**Продолжение Приложения (п. 1.4.)**

Приложение 11

к Порядку организации и проведения

государственного контроля (надзора)

за соблюдением требований

природоохранного законодательства

(государственного экологического контроля)(п.4.13)

Приложение \_\_ к Акту отбора проб от \_\_\_\_\_\_ №\_\_\_\_

**Протокол измерений параметров газопылевого потока**

Дата проведения измерений \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

Время проведения измерений: начало \_\_\_\_\_ час. \_\_\_\_\_\_\_ мин., окончание \_\_\_\_\_ час. \_\_\_\_\_\_ мин.

Измерения выполнены в соответствии с ГОСТ 17.2.4.06-90 та 17.2.4.07-90.

1. Номер (наименование) источника \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Место измерения \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2.1. До (после) вентилятора; до (после) ГОУ; Участок газохода: вертикальный, горизонтальный, наклонный.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(подчеркнуть)

2.2. Длинна прямого участка *l*, мм \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

2.3. Измерительное сечение

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Круглое сечение | | | | | | | | Прямоугольное сечение | | | | | | | |
| Диаметр *D*, мм | | | | | | | | Размер сторон *А* и *В*, мм | | | |  | | |  |
|  |  | | |  | | , |  | ***A*=** |  | ***B*=** |  |  | ***B/A*=** |  |  |
|  |  | | , |  | | . |  | Эквивалентный диаметр *D*е, мм. *D*е =(2*А*×*В*)/(*А*+*В*) | | | | | | | |
|  |  |  | ***D* =** |  | |  |  |  |  |  | ***D***е = |  | |  |  |
| Значение L = *l* / *D* = | | | |  | |  |  | Значение *L* = *l* / *Dе*= | | | |  | |  |  |
| Длинна участка до измерительного сечения *l*y, мм | | | | | | | | Длинна участка до измерительного сечения *l*y, мм | | | | | | | |
| *l*y = *l* - (Kz × *D*) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | |  | *l*y = *l* - (Kz × *D*e) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | |  |
| Количество точек измерения *nD*, шт. | | | | | |  |  | Количество точек измерения *nА*, *nВ*, шт. | | | | | |  |  |
|  | ***nD*** |  |  |  |  |  |  |  | ***nА*** |  |  | ***nВ*** |  |  |  |
| Скорректированное кол-во точек измерения *nD* , шт. | | | | | | | | Скорректированное кол-во точек измерения *nА*, *nВ*,шт | | | | | | | |
|  | ***nD*** |  |  |  |  |  |  |  | ***nА*** |  |  | ***nВ*** |  |  |  |
| Площадь сечения *SD*, м2. *SD* = 0,785 (*D* / 1000)2 | | | | | | | | Площадь сечения *SАВ*, м2. *SAB* = (*А*/1000)×(*В*/1000) | | | | | | | |
|  |  |  |  |  | ***SD*** = |  | |  |  |  |  |  | ***SAB*=** |  | |

3. Температура газопылевого потока *t*г ; оС; *Т*г ; К

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Круглое сечение | | | | | | Прямоугольное сечение | | | | | | | | |
|  | Координаты точки, мм | *t*г1 | *t*г2 | *t*г3 | *‾ t*г |  | Координаты точки, мм | | | *t*г1 | *t*г2 | *t*г3 | | *‾t*г |
| т. 1 | (0,250 ± 0,083)‾*D* |  |  |  |  | т. 1 | | (0,250 ± 0,083) *А* | |  |  |  | |  |
|  |  |  | | 0,25 × \_\_\_\_\_\_\_ = \_\_\_\_\_ | |
|  | 0,25 × \_\_\_\_\_\_ = \_\_\_\_\_\_ |  | | (0,250 ± 0,083) *В* | |
|  |  |  | | 0,25 × \_\_\_\_\_\_\_ = \_\_\_\_\_\_ | |
| т. 2 | *‾D* - (0,250 ± 0,083)‾*D* |  |  |  |  | т. 2 | | *А* - (0,250 ± 0,083) *А* | |  |  |  | |  |
|  |  |  | | *\_\_\_\_\_\_* − \_\_\_\_\_ = \_\_\_\_ | |
|  | *\_\_\_\_* − \_\_\_\_= \_\_\_\_\_\_\_\_ |  | | *В* - (0,250 ± 0,083) *В* | |
|  |  |  | | *\_\_\_\_\_* − \_\_\_\_\_= \_\_\_\_\_ | |
|  |  | | |  | |
| *‾ t*г = \_\_\_\_\_\_\_\_\_ ; | | | | | | | | | *Т*г = (273 + ‾*t*г) | ***Т*г** = | | |  | |

