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KUCHLI TA'SIR ETUVCHI ZAHARLI MODDALAR (KTZM) QO'LLANILADIGAN OBYEKTLARDAGI AVARIYADA KIMYOVIY HOLATNI BAHOLASH.

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Annotatsiya. *Ushbu maqolada, kimyoviy holatni baholash, taxlil qilish usllari hamda sano'at obektlarida REM, (KTZM)ni aniqlash, kimyoviy holatni baholashda havoning turg'unlik darajasi belgilari haqida muallifning nazariy, ummumlashtiruvchi fikrlari keltirilgan. Maqola mehnat muhoazasi va texnika xavfsizligi yunalishlari talablari, mehnat muhofazasi va xavfsizlik mutaxassislari hamda keng izlanuvchilar uchun muljallangan.*

Kalit so'zlar va iboralar: *"Kimyoviy holat, kimyoviy holatni baholash, xavfsizlik, KTZM, izotermiya, konveksiya, sanoat korxonalari, agressiv moddalar".*

ASSESSMENT OF THE CHEMICAL SITUATION IN AN ACCIDENT IN FACILITIES USING STRONG TOXIC SUBSTANCES (KTZM).

Abstract. *In this article, the author's theoretical and general opinions are presented about methods of chemical state assessment, analysis, determination of REM, (KTZM) in industrial objects, signs of air stagnation level in chemical state assessment. The article is intended for the requirements of labor protection and technical safety directions, labor protection and safety specialists, and general readers.*

Key words and phrases: *"Chemical state, assessment of chemical state, safety, KTZM, isotherm, convection, industrial enterprises, aggressive substances."*

ОЦЕНКА ХИМИЧЕСКОЙ СИТУАЦИИ ПРИ АВАРИИ НА ОБЪЕКТАХ, ИСПОЛЬЗУЮЩИХ СИЛЬНО ТОКСИЧНЫЕ ВЕЩЕСТВА (КТЗМ).

Аннотация. *В статье изложены теоретические и общие соображения автора об оценке химического состояния, методах анализа, определении РЗМ (КТЗМ) в промышленных объектах, признаках уровня застоя воздуха при оценке химического состояния. Статья предназначена для требований направлений охраны труда и технической безопасности, специалистов по охране труда и технике безопасности, а также широкого круга читателей.*

Ключевые слова и фразы: *«Химическое состояние, оценка химического состояния, безопасность, КТЗМ, изотерма, конвекция, промышленные предприятия, агрессивные вещества».*

Kirish. Kimyoviy holat deb- dushman tomonidan kimyoviy qurollar ishlatilganda, yoki kimyoviy obyektlarda halokat yuz berganda atrof-muhitga kuchli ta'sir etuvchi zaharli moddalar (KTZM) tarqalganligi natijasida hosil bo'lgan sharoitga aytiladi.

Kimyoviy holatni baholash deganda – kuchli ta'sir etuvchi zaharli moddalarni odamlarga, hayvonlarga, suv va boshqa obyektlarga ta'sir etish darajasini aniqlash hamda kimyoviy hujum

yoki ishlab chiqarish tarmoqlaridagi falokat oqibatlarini tugatish uchun eng maqbul uslubni tanlash tushuniladi.

Tadqiqot metodlari. Tadqiqot jarayonida ilmiy va o‘quv-uslubiy adabiyotlar tahlili, pedagogik-tarixiy kuzatuv, umumlashtirish, metodlaridan foydalanildi.

Tadqiqot natijalari va muhokamalar. KTZM ishlatiladigan obyektlardagi avariyada kimyoviy holatni baholash, fuqarolarni zaharlanish o’choqlarida bo’lishlari mumkin bo’lgan holda, ularni himoyalanishini tashkil etish maqsadida o’tkaziladi.

Kimyoviy holatni baxolashda bashorat usuli bo‘yicha zaxarlangan xavoning tarqalishi uchun qulay b‘lgan sharoitda (inversiya, shamol tezligi 1m|s. da) ob’ektdagi barcha KTZM zaxiralarining tashqariga chiqib ketishi (tukilish) okibatlarini o‘rganish orkali aniqlanadi.

KTZM saqlanadigan zaxirasining falokatini baxolash, xaqiqatda sodir bo‘lgan vaziyatda utkaziladi. Bunda zaxarli moddalarning aniq miqdori va ob xavo sharoitlari xisobga olinadi.

SHunga xam axamiyat berish lozimki, qaynash xarorati 20°S dan past bo‘lgan zaxarli moddalarni (masalan, fozgen, vodorod ftorid va shunga uxshashlar) to‘kilishi bilan juda oz vaqt mobaynida bug‘lanib ketadi va bug‘langan zaxarli modda miqdori, uning tukilgan suyuk miqdoriga teng b‘ladi. Agar qaynash harorati 20°S dan yuqori bo‘lgan (uglerod (IV) sulfid, sinil kislotasi va boshqalar) va qaynamaydigan zaxarli suyukliklar (ammiak, xlor, oleum va xokazolar) usha ob’ekt hududi bo‘ylab tarqaladi va xavoning yer ustki qatlamini zaharlaydi.

KTZM bo‘lgan joylardagi kimyoviy xolatni baxolashda, kimyoviy zaxarlangan hudud o‘lchamini, kimyoviy shikastlanish uchog‘ini, zaxarli havoning hududga yetib kelish va shikastlash vaqtini xamda kimyoviy shikastlanish uchoqlarida fuqarolarni talafotlanish extimollari ko‘zda tutiladi.

