Public Input No. 1-NFPA 12-2022 [New Section after 3.2.3]

TITLE OF NEW CONTENT

3.3.2* Deep-Seated Fire.

Combustion that occurs within a fuel mass and has restricted access to ambient air where the configuration of the fuel restricts heat flow from the combustion zone to the surroundings.

A.3.3.2 Deep-Seated Fire.

A characteristic of this type of combustion is the slow rate of heat losses from the reaction zone. Thus, the fuel remains hot enough to react with oxygen, even though the rate of reaction, which is controlled by diffusion processes, is extremely slow. Deep-seated fires can continue to burn for many weeks, for example, in bales of cotton and jute and heaps of sawdust. A deep-seated fire ceases to burn only when either all the available oxygen or fuel has been consumed or the fuel surface is at too low a temperature to react.

A deep-seated fire is not subject to immediate extinguishment. Deep-seated fires usually are extinguished by reducing the fuel temperature, either directly by application of a heat-absorbing medium, such as water, or by blanketing with an inert gas. The medium slows the reaction rate to the point where heat generated by oxidation is less than heat losses to surroundings. This causes the temperature to fall below the level necessary for spontaneous ignition after removal of the inert atmosphere

Statement of Problem and Substantiation for Public Input

The current document provides much detail on how to protect against deep-seated hazards but there appears to be no definition for a deep-seated fire. Both the proposed definition and Annex material is extracted from NFPA 2001, 2022 edition.

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Submittal Date: Fri Jan 28 09:58:48 EST 2022
Committee: GFE-AAA

Committee Statement

Resolution: FR-1-NFPA 12-2023
Statement: Defines a term that is used throughout the document.

Public Input No. 12-NFPA 12-2022 [New Section after 3.2.3]

3.2.3 Directional Valve

See definition of Selector Valve

Statement of Problem and Substantiation for Public Input

The term "directional" valve is used interchangeably with the term "selector" valve by some manufacturers, installers and users. The proposal attempts to eliminate confusion in the industry.

Submitter Information Verification

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Submittal Date: Mon Oct 31 12:02:38 EDT 2022
Committee: GFE-AAA

Committee Statement

Resolution: FR-2-NFPA 12-2023

Statement: The term "directional" valve is used interchangeably with the term "selector" valve by some manufacturers, installers and users. The proposal attempts to eliminate confusion in the industry.

Public Input No. 5-NFPA 12-2022 [New Section after 3.3.1]

TITLE OF NEW CONTENT

3.3.3 Extended Discharge

A continued discharge of CO2 provided in order to maintain the design concentration over a specified period of time after the completion of the initial discharge.

Statement of Problem and Substantiation for Public Input

The "extended discharge" concept is referenced in NFPA 12 but no formal definition is provided.

Submitter Information Verification

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Submittal Date: Wed Sep 14 10:48:52 EDT 2022
Committee: GFE-AAA

Committee Statement

Resolution: FR-3-NFPA 12-2023
Statement: The "extended discharge" concept is referenced in NFPA 12 but no formal definition is provided.

Public Input No. 6-NFPA 12-2022 [New Section after 3.3.2]

TITLE OF NEW CONTENT

3.3.3 **Initial Discharge**

The initial discharge of CO2 is based on the design concentration as required by NFPA 12 for total flooding or local application systems.

Statement of Problem and Substantiation for Public Input

the "Initial discharge" concept is referenced NFPA 12 however no formal definition exists.

Submitter Information Verification

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Submittal Date: Wed Sep 14 10:55:39 EDT 2022
Committee: GFE-AAA

Committee Statement

Resolution: FR-4-NFPA 12-2023
Statement: Defines a term used within the standard.

Public Input No. 7-NFPA 12-2022 [New Section after 3.3.5]

TITLE OF NEW CONTENT

3.3.6

Master Valve

A discharge valve that upon automatic or manual actuation releases CO2 through the system piping to other system valves, located downstream and which function to deliver CO2 to designated hazards.

A.3.3.6

A master valve is under constant CO2 pressure from the low pressure CO2 storage vessel. The valve is typically a pneumatically or electrically actuated valve that controls the flow of CO2 from a bulk supply to a selector valve or multiple selector valves protecting designated hazards.

Statement of Problem and Substantiation for Public Input

The component term "master valve" is referenced in NFPA 12, section A.4.6.6. However, there is no formal definition, description or function for its use.

Submitter Information Verification

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Submittal Date: Wed Sep 14 11:00:45 EDT 2022
Committee: GFE-AAA

Committee Statement

Resolution: FR-5-NFPA 12-2023
Statement: Defines a term used in the standard.

