

Experimental Investigation for Effect of Geopathic Stress on Simple Reaction Time at National Highways and Expressways

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Abstract

Geopathic Stress is the energy from the earth surface which is the biggest threat to the built environment. Energy emitted by the earth surface which has ability to change the normal functioning of human beings is termed as Geopathic stress Suitability of the site in ancient times is carried out by different tests like Bhumi Pariksha, architectures and civil engineers were very particular in selecting the site for dwelling but in recent past geopathic stress is rarely considered spatial planning. Recent studies have shown that it is one of the causes for inception of disease. Places on road affected by this stress are prone to accidents. if geopathic stress is present on road environment, it may lead to increased reaction time of drivers in turn responsible for occurrence of accidents This paper highlights how simple reaction time will increase due to presence of Geopathic stress with help of Regression Analysis. Regression Analysis will help to predict and forecast Accidents on Roads.

Keywords— Geopathic Stress, Simple Reaction Time, Expressways, Accidents, Regression Analysis.

I. INTRODUCTION

Geopathic Stress: 'Geopathic' comes from the Greek words 'Geo', meaning 'of Earth,' and 'pathic' comes from 'pathos' meaning disease or suffering. 'Geopathic' therefore connotes disease of the earth. The resulting 'negative earth energies', as they are often termed, can result in discomfort and even disease. Earth is a giant electromagnet; its core produces natural electric currents and magnetic waves. This natural Earth radiation can be distorted by other weak electromagnetic field caused by various underground formations such as running water, mineral concentrations, geological fault lines and cavities as it rises up through the earth. Effect on Health - GS happens when you spend long periods sleeping or working above any place or in a building where the Earth's natural radiation is distorted ('GS zone'). Some of the common early symptoms associated with sleeping in a GS zone include bad dreams, behavioural problems in children, fatigue, grinding of teeth, headaches, insomnia, restlessness and sleep-walking. Prolonged sleeping or working in an area of GS is likely to lead to more serious conditions such as allergies, Cancer, Chronic Fatigue Syndrome, Depression, diseases of the central nervous system, Infertility and Miscarriages and Multiple Sclerosis. Cancer is usually the most feared of these. Cancer tumours develop almost always at exactly the spot where two or more GS lines cross a person's body as they lie asleep in their bed. It's important to note that GS itself does not produce disease; it lowers your immunity system and hence your ability to combat disease. While some stress is good for the body, prolonged stress is known to adversely affects health. Your body reacts to stress

in general, and GS in particular, by modifying its output of hormones to adapt to the stress. This non-natural state of affairs ultimately affects other system terms in the body, causing disease. Over the years, GS has become stronger; this is attributed mainly to the weaker ozone layer that protects the earth letting in more solar radiation. It is believed that the stronger GS is the main factor behind the rising cases of terminal illnesses such as cancer.

General signs and symptoms include

1. You rarely wake up feeling refreshed; more often than not you wake up feeling more tired than you were the night before.
2. You always feel in poor health, and stop responding to medications.
3. You always feel as if something is not quite right at home. You no longer feel comfortable at home, and prefer to stay away.
4. You begin suffering from a serious medical condition, after relocating to your new home, which just will not respond to medication.
5. The house you are living in has a history of, or is associated with, serious illnesses.

Specific signs and symptoms of GS include appetite loss; bedwetting; depression; falling asleep on the couch but not in bed; feeling cold; grinding of teeth; nightmares; problems with neighbours; restless sleep; road rage and stressed relationships. In a weak or sensitive patient, or someone who has been exposed to GS for a long time, the body loses its natural homeostasis (the tendency to seek and maintain a condition of balance or equilibrium within the internal environment, even when faced with external changes), leading to being affected by several diseases and negative psychological affect

II. EFFECT OF GEOPATHIC STRESS

- *Effects on Built Environment –*

In the present scenario, while natural environment with varying climate is not suitable for the life style of human beings; the insects, birds and animals live by making adjustments with the climate. Man is always trying suitable transformation in the natural surroundings. This transformed environment is known as Built Environment". Built Environment constitutes houses, roads, footpaths, shops etc. A Built Environment is planned not only to shelter the people but also to provide space for various activities like agriculture activities, industries, educational institutes etc. In ancient times, people were aware of geopathic stress" associated with specific areas and were very particular in selecting location for civilizations and sites for construction of any structure and dwelling. Energies from the earth at certain locations that have ability to disturb normal functions of human body systems are termed as geopathic stress. Geopathic stress is a natural phenomenon which affects certain places and can be detrimental to Human health. The most usual cause of geopathic stress is certain mineral concentration or an underground water stream, owing beneath the house. Geopathic stress can also arise out of a geological fault line i.e., a deep crack in the bed rock which allows radiations from deep within the earth to come up to the surface. Construction companies today hardly give any kind of thought to the presence of geopathic stress and its impact on Built Environment. Most of the people always ignore geopathic stress since they are unaware of its occurrence in certain locations of Built Environment. World Health Organization (WHO) has recognized that a building can make a person sick. The illness caused by a building is called as `sick