Shunga ham ahamiyat berish lozimki, qaynash harorati 20º S dan past bo’lgan zaharli moddalarni (masalan, fozgen, vodorod ftorid va shunga o’xshashlar) to’kilishi bilan juda oz vaqt mobaynida bug’lanib ketadi va bug’langan zaharli modda miqdori, uning to’kilgan suyuq miqdoriga teng bo’ladi. Agar qaynash harorati 20º S dan yuqori bo’lgan (uglyerod (IV) sul’fid, sinil kislotasi va boshqalar) va qaynamaydigan zaharli suyuqliklar (ammiak, xlor, oleum va h.k.) o’sha obyekt hududi bo’ylab tarqaladi va havoning yer ustki qatlamini zaharlaydi.

KTZM bo’lgan joylardagi kimyoviy holatni baholashda, kimyoviy zaharlangan hududni o’lchami, kimyoviy shikastlanish o’chog’i, zaharli havoni hududga etib kelish vaqti, shikastlash vaqti hamda kimyoviy shikastlanish o’choqlarida fuqarolarni talofatlanish ehtimollari ko’zda tutiladi.

Ochiq joyda KTZM bilan zaharlangan havoning tarqalish chuqurligi (KTZM idishi himoyalanmagan, Shamol tezligi 1m/s, izotermiya)*

1-jadval

KTZM nomi	Idishdagi KTZM miqdori (obyektda), (Tona)					
	5	**10**	**25**	**50**	**75**	**100**
Xlor, fozgen	4,6	7	11,5	16	19	21
Ammiak	0,7	0,9	1,3	1,9	2,4	3
Oltingugurt (II) oksid	0,8	0,9	1,4	2	2,5	3,5
Vodorod sulfid	1,1	1,5	2,5	4	5	8,8

* Izoh: inversiyada havo qatlamining tarqalish chuqurligi taxminan 5 barobar katta, konveksiyada esa izotermiyaga nisbatan 5 marta kichik bo'ladi.

Havoning vertikal turg'unlik darajasini shamol tezligiga bog'liqligi (holatlar uchun to'g'rilovchi koeffitsient).

2-jadval

Havoning vertikal turg'unlik darajasi	**Shamol tezligi, m/s**				
	2	3	4	5	6
Inversiya	0,6	0,45	0,38	-	-
Izotermiya	0,71	0,55	0,5	0,45	0,41
Konveksiya	0,7	0,62	0,55	-	-

*Ba'zi KTZM larning parchalanish vaqti (Shamol tezligi – 1m/s)**

3-jadval

KTZM nomi	**Saqlanish turi**	
	Himoyalanmagan	**Himoyalangan**
Xlor	1,3	22
Fozgen	1,4	23
Ammiak	1,2	20
Oltingugurt (IV) oksid	1,3	20
Vodorod sulfid	1	19

*Izoh. SHamol tezligi 1 m/s.dan yuqori bo'lganda quyidagi to'g'rilovchi koeffitsientlardan foydalaniladi:

4-jadval

Shamol tezligi m/s	**1**	**2**	**3**	**4**	**5**	**6**
To'g'rilovchi koeffitsient	1	0,7	0,55	0,43	0,37	0,32

Ilova: Shamol tezligi 1m/s dan yuqori bo'lganda quyidagi to'g'rilovchi koeffitsientlar olinadi:

KTZM ta'siridagi shikastlanish chog'ida fuqarolarning talofotlanish soni, foiz * Odamlarning joylashgan sharoiti fuqarolarning gazniqob bilan ta'minlanganligi, foiz

5-jadval

Odamlarning joylashgan Sharoiti	Fuqarolarning gazniqob bilan ta'minlanganligi, foiz								
	0	20	30	40	50	60	70	80	90
Ochiq joyda	90-100	75	65	58	50	40	35	25	18
InShootlarda, oddiy boshpanada	50	40	35	30	27	22	18	14	9

*Izoh: shikastlanish chog'ida odamlarning taxminiy talafotlanish darajasi (foiz): yengil darajada shikastlanish-25; O'rtacha va og'ir darajada-40; O'lim bilan yakunlanadigan holatda-35.

6-jadval

Shamol tezligi	Inversiya		Izotermiya		Konveksiya	
	R<10km	R>10km	R<10km	R>10km	R<10km	R>10km
1m/s	2	2.2	1.5	2	1.5	1.8
2m/s	4	4.7	3	4	3	3.5
3m/s	6	7	4.5	6	4.5	5
4m/s	-	-	6	8	-	-
5m/s	-	-	7.5	10	-	-
6m/s	-	-	9	12	-	-

Ilova: Zaxarli xavoning urtacha tezligi.

Xulosa. Kuchli ta'sir etuvchi zaharli moddalar bilan ishlaydigan sanoat tarmoqlarida nafaqat avariya oqibatidan fuqarolarga qavf-xatar keltirishi mumkin, balki shu tarmoqlardan chiqindi maqsulotlar xam (atmosferaga yoki suv qavzalariga chiqarib yuborilishi) atrof muqitni va tabiatni ifloslantirishi oqibatida insonlar qayotiga jiddiy xavf soladi. Bu borada ayniqsa, metallurgiya, kimyo, biotexnologiya, rezina-texnika, neftni qayta ishlovchi va boshqa sanoat tarmoqlarining salbiy ta'siri juda kattadir. Respublikamizdagi ayrim sanoati rivojlangan ayrim shaharlarda, jumladan, Samarqand, Farqona, Andijon, Qo'qon, Angren, Olmaliq, Chirchiq, Navoiy va boshqa shaxarlarda havoning ifloslanish darajasi me'yoridan 1,5-2 marta xatto ayrim joylarda 3-6 marta ortiq.

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