Public Input No. 8-NFPA 12-2022 [New Section after 3.3.5]

TITLE OF NEW CONTENT

3.3.7 **Master-Selector Valve**

A Master-Selector Valve has its inlet connected directly to the tank header with its outlet connected to discharge pipe supplying carbon dioxide to one or more discharge nozzles. (Low Pressure CO2 Systems)

A.3.3.7

A master-selector valve is normally under constant pressure from the storage unit. It is typically pneumatically or electrically operated. Some master-selector valves are equipped with mechanical overrides which serve as an emergency manual release.

Statement of Problem and Substantiation for Public Input

The component term "master-selector valve" is referenced in NFPA 12 however, no formal definition, description or function of the component is provided.

Submitter Information Verification

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Submittal Date: Wed Sep 14 11:07:48 EDT 2022
Committee: GFE-AAA

Committee Statement

Resolution: FR-6-NFPA 12-2023
Statement: Defines a term used in the standard.

Public Input No. 9-NFPA 12-2022 [New Section after 3.3.9.2]

TITLE OF NEW CONTENT

3.3.10

Selector Valve

A selector (directional) valve is an automatically operated valve which directs carbon dioxide to discharge nozzles.

A.3.3.10

In systems served by high pressure storage, selector (directional) valves open to permit flow of carbon dioxide from the storage cylinders to the discharge nozzles. Selector valves are typically connected to the cylinder manifold.

In systems served by low pressure storage, carbon dioxide from the storage unit is fed through a Master Valve to one or more selector (directional) valves. The outlet of the selector valve is connected to discharge pipe to supply carbon dioxide to the discharge nozzles.

By using multiple selector valves, a single carbon dioxide supply may provide carbon dioxide to multiple hazards.

Statement of Problem and Substantiation for Public Input

Selector (directional) valves are referenced in A.4.8.3 which applies to both low and high pressure systems.

Also used in 4.5.4.13.2 in relation to low pressure CO2 systems only.

Submitter Information Verification

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Submittal Date: Wed Sep 14 11:17:16 EDT 2022
Committee: GFE-AAA

Committee Statement

Resolution: FR-7-NFPA 12-2023
Statement: Defines a term used in the standard.

Public Input No. 13-NFPA 12-2022 [New Section after 3.3.12]

3.3.12 Tank Header

Section of pipe between main tank shutoff valve and the automatic discharge valves (i.e. master valve and/or master-selector valves). (Low Pressure CO2 Systems)

A.3.3.12

The tank header is normally under full pressure from the storage unit. Pressure test requirements for the tank header are given in 9.4.2.3.1.

Statement of Problem and Substantiation for Public Input

Provides definition for the term “tank header” which is used multiple times in the standard.

Submitter Information Verification

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Submittal Date: Mon Oct 31 12:23:25 EDT 2022
Committee: GFE-AAA

Committee Statement

Resolution: FR-8-NFPA 12-2023
Statement: Defines a term used in the standard.

Public Input No. 17-NFPA 12-2022 [Section No. 4.7.1.6]

4.7.1.6 Pipe Connections.

4.7.1.6.1

Welded joints and screwed or flanged fittings (malleable iron or ductile iron) shall be permitted to be used.

4.7.1.6.2

Mechanical grooved couplings and fittings shall be permitted to be used if they are specifically listed for carbon dioxide service.

4.7.1.6.3

Flush bushings shall not be used.

4.7.1.6.4

Where hex bushings are used for one pipe size reduction, a Class 3000 steel bushing shall be provided to maintain adequate strength.

4.7.1.6.5

Where hex bushings are used for more than one pipe size reduction, 4.7.1.5 shall be followed.

4.7.1.6.6

Flared, compression-type, or brazed fittings shall be used with compatible tubing.

4.7.1.6.7

Where brazed joints are used, the brazing alloy shall have a melting point of 1000°F (538°C) or higher.

See attached TIA

Additional Proposed Changes

File Name	Description	Approved
NFPA_12_22-1_TIA_Log_No._1543.pdf	NFPA 12 22-1 TIA Log No. 1543	

Statement of Problem and Substantiation for Public Input

NOTE: This public input originates from Tentative Interim Amendment No. 22-1 Log No. 1543. Text of the TIA was issued and approved for incorporation into the new document prior to printing.

Substantiation: The addition of a title clarifies that these requirements apply to both high-pressure and low-pressure distribution systems.