building syndrome'. Many researchers through their research have established the interaction of built environment and human systems. It has been observed that, the presence of ground water vein is closely associated with generation of such a sick building syndrome. Location of ground water veins can be identified by using ancient techniques of dowsing. Various scientific methods are also available for detection of geopathic stress. It is now well proven that, the Geopathic stress affects the Built Environment.

- ***Effects on Accidents –***

Expressways constitute only about 1.7% of the road network but carry about 40% of the total road traffic. Number of vehicles has been growing at an average pace of 10.60% per annum over last five years. Road environment includes soil, pavement, reaction time of driver, etc. Geopathic stress is the energy emitted from the earth crust affects the road environment. National Highways and Expressways in India have one of the largest road networks in the world (over 3 million km at present). About 65% of freight and 80% passenger traffic is carried by the roads. National highways and Expressways are the veins of the overall development of the country years. Due to geopathic stress zone, the drivers get disturbed since the geopathic stress affects normal functioning of human being. One of the reasons for disturbance may be increased reaction time. Reaction time is the elapsed time between the presentation of sensory stimulus and the subsequent behavioural response. Because of Geopathic Stress soil properties get changed, distress of pavement occurs which ultimately reduces the designed life of pavement. An accident is the major problem associated with National highways and Expressways. 30% of the total number of accidents occurred on National highways and Expressways; the cause of those accidents is unknown. Out of these 30% accidents, Geopathic stress might be one of the causes for occurrence of accidents on National highways and Expressways. The reaction time of driver increases in geopathic stress zone as compared to normal zone, because of which accidents occur. It is observed that rate of accident is more on Geopathic stress zone as compared to normal zone. This study aims at finding relationship between geopathic stress and occurrence of accidents on Expressways and National Highways.

- ***Effects on Soil Properties-***

The most usual cause of Geopathic stress is certain minerals concentration, usually an underground water stream, owing beneath a house. The water rapidly owing through rock gives rise to an electromagnetic field which can affect the health of those living above it . Geopathic stress can also arise from a geological fault line that is, a deep crack in the bedrock which allows radiation from deep within the earth to come up to the surface. However, in Structures, soil is an important component; change in Geotechnical Properties of the soil affects the stability of the structure.

1. In Geopathic Stress Zone we require more compactive efforts to achieve the desired level of strength.
2. Soil remains longer in the Plastic State thus, indicating increase in chances of settlement.
3. Also as the water holding capacity of soil increases at Geopathic Stress Zone, there is a direct impact on the bearing capacity of soil.
4. So Geopathic Stress in one of the parameters that affects the normal functioning of the road pavement. There is a remarkable change in the basic properties of soil in Geopathic Stress Zone Since Soil is the Major component of any Civil Engineering Structure, if there is such a remarkable

change in the standard geotechnical properties soil, it will directly have an impact on the performance of that structure.



Figure No.1: Road Pavement

III. METHODOLOGY

1. Selection of expressway and collection of accidental data.

Firstly, decided and confirmed the highway for detection or work on it i.e. We have analyzed pune-Mumbai highway. We collected the accidental data of confirmed highway by NHAI (Warje).

2. Detection of Geopathic stress by using L-rods and confirmation of it by using NAAV meter.

L-rods dowsing : It is most ancient technique used for detection of Geopathic Stress. L-Rods are made of copper metal having dimensions in the ratio 4:1(H:V). If person travels with L-Rods in GS Zone , the rods get deflected inward or outward , hence GS Zone is identified.

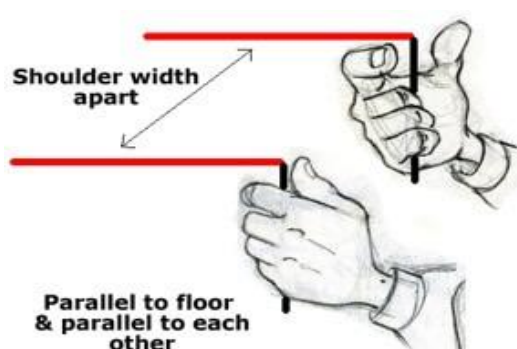


Figure No.2: L-Rods

NAAV Meter (Light Interference Technique): It is modern technique used to detect geopathic stress zone. The length of naav meter is about 6ft. It is enclosed laser and selenium photocell at two ends of wooden box. This is introduced by Dr. Dharmadhikari sir. It is observed that on GS zone location the current decreases sharply and remains constant.

