Research Article

Petroleum Refinery Hazardous Emissions

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Abstract

Oil Refineries are known to pollute the air with their emissions, besides polluting water with their effluent. In this paper we consider the main chemicals that are in atmospheric pollution from refineries. We see that the toxin hydrogen peroxide results that has been shown to cause cancer and nervous system diseases. The same techniques can be used on other emitters such as pulp mills and power plants.

Keywords: Petroleum Refineries; Atmospheric Pollution; Organic Chemicals; At Math.

Introduction

Petroleum Refineries process raw crude oil into 3 categories of products:

1. Fuel products
2. Nonfuel products (asphalt)
3. Petrochemicals

They have atmospheric pollution. For each ton of crude processed in CPCL, the emissions are according to Table 1. They also exhaust VOC's, Toxic Organics & Heavy metals, Carcinogenic Dangerous dust that causes disabling lung disease. (Asthma.)
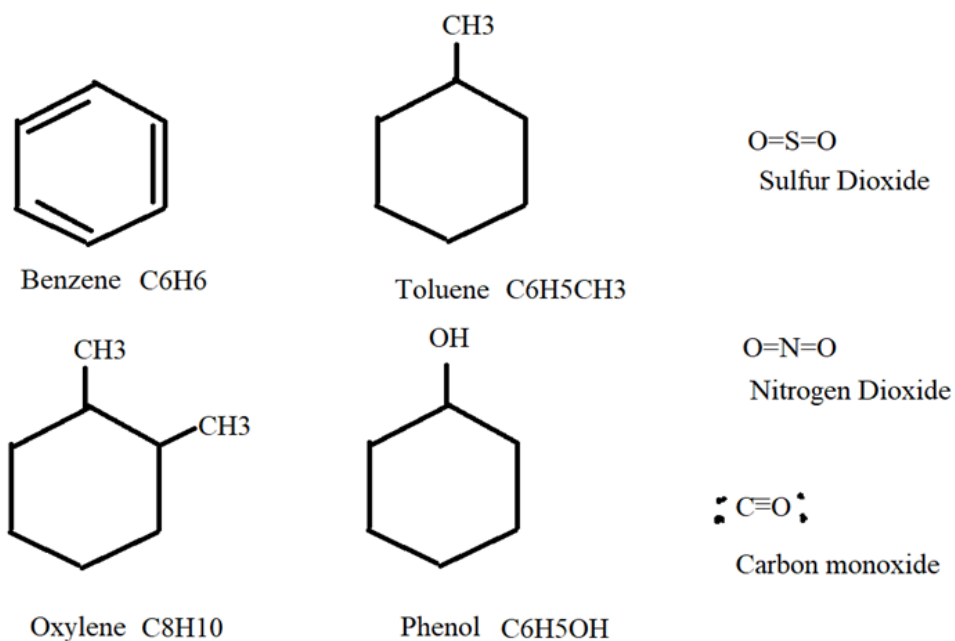
Figure 1: Oil Refinery Exhaust

Table 1

Exhaust	Molar mass (g/mol)	Exhaust per ton of crude	Moles
SO2	64.07	40(10-6)	1.60175
NO2	46.01	450 (10-6)	0.1022
CO	28.01	180(10-6)	0.1556
C6H6	78.11	80 mg/l	97.637
C6H5CH3	92.14	0.35 kg	0.263
C8H10	106.165	1.4 kg	0.07583
C6H5OH	94.11	300 mg/L	0.3137
			0.1555 moles

$0.1555 \times 1/7 = 0./222 = 2/9 = E/c^2 = M$

$PE = Mc^2 = 2/9(9) = 2$

$E=2 \quad E=1/t=2=1/t$

$t_{min} = 1/2 \Rightarrow GMP$

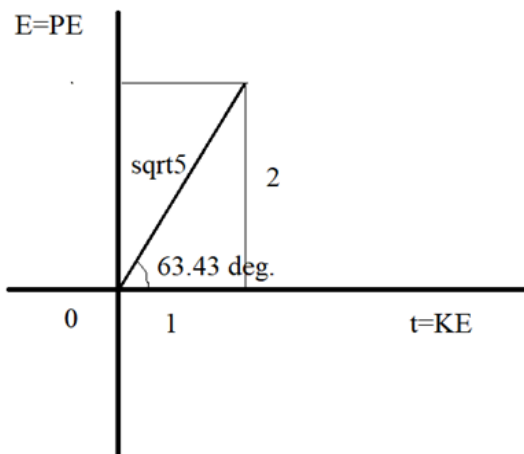$E=y=2=2/1=\Delta y/\Delta x=$ slope m of the Golden Mean Triangle

Figure 2: Golden Mean Triangle

$t^2-t-1=E=2$

$t=2.3027; 1.3027$

$M=Ln\ t=Ln\ 2.3027=3.1367=$ C6H5OH Toluene

$CO=0.1555$ mol

$1/0.1555=6.428 \times 7=45$

$45/360=0.125 =Emin$

$45=1/0.222=9/2=c^2/E=1/M$

$M=0.1555=Ln\ t$

$t=1.168=$Mass of the periodic Table of the elements

$1/0.1555=6.428 \times 7=45$

$45°/360°=0.125 =E_{min}/(-10)$
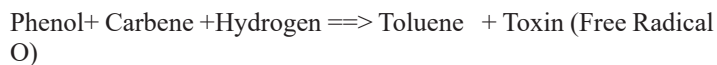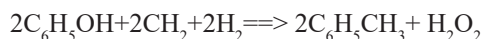
$45=1/0.222=9/2=c^2/E=1/M$

$M=0.1555=Ln\ t$

$t=1.168=$Mass of the Periodic Table of the elements

$t^2-t-1=E$
$(116.8)- (116.8)-1=1352\sim1350=$ Telescopic

$TE=1.5Mc^2$
$=1.5(M) (2.99792458)^2$
$=13.52\ M$
$=13.52(116.8)$
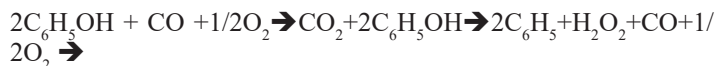$=1.4197\sim\sqrt{2}$

$\sin 45°+\cos 45°=2/\sqrt{2}=\sqrt{2}$

$2C_6H_5OH+2CH_2+2H_2 ==> 2C_6H_5CH_3+ H_2O_2$

Phenol+ Carbene +Hydrogen ==> Toluene + Toxin (Free Radical O)

Clairnaut Differential Equation

$y''-y=0$

slope $m=y/1=y''=2$

$t^2-t-1=E$
$2t-1=dE/dt$
$2=d^2E/dt^2$

$2C_6H_5OH + CO +1/2O_2 \rightarrow CO_2+2C_6H_5OH \rightarrow 2C_6H_5+H_2O_2+CO+1/2O_2 \rightarrow$

Phenol + Carbon monoxide $\rightarrow$ Carbon Dioxide $\rightarrow$ Hydrogen Per-

oxide➔

$$CO_2 + 2H_2O + 2C_6H_5 \rightarrow HO_3 + 1/2H_2 + 2C_6H_6 + CO$$

Conclusion

AT Math is another tool that can be used to discern disease such as cancer and nervous system diseases.

References

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3. Paul TE Cusack (2020) Sugar and Ecoli: Diseases of the Nervous System. *Journal of Brain and Neurological Disorders* 2(1).