Emergency Nature: The standard contains an error or an omission that was overlooked during the regular revision process.

Submitter Information Verification

Submitter Full Name: TC ON GFE_AAA
Organization: NFPA TC on Gaseous Fire Extinguishing Systems
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Submittal Date: Wed Dec 21 14:01:34 EST 2022
Committee: GFE-AAA

Committee Statement

Resolution: The language from the TIA is correct.

Public Input No. 14-NFPA 12-2022 [Section No. 5.2.3.2]

5.2.3.2* Deep-Seated Fires.

For deep-seated fires, the design concentration shall be maintained for a period of time to allow the smoldering to be extinguished and the material to cool to a point at which re-ignition will not occur when the inert atmosphere is dissipated or for a time sufficient to permit response by personnel trained and equipped to manually extinguish any residual hot spots .

Statement of Problem and Substantiation for Public Input

It is not always possible to completely extinguish deep seated fires without manual intervention.

Submitter Information Verification

Submitter Full Name: Thomas Wysocki
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Submittal Date: Wed Nov 09 14:16:43 EST 2022
Committee: GFE-AAA

Committee Statement

Resolution: FR-9-NFPA 12-2023
Statement: It is not always possible to completely extinguish deep seated fires without manual intervention.

Public Input No. 4-NFPA 12-2022 [Section No. 5.3.3 [Excluding any Sub-Sections]]

The volume factor used to determine the basic quantity of carbon dioxide to protect an enclosure containing a material requiring a design concentration of 34 percent shall be in accordance with Table 5.3.3(a) and Table 5.3.3(b).

Table 5.3.3(a) Volume Factors and Flooding Factors

~~(A)~~ Volume of Space (ft^3)	~~(B)~~ Volume Factor (ft^3/lb CO_2)	~~(C)~~ Flooding Factor (lb CO_2/ft^3)	Calculated Quantity (lb) (Not Less Than)
Up to 140	14	0.072	—
141–500	15	0.067	10
501–1600	16	0.063	35
1601–4500	18	0.056	100
4501–50,000	20	0.050	250
Over 50,000	22	0.046	2500

Table 5.3.3(b) Volume Factors and Flooding Factors (SI Units)

~~(A)~~ Volume of Space (m^3)	~~(B)~~ Volume Factor (m^3/kg CO_2)	~~(C)~~ Flooding Factor (kg CO_2/m^3)	Calculated Quantity (kg) (Not Less Than)
Up to 3.96	0.86	1.15	—
3.97–14.15	0.93	1.07	4.5
14.16–45.28	0.99	1.01	15.1
45.29–127.35	1.11	0.90	45.4
127.36–1415.0	1.25	0.80	113.5
Over 1415.0	1.37	0.74	1135.0

Statement of Problem and Substantiation for Public Input

Editorial change deleting "A," "B," "C" from top of tables. A, B, C in these tables are not referenced anywhere in the standard.

Submitter Information Verification

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Submittal Date: Thu Mar 24 12:44:13 EDT 2022
Committee: GFE-AAA

Committee Statement

Resolution: FR-10-NFPA 12-2023
Statement: Editorial change deleting "A," "B," "C" from top of tables. A, B, C in these tables are not referenced anywhere in the standard.

Public Input No. 15-NFPA 12-2022 [Section No. 5.4.1.1]

5.4.1.1

After the design concentration is reached, the concentration shall be maintained for a substantial period of time, but not less than 20 minutes or for a time period sufficient

to allow for response by trained personnel .

Statement of Problem and Substantiation for Public Input

The hold time may be reduced to accommodate more rapid response by trained fire fighters.

Submitter Information Verification

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Submittal Date: Wed Nov 09 14:19:48 EST 2022
Committee: GFE-AAA

Committee Statement

Resolution: FR-20-NFPA 12-2023

Statement: Some of the hazards listed in the standard as deep-seated in 5.4 may extinguish within 20 minutes. Proper practice, however, is to hold the concentration until the arrival of trained personnel equipped to complete extinguishment of any fire which remains in the hazard.

Public Input No. 3-NFPA 12-2022 [Section No. 5.4.1.1]

5.4.1.1

After the design concentration is reached, the concentration shall be maintained for a ~~substantial period of time, but not less than 20 minutes~~ time period sufficient

to allow for response by trained personnel .

Statement of Problem and Substantiation for Public Input

Many users of the standard are under the impression that if the design concentration for a deep-seated hazard is held for 20 minutes, the fire will be extinguished. Some of the hazards listed in the standard as deep-seated in 5.4 may extinguish within 20 minutes. Proper practice, however, is to hold the concentration until the arrival of trained personnel equipped to complete extinguishment of any fire which remains in the hazard.