4. Атмосферное давление *р*а, кПа.

|  |  |  |  |
| --- | --- | --- | --- |
| В начале измерений | В конце измерений |  | **‾*ра* =** |
|  |  |  |

5. СИТ, применяемые при измерениях

|  |  |  |  |
| --- | --- | --- | --- |
| Наименование СИТ | Заводской номер | Сведения о поверке | |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

6. Скорость *υ* и объёмный расход *qv*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | Координаты точки *ni*, мм | | | | | | Давление полное *р*п*i* статическое *р*ст*i* ,  кПа | | | | | | | | | | | | | | Динамическое давление *р*д*i*,  кПа | | | | | | | | | | | | | | | Скорость*υi* ,  м/с | |
| *ni* | | | | *KDi*,  *KnAi*  *KnBi* | | при круглом сечении:  *KDi* × ‾*D*;  при прямоуголь-ном сечении:  *KnAi* × *A*,  *KnBi* × *B* | | | | Показания СИТ | | | | | ‾*р* | | *р*п*i* (*р*ст*і*) | | *р*ст*і* при  a) *р*cт «+»: = *р*п*i* – *р*д*i*;  б) *р*cт «-»: = *р*п*i* + *р*д*і* | | | | | *K*т = | | | | | | | *р*д*i*=  ‾*р*× *K*т | | | | | √*р*д*і* | | | *vi*= 4,429√(1/ρ)√*р*д*i*  = 4,429 ×\_\_\_\_ √*р*д*i*  = \_\_\_\_\_\_\_\_ × √*р*д*i* | |
|  | | | |
|  | | | | Показания СИТ | | | | | | ‾*р* |
|  | | | | *р*1 | | *р*2 | | *р*3 | *р*1 | | *р*2 | *р*3 | | |
| 1 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
| 2 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
| 3 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
| 4 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
| 5 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
| 6 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
| 7 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
| 8 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
| 9 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
| 10 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
| 11 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
| 12 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
| 13 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
| 14 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
| 15 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
| 16 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
| 17 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
| 18 | | | |  | |  | | | |  | |  | |  |  | |  | |  | | | | |  | |  |  | | |  |  | | | | |  | | |  | |
|  | | | |  | | | |  | |  | | | |  | | |  | |  | | | | |  | | | | |  | | | | | |  | | | | | |  |
|  | | | |  | | |  | | | *‾υ* = | | | | | | | | |  |  | | | |  | | | |  | | | | | |  | | | | |  |
|  | | | |  | | |  | | |  | | | | | | | | |  |  | | | |  | | | |  | | | | | |  | | | | |  |
| ***р*г =** (*р*a  ± ‾*р*cт) = \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ | | | | | | | | | | | | | | | | | | |  | ***р*г =** | | | | | | | | | |  | | | | | |  | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ***р*г / *T*г = \_\_\_\_\_\_\_\_\_\_\_\_\_ / \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | | | | | | | | | | | | | | | | | |  | ***р*г / *T*г =** | | | | | | | | | |  | | | | | |  | | |
| Плотность газа , кг/м3  = 2,695 о  *р*г */ Т*г ; При о = 1,29 кг/м3   = 3,477 *р*г */ Т*г ; = 3,477 \_\_\_\_\_\_ / \_\_\_\_\_\_ = \_\_\_\_\_\_\_  Объёмный расход *qv* и *qv*о , м3/с. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1/ = 1/ \_\_\_\_\_ = \_\_\_\_\_\_ | | | | | | | | |
| При рабочих условиях *qv**=**‾υ* × *S* = *\_\_\_\_\_\_\_\_* × *\_\_\_\_\_\_\_\_\_\_* = *\_\_\_\_\_\_\_\_\_\_* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | |
| Приведённый к нормальным условиям  *qv*о = 2,695× *qv*× *р*г */ Т*г = 2,695 × *\_\_\_\_\_\_\_\_* × *\_\_\_\_\_\_\_\_\_* | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | ***qv*о =** | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

7. Температура окружающей среды возле места отбора проб, *t*ос = *\_\_\_\_\_\_\_\_\_\_\_* °С.

|  |  |
| --- | --- |
| Примечание.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
|  | |
| Измерения выполнили: |  |
| (подписи, ФИО) |
|  |
|  | (подписи, ФИО) |