3. Study of effect of Geopathic Stress on various parts of built environment like soil, pavement.

The effect of GS on soil and permits is not good as the zone consist of negative energy which leads to disturb the soil and permits compared to non-GS zone. The Geopathic Stress also has effect on human, such that according to study the one who stays for a long period in GS zone. The body functions get disturbed. And this is many reasons for the mostly occurrence of accidents on highways which has no liable reason of occurrence such accidents.

4. Establishment of relation between occurrences of accident with presence of geopathic stress zone.

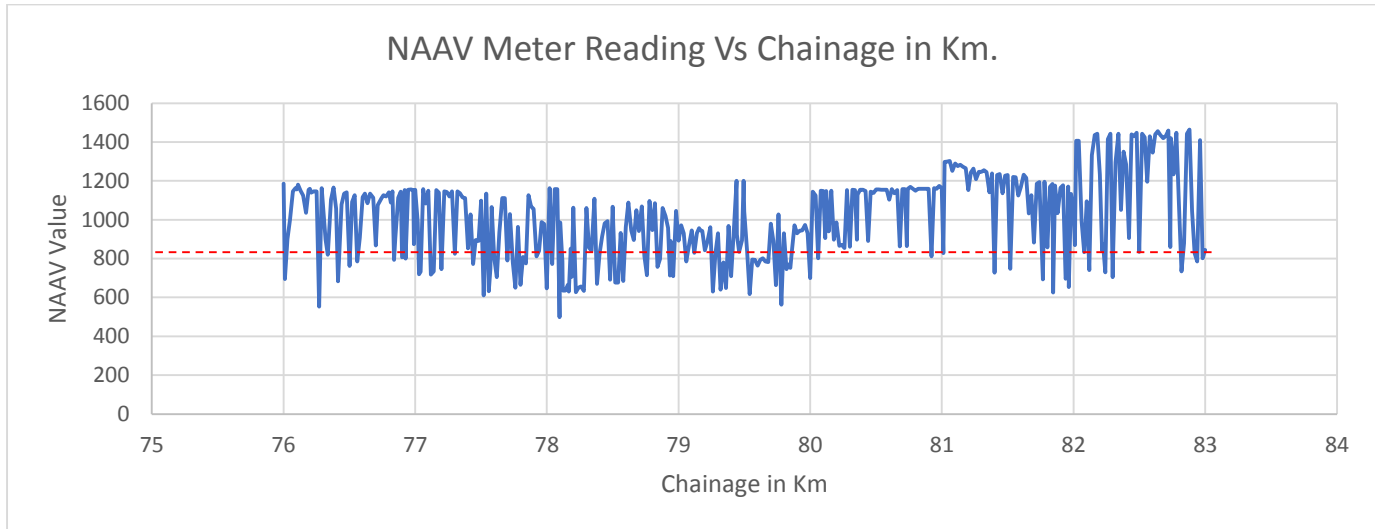
According to study the people who stay for longer period in GS zone gets affected and has the body functions gets disturbed and that is way the driver on road when get in contact with such zone gets disturbs and vehicle get out of control. Therefore, there is relation between accidents with presence of GS zone.

5. Regression Analysis:

Regression Analysis is a statistical process for estimating the relationships among dependent and independent variables. There are many techniques for modelling and analysing variables correlations. Regression analysis is widely used for predicting roads crashes. Regression Analysis is primarily used for two conceptually distinct purposes. First, regression analysis is widely used for prediction and forecasting.

IV. RESULTS

In study of Geopathic Stress, we referred thesis of Dr. R. R. Sorate, Empirical and theoretical investigation for attenuation of geopathic stress on expressways and national highways and taken Values of NAAV Meter readings of Yashawatrao Chavan Expressway (Mumbai- Pune Highway). With the help of Regression Analysis, we have Predicted accident within Prescribed Distance as per data from Maharashtra State Road Development Corpn.Ltd. (MSRDC) Maximum numbers of accidents have occurred between 79-81 kms of Mumbai- Pune Expressway.

