before 1A, 1B and 2 is redundant

Proposal

Under the heading “Hazard category”, replace “category 1A”, “category 1B” and “category 2” with “1A”, “1B” and “2” as shown below (changes are indicated).

<table>
<tr><th colspan="4">Classification</th></tr>
<tr><th>Hazard class</th><th colspan="3">Hazard category</th></tr>
<tr><td rowspan="5">Flammable gases</td><td rowspan="4"><s>category</s> 1A</td><td colspan="2">Flammable gas</td></tr>
<tr><td colspan="2">Pyrophoric gas</td></tr>
<tr><td rowspan="2">Chemically unstable gas</td><td>A</td></tr>
<tr><td>B</td></tr>
<tr><td colspan="3"><s>category</s> 1B</td></tr>
<tr><td colspan="3"><s>category</s> 2</td></tr>
</table>