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Submittal Date: Fri Mar 18 14:48:53 EDT 2022
Committee: GFE-AAA

Committee Statement

Resolution: FR-20-NFPA 12-2023

Statement: Some of the hazards listed in the standard as deep-seated in 5.4 may extinguish within 20 minutes. Proper practice, however, is to hold the concentration until the arrival of trained personnel equipped to complete extinguishment of any fire which remains in the hazard.

Public Input No. 2-NFPA 12-2022 [New Section after 5.5.3]

TITLE OF NEW CONTENT

5.5.2.3.1* The flooding factor to be used to develop a 30% design concentration in 2 minutes should be no less than 0.043 lb CO_2/ft^3 (0.688 $kgCO_2/m^3$).

A.5.5.2.3.1

By applying the equation D.1b , in **Annex D , Total Flooding Systems :**

$X=2.303*\log_{10}(100/100-\%CO_2)$; *X = volume of carbon dioxide per protected volume of the hazard enclosure.*

The volume of carbon dioxide required to develop a 30% concentration can be calculated. This quantity of carbon dioxide can be expressed in cubic feet (cubic meters) of carbon dioxide per cubic foot (cubic meter of protected volume.

$$\frac{CO2}{1 * ft3(m3)} = 2.303 * \log\left(\frac{100}{(100 - \%C)}\right)$$

$$CO2 = 2.303 * \log\left(\frac{100}{(100-\%C)}\right) * 1 * ft3(m3)$$

$$CO2 = 2.303 * \log\left(\frac{100}{(100 - 30)}\right) * 1ft3\,(m3)$$

$$CO2 = 2.303 * \log(1.429) * 1ft3\,(m3)$$

$$CO2 = 2.303 * 0.1549 * 1ft(m3)$$

$$CO2 = 0.3567\ ft3(m3)$$

Common industry practice has typically been to use the carbon dioxide expansion of 8.35 ft^3/lb (0.52 m^3/kg) to convert the volume of CO_2 @ 30% to a related flooding factor:

$$CO2 = 0.3567 ft3 * \frac{1lb}{8.35 ft3} = 0.043\ lb$$

Statement of Problem and Substantiation for Public Input

Section 5.5.2.3 requires that initially a 30% concentration be developed in the first 2 minutes of the protection against deep-seated fires hazards however there is no prescribed flooding factor provided as is provided in Table 5.4.2.1 for multiple deep-seated fire hazards. By providing a prescribed value simplifies the process that users endure in the design process.

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Submittal Date: Fri Jan 28 10:25:22 EST 2022

Committee: GFE-AAA

Committee Statement

Resolution: FR-12-NFPA 12-2023

Statement: Section 5.5.2.3 requires that initially a 30 percent concentration be developed in the first 2 minutes of the protection against deep-seated fires hazards however there is no prescribed flooding factor provided as is provided in Table 5.4.2.1 for multiple deep-seated fire hazards. By providing a prescribed value simplifies the process that users endure in the design process.

Public Input No. 10-NFPA 12-2022 [Section No. 5.5.3]

5.5.3* Enclosed Rotating Electrical Equipment.

5.5.3.1 For all enclosed rotating electrical equipment,

~~a~~
"a minimum concentration of

~~30 percent~~
30 percent shall be maintained for the deceleration period, but not less than

~~20 minutes.~~
20 minutes".

5.5.3.2 For enclosed, rotating electrical equipment with non-venting recirculating-type airflow, the initial discharge quantity should not be less than 1 lb (0.45 kg) of gas for each 10 ft^3 (0.28 m^3) of enclosed volume up to 2000 ft^3 (56.6 m^3).

5.5.3.3 For enclosed, rotating electrical equipment with non-venting recirculating-type airflow, the initial discharge quantity should not be less than 1 lb (0.45 kg) of gas for each 12 ft^3 (0.34 m^3) of enclosed volume greater than 2000 ft^3 (56.6 m^3).

5.5.3.3.1 Table 5.5.3.3(a) *and* Table 5.5.3.3(b) *shall be used as a guide to estimate the quantity of gas needed for the extended discharge to maintain a minimum concentration of 30 percent for the deceleration time.*

5.5.3.4 For enclosed, rotating electrical equipment with dampered, non-recirculating-type airflow, the indicated quantities of CO_2 as shown in Table 5.5.3.3(a) and Table 5.5.3.3 (b) shall be increased by 35 percent for extended discharge protection.