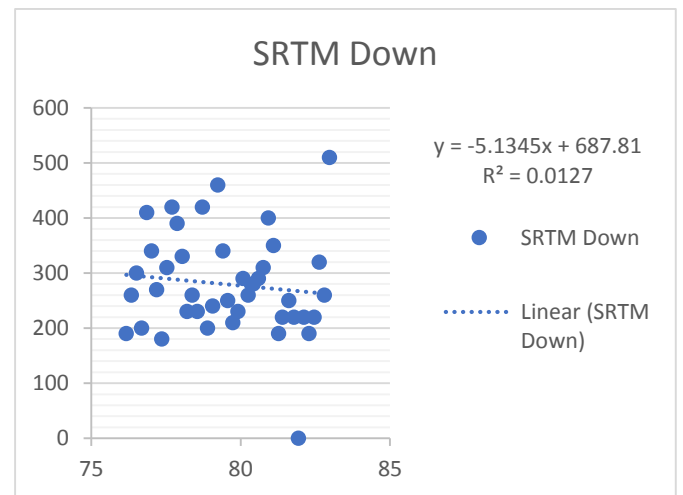
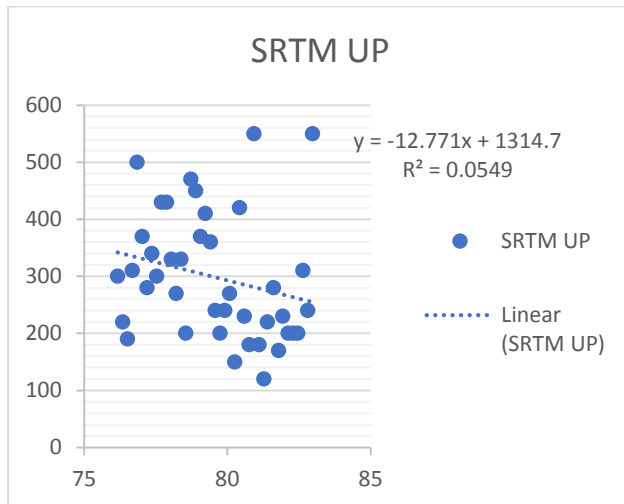


Graph No. 1 Readings of NAAV Meter w.r.t. Chainage in Km

Red dotted line indicate the limiting line. below this line the chainages with drop in NAAV reading indicate presence of geopathic stress.

Regression Analysis will help to predict and forecast Accidents on Roads. So, with help of Regression analysis, we analysed Reading of NAAV Meter with chainage in Km.

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.31538199							
R Square	0.0994658							
Adjusted R Square	0.09710838							
Standard Error	204.856219							
Observations	384							
<i>ANOVA</i>								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	1770660.28	1770660.28	42.192663	2.5801E-10			
Residual	382	16031038.88	41966.0704					
Total	383	17801699.16						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-1636.865	407.9356866	-4.0125566	7.229E-05	-2438.94554	-834.78454	-2438.9455	-834.78454
Chainage in Km	33.3383165	5.132455534	6.49558799	2.58E-10	23.2469158	43.4297173	23.2469158	43.4297173



SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.1126914							
R Square	0.01269935							
Adjusted R Square	-0.0126161							
Standard Error	93.3012755							
Observations	41							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	4366.886021	4366.886	0.501645239	0.48299011			
Residual	39	339499.9924	8705.128					
Total	40	343866.8784						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	687.814447	577.0066042	1.192039	0.240449056	-479.2915723	1854.920466	-479.2915723	1854.920466
CHAINAGE	-5.1345128	7.249380414	-0.70827	0.48299011	-19.7977687	9.528743179	-19.7977687	9.528743179

SUMMARY OUTPUT								
Regression Statistics								
Multiple R	0.234251839							
R Square	0.054873924							
Adjusted R Square	0.030639922							
Standard Error	109.2277195							
Observations	41							
ANOVA								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	27015.10196	27015.1	2.26434	0.140439378			
Residual	39	465297.0932	11930.7					
Total	40	492312.1951						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	1314.686969	675.5011134	1.94624	0.05886	-51.64299995	2681.016937	-51.64299995	2681.016937
CHAINAGE	-12.77075622	8.486843141	-1.50477	0.14044	-29.93701678	4.395504343	-29.93701678	4.395504343

V. CONCLUSION

- Maximum numbers of accidents have occurred between 79-81 kms of Mumbai- Pune Expressway as per data from Maharashtra State Road Development Corporation Ltd. (MSRDC). Hence this has considered as the study area.
- Geopathic Stress zones were identified by L-Rods on the Expressway between 79-81 kms. Significant changes in NAAV readings were also observed on geopathic stress zones identified by L-rods. Thus, confirming presence of geopathic stress in that area.
- Accidents may occur due to increase in reaction time of the stressed driver crossing geopathic stress zone.

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