Table 5.5.3.3(a) Extended Discharge Protection for Enclosed Recirculating Rotating Electrical Equipment (Cubic Feet Protected for Deceleration Time)

	Time (minutes)							
lb CO_2	**5**	**10**	**15**	**20**	**30**	**40**	**50**	**60**
100	1,200	1,000	800	600	500	400	300	200
150	1,800	1,500	1,200	1,000	750	600	500	400
200	2,400	1,950	1,600	1,300	1,000	850	650	500
250	3,300	2,450	2,000	1,650	1,300	1,050	800	600
300	4,600	3,100	2,400	2,000	1,650	1,300	1,000	700
350	6,100	4,100	3,000	2,500	2,000	1,650	1,200	900
400	7,700	5,400	3,800	3,150	2,500	2,000	1,600	1,200
450	9,250	6,800	4,900	4,000	3,100	2,600	2,100	1,600
500	10,800	8,100	6,100	5,000	3,900	3,300	2,800	2,200
550	12,300	9,500	7,400	6,100	4,900	4,200	3,600	3,100
600	13,900	10,900	8,600	7,200	6,000	5,200	4,500	3,900
650	15,400	12,300	9,850	8,300	7,050	6,200	5,500	4,800
700	16,900	13,600	11,100	9,400	8,100	7,200	6,400	5,600
750	18,500	15,000	12,350	10,500	9,150	8,200	7,300	6,500
800	20,000	16,400	13,600	11,600	10,200	9,200	8,200	7,300
850	21,500	17,750	14,850	12,700	11,300	10,200	9,100	8,100
900	23,000	19,100	16,100	13,800	12,350	11,200	10,050	9,000
950	24,600	20,500	17,350	14,900	13,400	12,200	11,000	9,800
1,000	26,100	21,900	18,600	16,000	14,500	13,200	11,900	10,700
1,050	27,600	23,300	19,900	17,100	15,600	14,200	12,850	11,500

	Time (minutes)							
lb CO_2	5	10	15	20	30	40	50	60
1,100	29,100	24,600	21,050	18,200	16,600	15,200	13,750	12,400
1,150	30,600	26,000	22,300	19,300	17,700	16,200	14,700	13,200
1,200	32,200	27,300	23,550	20,400	18,800	17,200	15,600	14,100
1,250	33,700	28,700	24,800	21,500	19,850	18,200	16,500	14,900
1,300	35,300	30,100	26,050	22,650	20,900	19,200	17,450	15,800
1,350	36,800	31,400	27,300	23,750	22,000	20,200	18,400	16,650
1,400	38,400	32,800	28,550	24,900	23,100	21,200	19,350	17,500
1,450	39,900	34,200	29,800	26,000	24,200	22,200	20,300	18,350
1,500	41,400	35,600	31,050	27,100	25,250	23,200	21,200	19,200

Table 5.5.3.3(b) Extended Discharge for Enclosed Recirculating Rotating Electrical Equipment (Cubic Meters Protected for Deceleration Time) (SI Units)

	Time (minutes)							
kg CO_2	5	10	15	20	30	40	50	60
45.4	34.0	28.3	22.6	17.0	14.2	11.3	8.5	5.7
68.1	50.9	42.5	34.0	28.3	21.2	17.0	14.0	11.3
90.8	67.9	55.2	45.3	36.8	28.3	24.1	18.4	14.2
113.5	93.4	69.3	56.6	46.7	36.8	29.7	22.6	17.0
136.2	130.2	87.7	67.9	56.6	46.7	36.8	28.3	19.8
158.9	172.6	116.0	84.9	70.8	56.6	46.7	34.0	25.5
181.6	217.9	152.8	107.5	89.1	70.8	56.6	45.3	34.0
204.3	261.8	192.4	138.7	113.2	87.7	73.6	59.4	45.3
227.0	305.6	229.2	172.6	141.5	110.4	93.4	79.2	62.3
249.7	348.1	268.9	209.4	172.6	138.7	118.9	101.9	87.7
272.4	393.4	308.5	243.4	203.8	169.8	147.2	127.4	110.4
295.1	435.8	348.1	278.8	234.9	199.5	175.5	155.7	135.8
317.8	478.3	384.9	314.1	266.0	229.2	203.8	181.1	158.5
340.5	523.6	424.5	349.5	297.2	258.9	232.1	206.6	184.0
363.2	586.0	464.1	384.9	328.3	288.7	260.4	232.1	206.6
385.9	608.4	502.3	420.3	359.4	319.8	288.7	257.5	229.2
408.6	650.9	540.5	455.6	390.5	349.5	317.0	284.4	254.7
431.3	696.2	580.2	491.0	421.7	379.2	345.3	311.3	277.3
454.0	738.6	619.8	526.4	452.8	410.4	373.6	336.8	302.8
476.7	781.1	659.4	563.2	483.9	441.5	401.9	363.7	325.5
499.4	823.5	696.2	595.7	515.1	469.8	430.2	389.1	350.9
522.1	866.0	735.8	631.1	546.2	500.9	458.5	416.0	373.6
544.8	911.3	772.6	666.5	577.3	532.0	486.8	441.5	399.0
567.5	953.7	812.2	701.8	609.4	561.8	515.1	467.0	421.7
590.2	999.0	851.8	737.2	641.0	591.5	543.4	493.8	447.1
612.9	1041.4	888.6	772.6	672.1	622.6	571.7	520.7	471.2
635.6	1086.7	928.2	808.0	704.7	653.7	600.0	547.6	495.3
658.3	1129.2	967.9	843.3	735.8	684.9	628.3	574.5	519.3
681.0	1171.6	1007.5	878.7	766.9	713.2	656.6	600.0	543.4

Statement of Problem and Substantiation for Public Input

Annex A.5.5.3 contains prescriptive requirements that should be located in the body of NFPA 12 Section 5.5.3.

Submitter Information Verification

Submitter Full Name: Daniel Hubert
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Submittal Date: Wed Sep 14 11:42:04 EDT 2022
Committee: GFE-AAA

Committee Statement

Resolution: FR-21-NFPA 12-2023
Statement: Annex A.5.5.3 contains prescriptive requirements that should be located in Section 5.5.3.

Public Input No. 11-NFPA 12-2022 [Section No. A.5.5.3]

A.5.5.3

Protection of stationary combustion engines and gas turbines is addressed in NFPA 37.

~~For enclosed recirculating-type electrical equipment, the initial discharge quantity should not be less than 1 lb (0.45 kg) of gas for each 10 ft ^{3} (0.28 m ^{3}) of enclosed volume up to 2000 ft ^{3} (56.6 m ^{3}). For larger volumes, 1 lb (0.45 kg) of gas for each 12 ft ^{3} (0.34 m ^{3}) or a minimum of 200 lb (90.8 kg) should be used. Table A.5.5.3(a) and Table A.5.5.3(b) can be used as a guide to estimate the quantity of gas needed for the extended discharge to maintain a minimum concentration of 30 percent for the deceleration time. The quantity is based on the internal volume of the machine and the deceleration time, assuming average leakage. For dampered, non-recirculating-type machines, add 35 percent to the indicated quantities in Table A.5.5.3(a) and Table A.5.5.3(b) for extended discharge protection.~~

~~Table A.5.5.3(a) Extended Discharge Protection for Enclosed Recirculating Rotating Electrical Equipment (Cubic Feet Protected for Deceleration Time)~~

~~Time (minutes)~~	~~lb~~ ~~CO_2~~																			
~~5~~	~~10~~	~~15~~	~~20~~	~~30~~	~~40~~	~~50~~	~~60~~	~~100~~	~~1,200~~	~~1,000~~	~~800~~	~~600~~	~~500~~	~~400~~	~~300~~	~~200~~	~~150~~	~~1,800~~	~~1,500~~	~~1,200~~	~~1,000~~

~~Table A.5.5.3(b) Extended Discharge for Enclosed Recirculating Rotating Electrical Equipment (Cubic Meters Protected for Deceleration Time) (SI Units)~~

~~Time (minutes)~~	~~kg~~ ~~CO_2~~																			
~~5~~	~~10~~	~~15~~	~~20~~	~~30~~	~~40~~	~~50~~	~~60~~	~~45.4~~	~~34.0~~	~~28.3~~	~~22.6~~	~~17.0~~	~~14.2~~	~~11.3~~	~~8.5~~	~~5.7~~	~~68.1~~	~~50.9~~	~~42.5~~	~~34.0~~	~~28.3~~	~~21.2~~

Statement of Problem and Substantiation for Public Input

The deleted information is prescriptive and should be located in the body of NFPA 12, Section 5.5.3.

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Committee Statement

Resolution: FR-21-NFPA 12-2023
Statement: Annex A.5.5.3 contains prescriptive requirements that should be located in Section 5.5.3.